

Resolution No.: 18-86
Introduced: February 10, 2015
Adopted: March 31, 2015

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: Council President at the Request of the County Executive

SUBJECT: Amendment to the Comprehensive Solid Waste Management Plan

Background

1. Pursuant to Sections 9-503 and 9-515 of the Environment Article, Annotated Code of Maryland (Environment Article), the governing body of each County is required to adopt and submit to the Maryland Department of the Environment (MDE) a ten-year plan dealing with solid waste disposal systems, solid waste acceptance facilities, and the systematic collection and disposal of solid waste. The Environment Article further requires each County to review its solid waste management plan at least every three years.
2. On February 9, 2010, the County Council adopted the County's current Comprehensive Solid Waste Management Ten Year Plan 2009 to 2019 (the Ten Year Plan) by Resolution 16-1254.
3. On September 28, 2010, the Ten Year Plan was amended by Council Resolution 16-1486 to comply with newly amended Environment Article Section 9-1703(b)(10), which requires county plans to include recycling plans of public schools.
4. Per MDE request, on September 9, 2013 and October 3, 2013, respectively, MDE received from the Division of Solid Waste Services (DSWS) informal revised draft updates of the Ten Year Plan and the MCPS Recycling Action Plan for preview. That draft Ten Year Plan reflected and was based on the County's new 70 percent recycling goal as expressed in Executive Regulation 7-12, adopted on October 16, 2012 by Council Resolution 17-566.
5. By letter dated December 3, 2013, MDE provided comments to DSWS' draft of the Ten Year Plan requiring specific language and other changes for MDE approval.
6. On February 18, 2014, MDE issued revised "Maryland Recycling Act (MRA) Tonnage Reporting Survey Guidelines for CY 2013", which Guidelines would abrogate the County's means to fully achieve its new 70 percent recycling goal by discontinuing the State's recognition of waste-to-energy residue as recycled when used as alternate daily cover (ADC) at a landfill.

7. On May 5, 2014, the Governor enacted Senate Bill 781 (“Environment—Recycling—Special Events”), requiring the counties to amend their Ten Year Solid Waste Plans, by no later than March 1, 2015, to contain certain provisions relative to recycling at certain special events.
8. On August 25, 2014, MDE issued a letter reversing its Guidelines noted in item 6, above, relative to residue generated at the Montgomery County Resource Recovery Facility and used as ADC at a Virginia landfill.

On January 15, 2015, the County Executive transmitted to the County Council a revised Ten Year Plan entitled “Montgomery County, Maryland Comprehensive Solid Waste Management Plan for the Years 2012 through 2023” responsive to the foregoing MDE preview comments, and new legislation, together with a revised MCPS Recycling Action Plan, dated November 2014.

9. On March 3, 2015, a public hearing was held pursuant to Section 9-505 of the Environment Article.
10. On March 9, 2015, the Transportation, Infrastructure, Energy & Environment Committee discussed and recommended approval of the revised Ten Year Plan with some technical corrections and revisions and updated background information recommended by County Council Staff.

Action

The County Council for Montgomery County, Maryland, approves the following resolution:

The Comprehensive Solid Waste Management Plan for the Years 2009 through 2019 is wholly superseded and replaced with the “Comprehensive Solid Waste Management Plan for the Years 2012 through 2023”, dated March 2015; and

The “Montgomery County Public Schools Recycling Action Plan,” dated November 2014, is incorporated by reference into the aforementioned Plan.

This is a correct copy of Council action.



Linda M. Lauer, Clerk of the Council

Montgomery County, Maryland

Montgomery County, Maryland
**DIVISION OF
SOLID WASTE SERVICES**



Comprehensive Solid Waste Management 10 Year Plan

2012-2023



Division of Solid Waste Services

March 2015

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MONTGOMERY COUNTY, MARYLAND
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN
for the Years 2012 through 2023

**Prepared in accordance with Title 9, Subtitle 5 of the
Environment Article of the Annotated Code of Maryland**

**Adopted by the County Council of Montgomery County,
Maryland by Resolution Number xx-xxxx dated xxxx xx,
201x.**

**Department of Environmental Protection
Division of Solid Waste Services**

Rockville, Maryland

INTRODUCTION

The Montgomery County 2012-2023 Ten Year Solid Waste Management Plan was prepared according to Title 9, Subtitle 5, Environment Article, Annotated Code of Maryland, and the Regulations under COMAR 26.03.03.03(A). An Executive Summary, along with the Resolution of the Montgomery County Council which adopted this Plan and the MDE approval letter will appear immediately following the Table of Contents.

EXECUTIVE SUMMARY

The Montgomery County, Maryland, Comprehensive Solid Waste Management Plan for the Years 2012 - 2023 has been prepared in accordance with Title 9, Subtitle 5 of the Environment Article, Annotated Code of Maryland, and the Code of Maryland Regulations (COMAR) 26.03.03. The Plan has been adopted by the Montgomery County Council Resolution xx-xxxx, and approved by the Maryland Department of the Environment (MDE).

This Ten-year Plan is updated every three years, as required by Maryland law to reflect amendments by the County Council and the continuing changes that are occurring in the County related to solid waste management. The following amendments, changes, additional appendices and other pertinent documents are included in this Plan:

Chapter 1 provides an overview of the laws, regulations, and government agencies that are a part of this Comprehensive Solid Waste Plan. Changes to this chapter include:

- Dates are updated throughout.
- Tables of applicable laws and regulations are updated. A very significant change is that by County Executive Regulation 7-12, Montgomery County adopted the State's MRA recycling rate calculation methodology. So, the County will no longer be reporting recycling rates using two different methodologies. In addition, the regulation established a new County goal of 70 percent for waste reduction, by Calendar Year 2020, inclusive of the State's 5 percent waste reduction credit. No other significant changes have occurred since the last Plan update.

Chapter 2 provides an overview of population and employment trends and land use considerations that impact present and future solid waste management considerations.

Changes to this chapter include:

- Dates and population/employment numbers are updated throughout.

Chapter 3 provides detailed data on waste generation and descriptions of waste collection and acceptance facilities. Changes to this chapter include:

- Dates and waste generation tonnages are updated throughout.
- Tables are repositioned to follow text references.
- The County recycling rate calculation method is clarified.
- Recycling descriptions are updated for Office Paper Systems (OPS) mixed paper operation.
- Additional detail is provided on the County's electronics recycling, multi-family recycling, and special event recycling programs, in order to demonstrate compliance with new State laws.

Chapter 4 assesses solid waste management needs to address waste generation issues and acceptance facility constraints. Changes to this chapter include:

- Dates and generation percentages are updated throughout.
- The recycling goal of 70 percent using State MRA calculation methodology, inclusive of the State 5 percent waste reduction credit, by 2020 is confirmed.
- Text describing the County's electronics recycling program is added.

- A new planning direction towards exploring food waste composting is indicated, including efforts to establish best management practices through the use of demonstration projects.

Chapter 5 provides a Plan of Action to address solid waste generation issues and acceptance facility needs. Changes to this chapter include:

- Dates and generation data are updated throughout.
- The County's ban on disposal of recyclables is described with respect to County Executive Regulations 15-04AM and 18-04, and enforcement of those regulations is discussed and the regulations are appended in this Plan.
- Contingency plans for yard waste management, to avoid exceeding the agreed limitation on annual tonnage received at the Dickerson Yard Trim Composting Facility, are expanded.
- The summary Plan of Action table is updated and expanded.

Appendices

Appendix A provides a list of term definitions.

Appendix B is updated to provide a material flow diagram and recycling calculations for a new Base Year, Calendar Year 2012.

Appendix C provides a copy of the County landfill site selection criteria.

Appendix D provides copies of community agreements related to solid waste facilities.

Appendix E provides a copy of County Council Resolution 13-1498 "Creation of Dickerson Area Facilities Implementation Group (DAFIG)".

Appendix F provides a copy of County Executive Regulation 6-99AM Expansion of Leaf Vacuuming Collection District.

Appendix G provides a copy of the recommendations made by the Maryland-National Capital Park and Planning Commission (M-NCPPC) and the Washington Suburban Sanitary Commission (WSSC).

Appendix H provides a copy of County Executive Regulation 7-12 which establishes the County's recycling rate calculation methodology, adopting the State MRA Recycling Rate methodology, and establishing a goal of 70 percent by 2020, inclusive of the State 5 percent waste reduction credit.

Appendix I provide copies of County Executive Regulation 15-04AM, "Residential and Commercial Recycling" and County Executive Regulation 18-04, "Collection, Transport, and Disposal of Solid Waste".

Montgomery County Council Resolution

NOTE: Currently, this page is intentionally left blank. It will be replace with approved Montgomery County Council Resolution, adopting the Plan Update, when adopted.

Montgomery County Council Resolution (con't)

Approval Letter
Maryland Department of the Environment (MDE)

NOTE: Intentionally left blank. Replace with approval letter from MDE.

MDE Approval Letter (con't.)

Chapter 1: Rules Governing Solid Waste Management

Montgomery County, Maryland (the "County"), is a body politic and corporate and a political subdivision of the State of Maryland. The Montgomery County Comprehensive Solid Waste Management Plan for the Years 2012-2023 (the "Plan"), sets forth the policies, goals, and plans for the comprehensive management of solid waste in the County. The Plan was prepared by the Division of Solid Waste Services (DSWS) of the County Department of Environmental Protection (DEP) in accordance with Title 9, Subtitle 5 of the Environment Article, Annotated Code of Maryland. State law requires that the Plan must be adopted by the Montgomery County Council and submitted to the Maryland Department of the Environment (MDE) for approval. This chapter is organized as follows:

- 1.1 Authority for and Purpose of this Plan
- 1.2 Goals, Objectives and Policies for Solid Waste Management
- 1.3 Government Structure for Solid Waste Management
- 1.4 Laws and Regulations Governing Solid Waste Management

Acronyms and solid waste terms used in this chapter and throughout this document are defined in Appendix A.

1.1 AUTHORITY AND PURPOSE

1.1.1 Authority

Maryland State law authorizes the Montgomery County Council to regulate and control the management of solid waste in the County, pursuant to Sections 9-501 through 9-521 of the Environment Article, Annotated Code of Maryland, and COMAR 26.03.03. State law requires the County to develop a "Solid Waste Management Plan" for the entire County, including all towns, municipal corporations and sanitary districts. The Plan must cover a planning period of at least ten years and describe the solid waste disposal systems, solid waste acceptance facilities and the systematic collection and disposal of

solid waste by public or private entities. The Plan must be reviewed and updated as necessary at least once every three years. When deemed necessary by either the County Executive or the County Council, the County Executive must prepare an amendment to the Plan. The County must conduct a public hearing prior to adopting, amending or revising the Plan. The Plan must contain the information specified in COMAR 26.03.03, "Development of County Solid Waste Management Plans," as amended.

1.1.2 Purpose of Plan

The purpose of this Plan is to describe the County's programs for providing comprehensive management of solid waste generated by the County's residential (including both single-family as well as multi-family), commercial, institutional, industrial, and agricultural sectors during the ten-year period from 2012 through 2023. The Plan establishes the framework on which current solid waste management activities are conducted and future programs are implemented. This Plan reflects the established integrated solid waste management system adopted by the County Council and implemented by the County Executive. The Plan sets out the manner in which solid waste generated throughout the County will be managed for the next ten years.

A number of technical terms have been developed in connection with the County's solid waste management system. The definitions of these terms as used in this Plan are included in Appendix A.

1.2 GOALS, OBJECTIVES, AND POLICIES FOR SOLID WASTE MANAGEMENT

1.2.1 General Goals, Objectives, and Policies

As related in Chapter 5 of this Plan, Montgomery County has adopted a general goal of solid waste management that establishes waste reduction as the most preferred management technique, followed by reuse and recycling, then incineration with energy

recovery, and, least preferred, landfilling. The general solid waste goals of this Plan include the following specific elements:

- The County must undertake all waste reduction measures to the extent practical and feasible.
- All waste recycling measures should be implemented that are practical with available technologies and markets and which are not significantly more expensive than the waste disposal measures that would otherwise be needed. Technology, markets, and cost effectiveness are reviewed regularly so that recycling may be expanded as new opportunities arise or, conceivably, contracted if markets for particular materials disappear for a long time.
- The County will operate, or cause to be operated, a waste-to-energy Resource Recovery Facility (RRF) to burn the combustible solid waste remaining after reduction and recycling.
- Out-of-County landfilling is the preferred disposal method for bypass waste and non-processible waste that cannot be recycled or reused. "Bypass" means waste received by the County which would be processible at the RRF, but is not processed at the RRF and is instead sent by the County to its out-of-County landfill. In-County landfilling should occur only if cost effective out-of-County landfilling options become unavailable or legislatively prohibited.
- The County solid waste acceptance, drop-off, recycling, and disposal facilities are designed based upon projections of solid waste generated in the County. To conserve capacity at the RRF and at other solid waste and disposal facilities for the residents and businesses of the County, the use of these facilities is restricted to solid waste generated in the County. This restriction does not apply to the Materials Recovery Facility (MRF), where under the terms of a contract with Office Paper Systems (OPS), the County may allow other jurisdictions to use any excess capacity at the OPS facility (see Section 5.1.2.1 of this Plan).

- The County builds and maintains solid waste acceptance and disposal facilities primarily to accommodate municipal solid waste generated in the County. The County facilities may not necessarily accommodate other types of waste.

1.2.2 Integrated Solid Waste Management System

The County has adopted an integrated solid waste management system to achieve its goal of reducing and recycling solid waste to the maximum feasible extent. To achieve this goal, the County has adopted a policy that establishes a hierarchy of solid waste management options. The most preferred management option is the reduction of solid waste at its source. The second most preferred solid waste management technique is recycling and reuse of solid waste. The County's goal is to achieve, maintain or exceed 70 percent source reduction and recycling of municipal solid waste by the end of Calendar Year 2020. The third tier option is combustion of solid waste remaining after reduction and recycling for the recovery of electrical energy. The least preferred method of managing solid waste is landfilling. Solid waste remaining after reduction, recycling and combustion is landfilled. This hierarchy recognizes the interdependence of all elements of an integrated solid waste management system.

To realize its recycling goals, the County has implemented a policy of County-wide (non-municipal) curbside collection of recyclable materials and established a policy favoring purchase of recycled materials¹. The County has adopted regulations requiring recycling at non-municipal multi-family residential (condominium, apartment and cooperatives) and commercial properties^{2,3} and has numerous programs to promote and further achieve its recycling goals, as detailed in Chapter 5. The County has also adopted a ban on all recyclables at any County's solid waste disposal facilities.

1 Chapters 48 and 11B-56 in Montgomery County Code.

2 The City of Gaithersburg adopted the County's regulations for multi-family and commercial recycling in 2005.

3 In September, 2008, the City of Rockville adopted the same regulations.

The Recycling Rates and Waste Diversion - Statewide Goal Act (2012) requires the Montgomery County Plan to address a reduction through recycling of at least 35 percent of the County's solid waste stream by July 1, 2014. The Plan must be fully implemented by December 31, 2015. Further, the Act sets a voluntary Statewide waste diversion rate of 60 percent by 2020. The County's solid waste management programs and policies have created a system that exceeds the State's established recycling goals (see Section 3.1.10). The County's solid waste management hierarchy is fully consistent with the State's solid waste management hierarchy. By shifting the focus of solid waste management to waste reduction and recycling, the County strives to reduce the solid waste remaining for disposal. This helps the County reduce its reliance upon land within the County for landfilling. Further, by combusting solid waste, the volume of material required to be landfilled is reduced 70 percent by weight and 90 percent by volume. This is consistent with the County's comprehensive land use plan. The County's General Plan, known as "*A General Plan for the Maryland-Washington Regional District in Montgomery and Prince George's Counties*," provides the comprehensive planning and policy framework for land use, growth management, and resource management in Montgomery County.⁴ This Plan acknowledges the existence of certain solid waste facilities and advises that the County "provide an adequate, self-sufficient, well-monitored, and ecologically sound system for the management of Montgomery County's solid wastes".⁵

1.3 GOVERNMENT STRUCTURE FOR SOLID WASTE MANAGEMENT

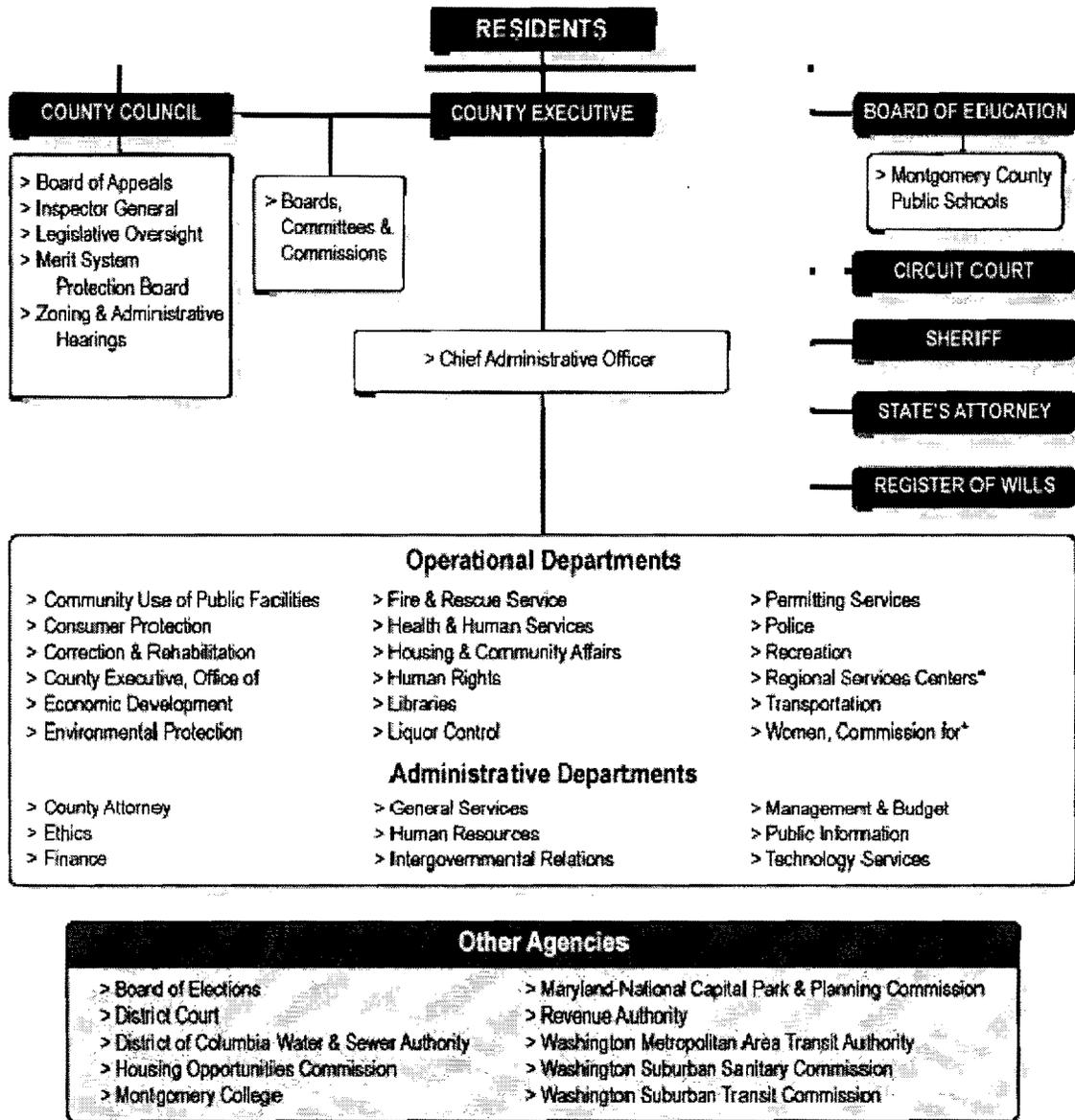
The County is a charter county of Maryland with a nine-member county council and a county executive. The County Executive drafts the Plan, its amendments and revisions, and recommends solid waste legislation. The County Executive also administers the County solid waste laws in Chapter 48 of the Montgomery County Code. The County Council, after providing notice and conducting public hearings, adopts the Plan, its amendments and

⁴ See Section 2.3 of this Plan for a fuller discussion of the County's General Plan.

⁵ Source: "A General Plan Refinement of the Goals and Objectives of Montgomery County," Maryland National Capital Park And Planning Commission, December 1993.

revisions and approves other solid waste legislation. An organizational chart of the County government is provided in Figure 1.1.

Figure 1.1
Montgomery County, Maryland Functional Organization Chart



* Effective 7/1/2011 - Became part of the Community Engagement Cluster, which also includes the Office of Community Partnerships, the Civic Center, and the Visitor Center.

1.3.1 Primary Solid Waste Management Responsibility

The day-to-day management of the County's integrated solid waste management system and planning for solid waste management is the responsibility of the County's DEP. DEP is under the general supervision of a Director, who is appointed by the County Executive and confirmed by the County Council. The DEP monitors air, water, and other environmental quality concerns related to solid waste management activities. In addition, DEP ensures that hazardous and special medical wastes are properly handled through the enforcement of State regulations and Chapter 48 of the Montgomery County Code governing the handling and disposal of such material.

Within DEP, DSWS, which is headed by a merit employee division chief, is responsible for:

- Overseeing the collection of solid waste, responding to inquiries and complaints related to collection services and other County solid waste program activities, and enforcing solid waste laws and regulations;
- Managing solid waste reduction, recycling, composting, resource recovery and disposal facilities and programs to implement the County's integrated solid waste management system as detailed in Chapter 5 of this Plan;
- Disseminating information and providing education, training and technical assistance to the public about various components of the County's integrated solid waste management system;
- Administering recycling regulations, including providing technical assistance and support, as well as enforcement;
- Assisting and supporting the legislatively created citizen advisory committees including: the SWAC, DAFIG and other ad-hoc advisory groups;

- Planning for facilities and programs with advice from SWAC and DAFIG to implement the County's integrated solid waste management system;
- Drafting the Plan and its amendments and revisions, proposed legislation and regulations, with review comments from the Office of the County Attorney (OCA), Solid Waste Advisory Committee (SWAC), Dickerson Area Facilities Implementation Group (DAFIG) and the Maryland-National Capital Park and Planning Commission (M-NCPPC); and
- Providing for the periodic review and update, if necessary, of the Plan on a three-year basis.

1.3.2 Other Executive Branch Departments that Manage Solid Waste

The Department of Housing and Community Affairs (DHCA) enforces portions of Chapter 48 by ensuring removal of abandoned vehicles and solid waste from residential areas.

The Department of Transportation (DOT) Division of Highway Services vacuums leaves in a portion of the County, collects roadside litter, and conducts clean-up operations following significant storm events.

The Police Department receives and disposes of abandoned vehicles.

The Police Department Division of Animal Services contracts for the collection and disposal of dead animals.

The Department of Fire and Rescue Services (DFRS) reviews solid waste acceptance facilities with respect to the potential for fire and other hazards. DFRS also supports DEP in controlled hazardous substances (CHS) spill emergencies.

1.3.3 Other Agencies that Manage Solid Waste

Other agencies have the following roles in the management of solid waste in the County and in the development of the Plan.

1.3.3.1 Maryland-National Capital Park and Planning Commission

The M-NCPPC is a bi-County agency created by the General Assembly of Maryland to prepare, adopt, and amend land use plans for the physical development of the Maryland-Washington Regional District that includes most of Montgomery and Prince George's Counties. M-NCPPC provides DEP with information and assistance as necessary during the preparation of the Plan. Pursuant to Section 9-515(e) of the Environment Article, Annotated Code of Maryland, the County Council must submit the final draft of any revision or amendment of the Plan to M-NCPPC for their recommendations at least 30 days before the date set for the public hearing on the Plan. The County Council requested M-NCPPC comments on xxxx xx, 201x. M-NCPPC's recommendations are listed in Appendix G.

1.3.3.2 Washington Suburban Sanitary Commission

WSSC is a bi-county agency created by the General Assembly of Maryland. WSSC is responsible for planning, designing, constructing, operating and maintaining waste and sewerage systems, and acquiring facility sites and rights-of-way to provide potable water and sanitary sewer services within the Washington Suburban Sanitary District that includes most of Montgomery and Prince George's Counties. WSSC provides the executive branch with information and assistance as necessary during the preparation of the Plan. Pursuant to Section 9-515(e) of the Environment Article, Annotated Code of Maryland, the County Council must submit the final draft of any revision or amendment of the Plan for recommendation to WSSC at least 30 days before the date set for the public hearing on the Plan. The County Council requested WSSC comments on xxxx xx, 201x. WSSC recommendations are listed in Appendix G. WSSC is responsible for biosolids of three of the four wastewater treatment plants in Montgomery County, but not the Poolesville treatment plant. WSSC is responsible for approximately 45 percent of the Blue Plains Wastewater Treatment Facility biosolids. This is based on WSSC's allocation of capacity at the Blue

Plains Wastewater Treatment Facility. The remainder of biosolids is the responsibility of District of Columbia Water and Sewer Authority (DC Water).

1.3.3.3 Maryland Environmental Service

The Maryland Environmental Service (MES) is an agency of the State of Maryland and a public corporation that provides environmental management services to public and private entities. MES receives no direct State appropriation and is required to provide its services on a fee-for-service basis. MES assists the County in the operation of several elements of the County's solid waste management system, including operation of the MRF, the County Yard Trim Composting Facility, and recycling activities taking place at the County Shady Grove Processing Facility and Transfer Station (Transfer Station).

1.3.3.4 Northeast Maryland Waste Disposal Authority

The Northeast Maryland Waste Disposal Authority (NMWDA) is a body politic and corporate and a public instrumentality of the State of Maryland. NMWDA was created by the General Assembly of Maryland to assist political subdivisions, public entities and the private sector in waste management and the development of adequate waste disposal facilities to accommodate regional requirements for disposal of solid waste. NMWDA financed the cost of designing and constructing the RRF and related transportation improvements necessary for the project. The County has a Waste Disposal Agreement with NMWDA for the disposal of non-recycled waste.

1.3.3.5 Waste Reduction and Recycling by Government Agencies

Each federal, state and County agency must comply with all waste reduction and recycling requirements imposed on County businesses. Each agency should track its annual waste generation and recycling rates and should be prepared to report to the Executive, Council, and/or DSWS of DEP as requested on measures undertaken to reduce the amount of trash produced.

In accordance with Resolution 15-313, regarding environmental policy, each County agency or department must appoint Environmental Policy Coordinators, submit environmental action plans outlining their goals, including annual reports on their accomplishments, and, promote environmentally responsible business practices. The County expects all federal and state agencies located in the County to abide by County waste reduction and recycling regulations.

1.4 LAWS AND REGULATIONS GOVERNING SOLID WASTE MANAGEMENT

Solid waste management activities in the County are governed by federal, state, and local laws and regulations. Federal solid waste management laws and regulations provide the framework on which solid waste activities throughout the nation are conducted. However, federal authority in the County is limited. Generally, federal authority to implement federal laws and regulations is given to the state, and the County's solid waste program and ordinances must meet or exceed the solid waste laws and regulations of the state. However, federal facilities are required by the Resource Conservation and Recovery Act (RCRA) to have solid waste/recycling programs which comply with local jurisdiction requirements.

1.4.1 Federal Laws and Regulations

The major federal statutes that affect local solid waste management are provided in Table 1.1. Foremost among the federal statutes listed is the Resource Conservation and Recovery Act (RCRA) of 1976, as amended. This law provides federal guidelines and standards for the environmentally sound reuse, handling and disposal of solid wastes. Subtitle D of RCRA provides federal standards for municipal solid waste (MSW) facilities, including requirements relating to the location, design, operation, ground water monitoring, closure and post-closure management and financial assurance criteria for municipal sanitary landfills.

Table 1.1

Summary of Major Federal Statutes Affecting Solid Waste Management

Resource Conservation and Recovery Act:

A primary objective of this Act is to promote recycling and reuse of recoverable materials. The Act also provides guidelines for environmentally sound hauling and disposal of hazardous and non-hazardous solid waste. Subtitle D of the Act specifies criteria for MSW landfills.

Comprehensive Environmental Response, Compensation and Liability Act (Superfund):

Establishes programs for the identification and remediation of waste disposal sites containing hazardous substances; establishes standards for clean-up efforts and disposal of waste; and provides a mechanism for assigning liability for contaminated sites.

Clean Water Act:

Section 402 of this act establishes the National Pollutant Discharge Elimination System (NPDES) program to address the discharge of wastewater and runoff from solid waste management facilities into surface waters. The construction of facilities that may impact any rivers, lakes, marshes, swamps or wetlands of the United States is addressed by Section 404, which is administered by the Army Corps of Engineers. Section 405 addresses the disposal of wastewater treatment biosolids.

Clean Air Act:

Title I of the CAA addresses emissions from landfills and authorizes regulations on collection and control of those emissions. Title V of the CAA addresses the potential-to-emit pollutants and authorizes permitting regulations for major polluters. Landfill facilities are subject to Title I and are required to obtain a Title V permit, in addition to any facility that is a "major source" of pollutants.

Safe Drinking Water Act:

Establishes maximum contaminant levels for parameters included in ground water monitoring programs.

Federal Emergency Management Act:

Prohibits siting of landfills within the 100-year floodplain (Subtitle D allows for an exception if the unit will not restrict the flow on 100-year flood, reduce the temporary storage capacity of the floodplain, or result in wash out of solid waste).

The portions of RCRA that directly address solid waste management are in Title 42, Chapter 82, Sections 6901-6992k of the United States Code. Specific sections relevant to solid waste management activities in the County, as well as the preparation of the Plan, are Sections 6941-6949a, entitled "State or Regional Solid Waste Plans". The objectives, as stated in Section 6941, are to:

"...assist in developing and encouraging methods for the disposal of solid waste which are environmentally sound and which maximize the utilization of valuable resources including energy and materials which are recoverable from solid waste and to encourage resource conservation. Such objectives are to be accomplished through federal technical and financial assistance to states or regional authorities for comprehensive planning pursuant to federal guidelines designed to foster cooperation among federal, state, and local governments and private industry."

Under Section 6942 of RCRA, the federal government must develop guidelines to assist in the development of state solid waste management plans that contain methods for achieving the objectives defined in Section 6941. These guidelines must consider:

(1) the varying regional, geologic, hydrologic, climatic, and other circumstances under which different solid waste practices are required to ensure the reasonable protection of the quality of the ground and surface waters from leachate contamination, the reasonable protection of the quality of the surface waters from surface runoff contamination, and the reasonable protection of ambient air quality;

(2) characteristics and conditions of collection, storage, processing, and disposal operating methods, techniques and practices, and location of facilities where such operating methods, techniques, and practices are conducted, taking into account the nature of the material to be processed;

(3) methods for closing or upgrading disposal sites for purposes of eliminating potential health hazards;

(4) population density, distribution, and projected growth;

(5) geographic, geologic, climatic, and hydrologic characteristics;

- (6) the type and location of transportation;
- (7) the profile of industries;
- (8) the constituents and generation rates of waste;
- (9) the political, economic, organizational, financial, and management problems affecting comprehensive solid waste management;
- (10) types of resource recovery facilities and resource conservation systems which are appropriate; and
- (11) available new and additional markets for recovered material.

The Code of Federal Regulations (CFR), Title 40 is entitled *Protection of Environment* and includes Subchapter I *Solid Wastes*. Table 1.2 displays the CFR location for major federal regulations relating to solid waste management.

In 1991, President George Bush issued Executive Order 12780, Federal Agency Recycling and the Council on Federal Recycling and Procurement Policy. This order created the Federal Recycling Coordinator (designated by the EPA Administrator), the Council on Federal Recycling and Procurement Policy, and agency recycling coordinators within each of the major agencies, all in order to increase the level of recycling and purchase of recycled-content products.

Table 1.2
Summary of Federal Regulations Affecting Solid Waste Management
(CFR, TITLE 40, SUBCHAPTER I)

Part 240:	Guidelines for the Thermal Processing of Solid Wastes Minimum performance levels for MSW incinerators.
Part 243:	Guidelines for the Storage and Collection of Residential, Commercial and Institutional Solid Waste Minimum performance levels for solid waste collection operations. Issues addressed include storage safety and equipment, and collection frequency and management.
Part 246:	Source Separation for Materials Recovery Guidelines Minimum actions recommended for the recovery of resources from solid wastes, including high grade paper, residential materials and corrugated containers.
Part 247:	Guidelines for the Procurement of Products that Contain Recycled Materials Recommended guidelines only. Procedures and specifications for procurement of products to increase the use of recycled material.
Part 255:	Identification of Regions and Agencies for Solid Waste Management Procedures for the identification of regional solid waste management planning districts.
Part 256:	Guidelines for Development and Implementation of State Solid Waste Management Plans Guidelines for development and implementation of state solid waste management plans.
Part 257:	Criteria for the Classification of Solid Waste Disposal Facilities and Practices Criteria to determine which solid waste facilities pose a reasonable probability of adverse effects on health or the environment. Facilities in violation will be considered open dumps. Does not apply to municipal landfills (covered under Part 258).
Part 258:	Criteria for Municipal Solid Waste Landfills (Subtitle D Regulations) Establishes minimum national criteria for the design and operation of MSW landfills. Includes location restrictions, operating criteria, design criteria, ground water monitoring and corrective action, closure and post-closure, and financial assurance criteria. Design standards apply only to new landfills and lateral expansions of existing facilities.
Part 260:	Hazardous Waste Management System - General Provides definitions and a general overview of Parts 260 through 265.
Part 261:	Identification and Listing of Hazardous Waste Provides identification of those materials which are subject to regulation as hazardous wastes under Parts 270, 271 and 124.

TABLE 1.2 (con't)
Summary of Federal Regulations Affecting Solid Waste Management
(CFR, TITLE 40, SUBCHAPTER I)

- Part 264: Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities**
Establishes minimum national standards for the management of hazardous wastes.
- Part 265: Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal facilities**
Establishes minimum national standards that define the management of hazardous wastes during the period of interim status and until the certification of post-closure or closure of the facility.
- Part 266: Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Disposal Sites**
Establishes minimum national standards for the recyclable materials used in a manner to constitute disposal, hazardous waste burned for energy recovery, used oil burned for energy recovery, recyclable material used for precious metal recovery, and spent lead-acid batteries being reclaimed.
- Part 270: EPA Administered Permit Programs: The Hazardous Waste Permit Program**
Application requirements, standard permit conditions, monitoring and reporting requirements for EPA permitting for the treatment, storage and disposal of hazardous waste.
- Part 271: Requirements for Authorization of State Hazardous Waste Programs**
Identifies the requirements that state programs must meet to fulfill interim and final authorization as well as the procedures EPA uses to approve, revise and withdraw approval of state programs.
- Part 272: Approved State Hazardous Waste Programs**
Establishes the applicable state hazardous waste management programs.
- Part 273: Standards for Universal Waste Management**
Establishes the requirements for managing batteries, pesticides, mercury-containing equipment and lamps.
- Part 503: Standards for the Use or Disposal of Sewage Sludge**
Establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works.

In 1993 President Bill Clinton issued Executive Order 12873, Federal Acquisition, Waste Prevention, and Recycling. The order created the position of the Federal Environmental Executive and Agency Environmental Executives. These positions were specifically intended to bolster support for recycling and the procurement of recycled-content products. This order also set the standard that all federal office paper is to contain at least 30 percent post-consumer recycled content.

1.4.2 Maryland Laws and Regulations

The primary laws of the State of Maryland that relate to solid waste management are contained in *the Local Government Article, the Environment Article, and the Natural Resources Article*. Pursuant to *Section 10-317(a)(2) of the Local Government Article*, charter counties have the power to enact local laws concerning the disposal of wastes. Title 9 of the *Environment Article* contains provisions for the planning and permitting of solid waste management and related facilities; it also provides for the regular submission of solid waste management plans by the counties and sets forth the minimum requirements of such plans and provides for a recycling office and requires counties to submit a recycling plan. Notable sections include the following:

- Section 9-204 defines the requirements for Refuse Disposal Permits issued by the MDE;
- Section 9-210 requires that specific wastes which are authorized for disposal in rubble landfills in the County be defined in the Plan prior to issuance of a permit by the State and provides prerequisites for the issuance of permits for refuse disposal systems;
- Section 9-211 describes the financial assurance requirements relating to the siting of solid waste facilities;

- Section 9-228 pertains to the storage, recycling and disposal of scrap tires through state efforts. Regulations for this program are in the Code of Maryland Regulations (COMAR) 26.04.08;
- Section 9-505 addresses the requirements of county recycling plans, recycling reductions, effect of increase in population, and regional plans;
- Section 9-1703 requires that each county submit a recycling plan to the state when the Plan is submitted. This section also defines specific information to be included in both plans;
- Section 9-1708 establishes requirements for a natural wood waste recycling facility.

The *Natural Resources Article* also contains several sections that relate to solid waste management planning. Notable provisions are included in Title 3, Subtitle 1 (Maryland Environmental Service); Title 9, Subtitle 4 of the Environment Article (Hazardous Waste Facility Siting Program); and Title 3, Subtitle 9 (Northeast Maryland Waste Disposal Authority).

The primary regulations governing solid waste management are contained in Title 26 Department of the Environment of COMAR. The pertinent sections of Title 26 are as follows:

- *Subtitle 03 – Water Supply, Sewerage, Solid Waste, and Pollution Control Planning and Funding*, which pertains to the development of county Comprehensive Solid Waste Management Plans;
- *Subtitle 04 – Regulation of Water Supply, Sewage Disposal, And Solid Waste*, which contains general provisions related to all aspects of solid waste management;

- *Subtitle 11 - Air Quality*, which contains requirements governing incinerators and asbestos disposal; and
- *Subtitle 13 - Disposal of Controlled Hazardous Substances*, which contains requirements for the management of CHSs.

Table 1.3 lists the relevant sections of the Annotated Code of Maryland that affect solid waste management. A summary of state regulations pertaining to solid waste management appears in Table 1.4.

1.4.3 Montgomery County Code

Regulations affecting solid waste management activities are present in nine chapters of the Montgomery County Code. Chapter 48 (Solid Wastes) specifically addresses solid waste management. A summary of the solid waste management regulations in each chapter of the County Code is provided below.

Chapter 3 (Air Quality Control) provides for the burning of leaves and household trash in certain parts of the County (Section 3-6).

Chapter 5 (Animal Control) provides for the collection and disposition of dead cats and dogs (Section 5-102) and for the disposal of carcasses of dead animals that had been exposed to rabies (Section 5-55).

Chapter 11B (Contract and Procurement) provides for the use of goods containing recycled materials for County government procurement.

Chapter 19 (Erosion, Sediment Control and Storm Water Management) governs erosion and sediment control, storm water management, and activities conducted in a floodplain.

Table 1.3
Maryland Statutes Affecting Solid Waste Management

Local Government Article

Environment Article

Title 4 *Water Management*

Title 6 *Toxic, Carcinogenic, and Flammable Substances*

Title 7 *Hazardous Materials and Hazardous Substances*

Title 9 *Water, Ice, and Sanitary Facilities*

Subtitle 2 Regulation by State

Section 204 *Installing, altering, or extending water supply systems, sewerage systems, or refuse disposal systems*

Section 209 *Landfill systems hearings*

Section 211 *Landfills, incinerators, and transfer stations: requirements for security*

Section 212 *Landfill systems - option to purchase*

Section 226 *Certificate of public necessity required for hazardous waste landfill system*

Section 228 *Scrap tires - storage, recycling, and disposal*

Subtitle 5 County Water and Sewerage Plans

Section 503 *County plans - required; review by governing body of county; revision or amendment*

Section 505 *County plans - recycling reductions, effect of increase in populations, and regional plans*

Section 506 *County plans - review by official planning agencies; progress reports; submitting reports to Department*

Section 516 *Special provisions for county plan in Montgomery County and Prince George's County - Information and assistance from Washington Suburban Sanitary Commission and Maryland-National Capital Park and Planning Commission*

Subtitle 17 Office of Recycling

Section 1703 *County recycling plans; reduction in volume of waste*

Section 1708 *Natural wood waste recycling facility*

Natural Resources

Title 3 *Environmental Programs*

Subtitle 1 Maryland Environmental Service

Subtitle 9 Northeast Maryland Waste Disposal Authority

Title 5 *Forests and Parks*

Table 1.4
Maryland Regulations Affecting Solid Waste Management

Title 08 Department of Natural Resources

The following sections must be considered in the siting of solid waste management facilities:

Subtitle 3 Chapter 8 Threatened and Endangered Species

Subtitle 19 Chapters 1-6 Forest Conservation

Title 26 Department of the Environment

Subtitle 3 Water Supply, Sewerage, Solid Waste, and Pollution Control Planning and Funding

Chapter 3 Development of County Comprehensive Solid Waste Management Plans:

Requires that each county maintain a current solid waste management plan and establishes the form for these plans.

Chapter 10 Financial Assistance for the Construction of Solid Waste Processing and Disposal Facilities

Stipulates the requirements, priority listing criteria, and ranking system for counties to receive financial assistance from the State.

Subtitle 4 Regulation of Water Supply, Sewage Disposal and Solid Waste

Chapter 6 Sewage Sludge Management

Chapter 7 Solid Waste Management

Requirements for permitting, designing, construction, operating, and closing (municipal, land clearing debris, rubble, and industrial waste) landfills, processing facilities, transfer stations, and incinerators.

Chapter 8 Scrap Tire Regulations

Chapter 9 Natural Wood Waste Recycling Facilities

Subtitle 8 Water Pollution

Subtitle 11 Air Quality

Subtitle 13 Disposal of Controlled Hazardous Substances

Subtitle 17 Chapter 1 Erosion and Sediment Control

Chapter 2 Storm Water Management

Chapter 22 (Fire Safety Code) addresses scrap, waste, and junk yards and collection stations with particular reference to fire protection (Section 22-61); the collection and burning of shavings, sawdust and other refuse materials produced at lumber yards and woodworking plants (Section 22-64); and the storage and handling of combustible waste and refuse (Section 22-80).

Chapter 25 (Hospitals, Sanitariums, Nursing and Care Homes) provides for the storage and disposal of garbage and "infectious" wastes at health care facilities (Section 25-43).

Chapter 28 (Junk Dealers and Junk Yards) provides for the licensing of junk dealers, the conditions for operating a junk yard and a prohibition against the burning of tires and other materials that create obnoxious odors or excessive smoke (Sections 28-1 to 7).

Chapter 31B (Noise Control) governs the generation of noise.

Chapter 48 (Solid Wastes) provides for the management of solid waste⁶, which is defined as "all waste materials and debris, including, but not limited to the following: garbage, sludge, and medical/pathological wastes, debris from building construction, ashes, junk, industrial waste, dead animals, salvageable waste, dead or felled trees, uprooted tree stumps, slash, tree limbs, bushes, plants, leaves, grass, garden trimmings, street refuse, abandoned vehicles, machinery, bottles, cans, waste paper, cardboard, sawdust, and slash from sawmill operations, and all other waste materials." (Section 48-1). In addition, this Chapter provides for the licensing and permitting of the collection, transportation and disposal of solid waste (Sections 48-5, 48-19, 48-22) and authorizes the County to establish service and disposal facilities (Section 48-8). Specifically, it provides for the establishment of refuse collection districts (Section 48-29). Article V of Chapter 48 requires the County Executive to develop a recycling program, which may be established by County Executive Regulation. The regulations establish the recycling goal for the County's recycling program

and the method by which the level of recycling achieved in the County is measured. It contains compliance and enforcement provisions, and authorizes the County Executive to enter into contracts to procure recycling services necessary for the collection, processing or marketing of recyclables.

Chapter 59 (Zoning) provides definitions of solid waste facilities as well as a list of land use zones in which these facilities are permitted either by right or by special exception.

⁶ In Maryland regulation (COMAR 26.03.03.01), "Solid waste also includes the "liquid" from industrial, commercial, mining, or agricultural operations, and from community activities...".

Chapter 2: Population, Employment, and Land Use

This Chapter provides a description of Montgomery County, its people, its work force and major employers, and its land use practices. These factors give helpful information for projecting solid waste quantities and for planning the future needs of the solid waste system accordingly. Trends in population and employment are indicative of the quantity and the composition of waste generated. Land use practices and conditions also influence solid waste planning in that land use patterns may place constraints on the location of solid waste facilities. This chapter is organized as follows:

- 2.1 Population Trends
- 2.2 Employment Trends
- 2.3 Zoning and Comprehensive Land Use
- 2.4 Subsidiary Plans

Acronyms and solid waste terms used in this chapter and throughout this document are defined in Appendix A.

2.1 POPULATION TRENDS

The M-NCPPC estimate of the County's population in CY 2012 is 989,177. Since 1989, Montgomery County has been the State's most populous jurisdiction. The current annual growth rate is about 1.9 percent¹ while the growth rate during the prior decade was at about 1.13 percent annually. The Department of Planning projects that the County will remain the most populous jurisdiction for the next 25 years, and this Plan incorporates those projections

¹ <http://quickfacts.census.gov/qfd/states/24/24031.html>

2.1.1 Population Projections

M-NCPPC projections suggest that population growth has slowed considerably since the 1980's with a forecasted annual growth rate averaging approximately 0.9 percent for each year from 2012-2023. Table 2.1 provides population projections for the years 2012-2023.

Table 2.1
Population of Montgomery County, Maryland 2012-2023

Year	Estimated County Population*
2012	989,177
2013	997,973
2014	1,006,768
2015	1,015,563
2016	1,025,533
2017	1,035,502
2018	1,045,472
2019	1,055,441
2020	1,065,411
2021	1,074,274
2022	1,083,137
2023	1,092,001

Source: M-NCPPC, Cooperative Forecast, Round 8.1 Revised May 2012, five year increments (2010, 2015, 2020, and 2025), intermediate years interpolated; converted to calendar years.

2.1.2 Municipalities

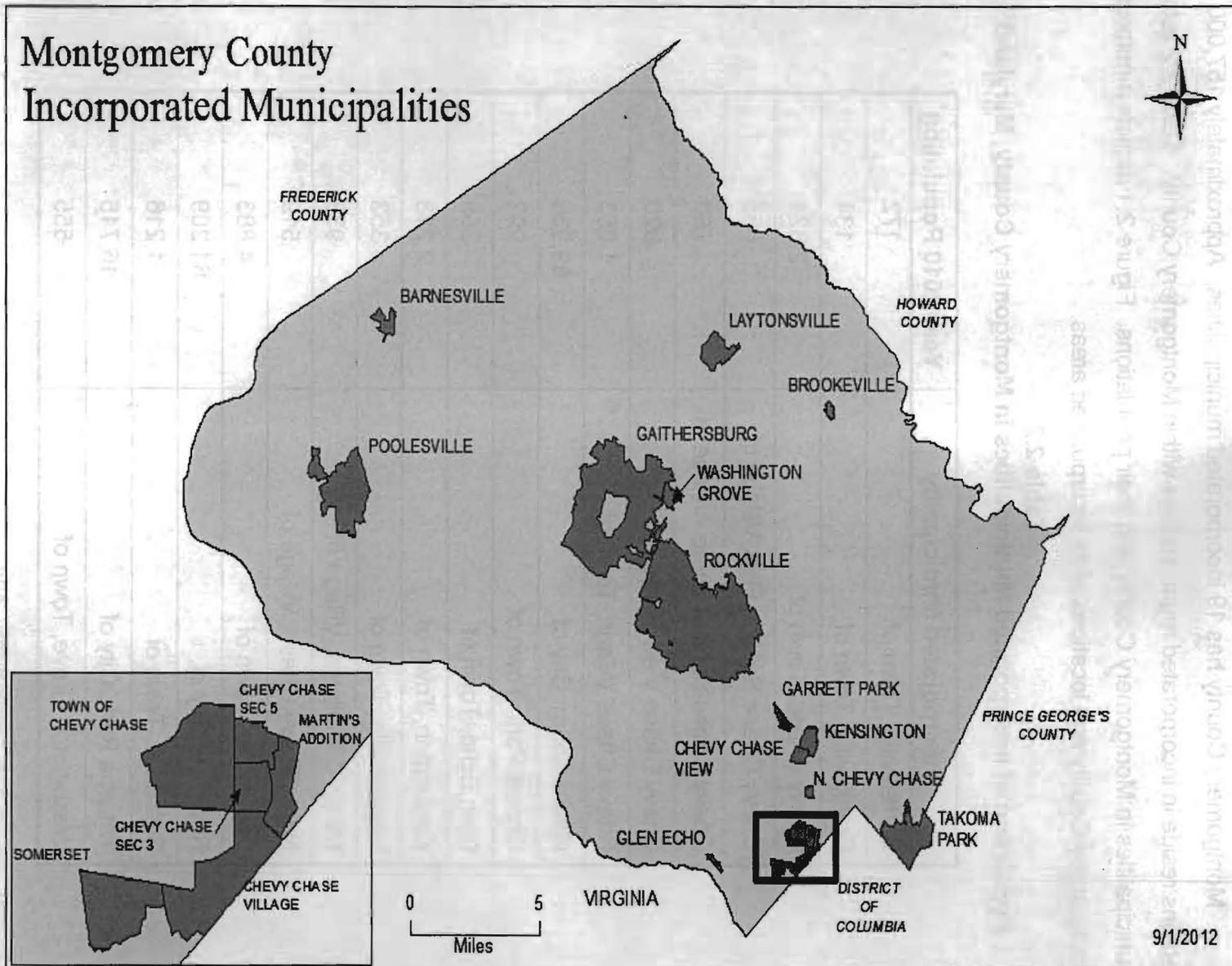
Montgomery County has 19 incorporated municipalities. Approximately 157,000 persons reside in incorporated municipalities within Montgomery County. Table 2.2 lists municipalities in Montgomery County and their populations. Figure 2.1 depicts a map of Montgomery County and locations of its incorporated areas.

**Table 2.2
Population of Incorporated Municipalities in Montgomery County, Maryland**

Incorporated Municipality	Year 2010 Population
Barnesville, Town of	172
Brookeville, Town of	134
Chevy Chase, Town of	2,824
Chevy Chase Section Five, Village of	658
Chevy Chase Section Three, Village of	760
Chevy Chase View, Town of	920
Chevy Chase Village, Town of	1,953
Gaithersburg, City of	59,933
Garrett Park, Town of	992
Glen Echo, Town of	255
Kensington, Town of	2,213
Laytonsville, Town of	353
Martin's Additions, Village of	933
North Chevy Chase, Village of	519
Poolesville, Town of	4,883
Rockville, City of	61,209
Somerset, Town of	1,216
Takoma Park, City of	16,715
Washington Grove, Town of	555

Source: U.S. Census Bureau, 2010

Montgomery County Incorporated Municipalities



Map of Montgomery County Including Municipalities

Figure 2.1

9/1/2012

2.2 EMPLOYMENT TRENDS

Montgomery County is the largest suburban employment center in the Metropolitan Washington Statistical Area, and is second only to Baltimore City within Maryland. During the last decade, the County led the State in employment growth. While the County experienced a decline in employment during the early 1990's, employment increased by the end of the decade. Over the next 10 years, the employment growth rate in the County is expected to be moderate.

The service sector is the largest category of employment in the County and exceeds federal, state and local government employment combined. This sector includes the following industries: business and repair; personal services; entertainment and recreation; professional health services; professional education services; and other miscellaneous services. According to Maryland Department of Planning, service employment increased 79 percent from 1980 to 1990. Business services were dominant. Retail trade also experienced significant growth during the 1980's, with one-quarter of the growth attributable to food and beverage businesses. During the first half of the 1990's, growth in the service sector slowed. At the same time, private sector employment in the areas of finance, insurance, real estate, transportation, communication, and public utilities jobs showed greater gains. During the second half of the 1990's, growth in the service sector increased 26 percent. Employment growth rate was 5.4 percent for the first five years of 2000's.

2.2.1 Employment Sectors

Over one-third of all jobs in the County are in the service industries, the largest sector of the County work force. Nearly one in five jobs in the County is related to retail trade. The Federal Government is the third largest employment sector in the County as well as the largest single employer in the County. The locations of federal installations in the County are provided in Figure 2.2.

Montgomery County Major Federal Installations

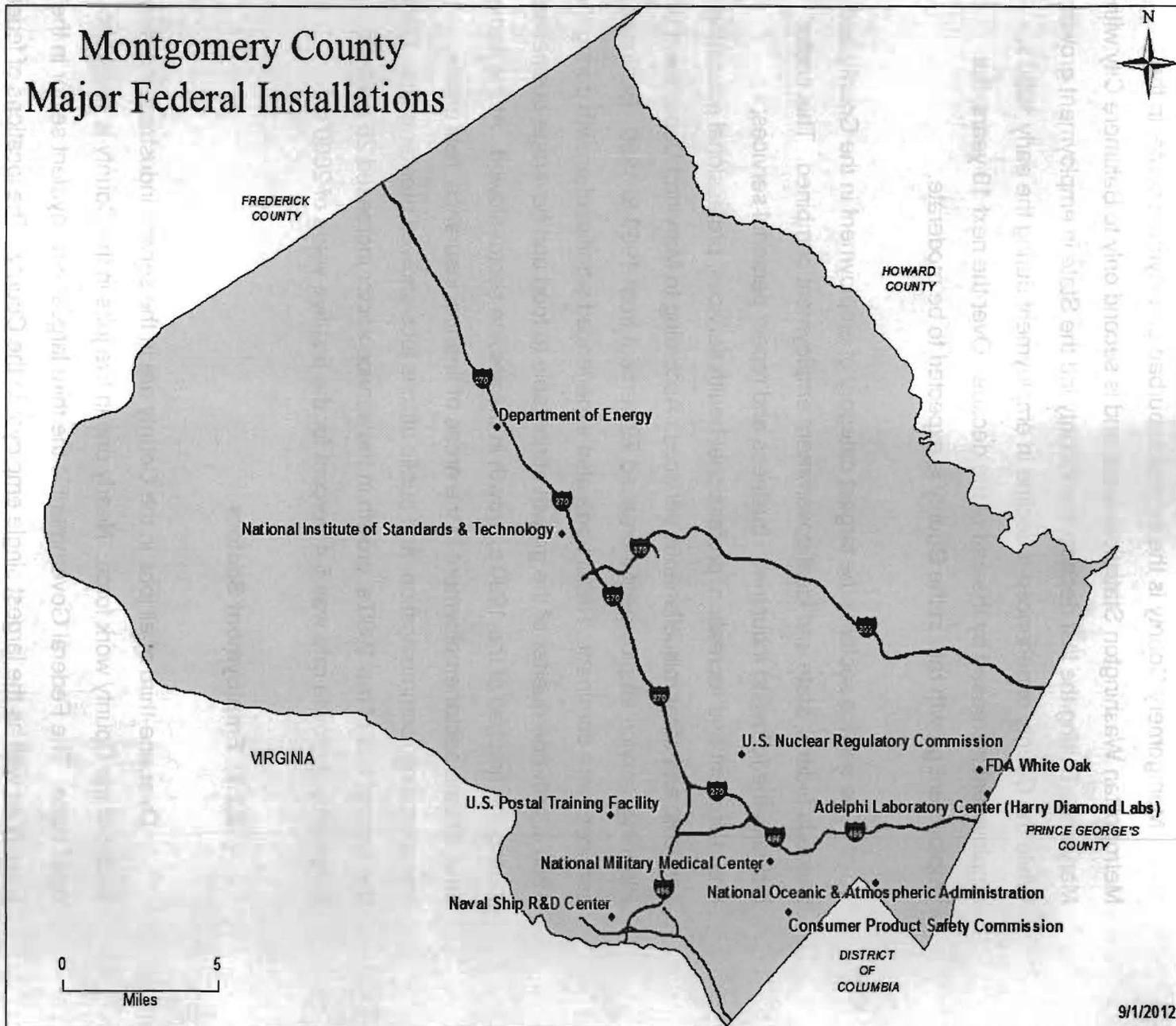


Figure 2.2 Map of Montgomery County Including Federal Installations

2.2.2 Employment Projections

M-NCPPC forecasts at-place employment (the number of positions located in the County) to grow at an annual rate of 1.22 percent from 2012 to 2013, and then an average of 1.46 percent per year from 2013 to 2023, resulting in a projected employment of 614,081 in the year 2023. Table 2.3 shows M-NCPPC “Round 8.1” projections for at-place employment for the years 2012 to 2023.

Table 2.3
At-Place Employment, Montgomery County, Maryland 2012-2023

Year	Estimated County Employment*
2012	522,880
2013	529,251
2014	535,623
2015	541,995
2016	550,669
2017	559,342
2018	568,016
2019	576,689
2020	585,363
2021	594,936
2022	604,508
2023	614,081

Source: M-NCPPC, Cooperative Forecast, Round 8.1 Revised May 2012 five year increments (2010, 2015, 2020, and 2025), intermediate years interpolated; converted to calendar years.

2.3 ZONING AND COMPREHENSIVE LAND USE

Land use policies in the County are implemented through planning and zoning decisions. Land use policies directly affect solid waste generation and management, both in terms of the quantity and type of waste generated as well as the properties on which solid waste management facilities may be located.

As stated in Chapter 1 of this Plan, the County's solid waste management goals and objectives conform to State and County land use plans by planning for the quantity of solid waste which must be processed. Waste reduction and recycling reduce the County's need to identify new land for landfills and other solid waste disposal facilities. The use of an out-of-County landfill also supports County land use plans.

The County's comprehensive land use plan, *"A General Plan for the Maryland-Washington Regional District in Montgomery and Prince George's Counties, as amended"*, (the General Plan) was adopted in 1964 and most recently revised in 1993. The General Plan also has been amended and amplified over the years by a series of master plans, sector plans, and functional plans. The General Plan includes the policy that the County will be developed on a wedges and corridors approach, with more density concentrated near major transportation corridors interspersed by wedges of large open space and farmland. The County is divided into 27 planning areas as illustrated in Figure 2.3. For each planning area, a Master Plan must be adopted and reviewed periodically.

"A General Plan Refinement of the Goals and Objectives of Montgomery County," dated December 1993, was approved by the County Council and adopted by M-NCPPC. Objective 9 in the Environment Chapter of the General Plan Refinement states: "Provide an adequate, self-sufficient, well-monitored, and ecologically sound

Montgomery County Planning Areas

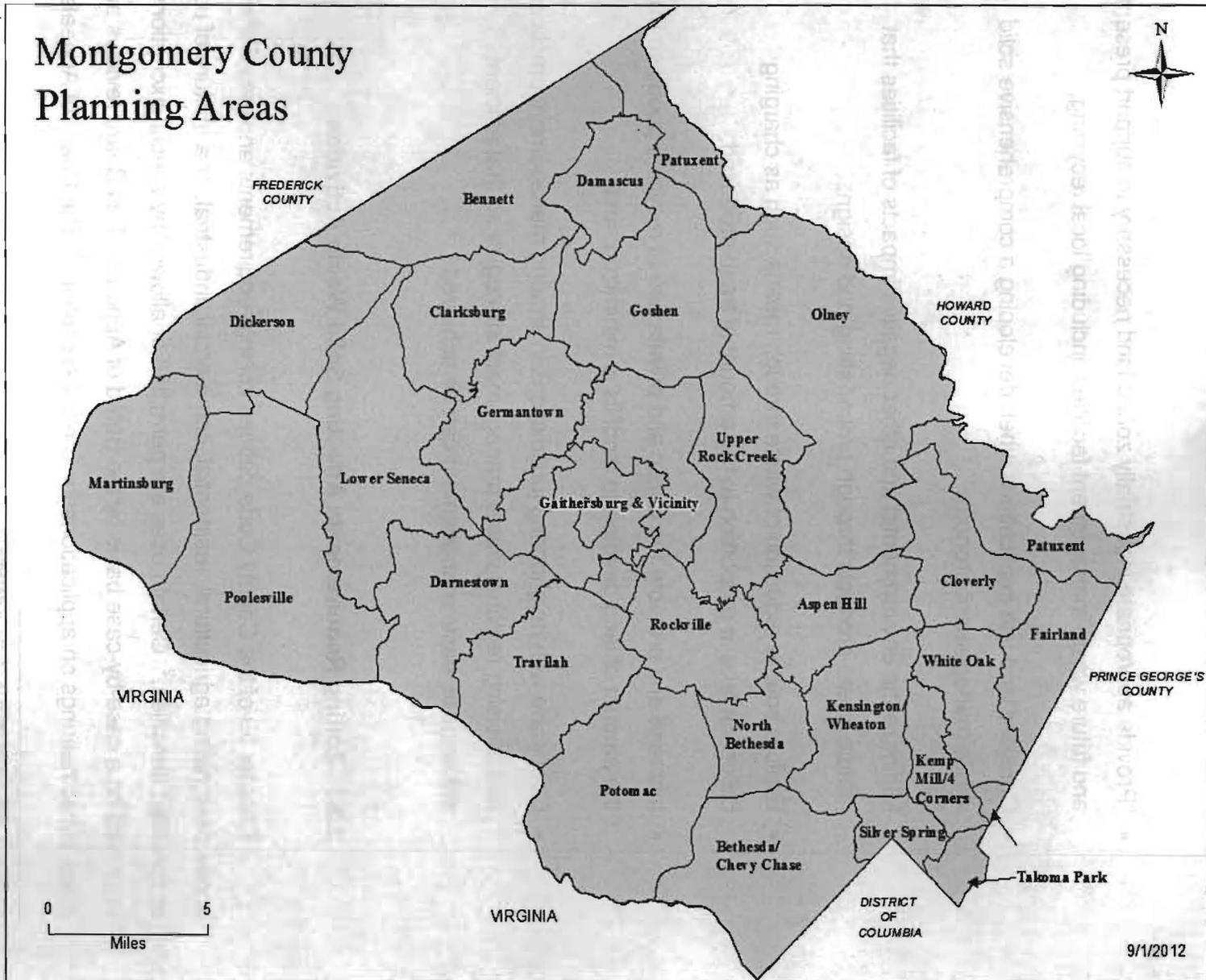


Figure 2.3 Map of Montgomery County Planning Areas

9/1/2012

system for the management of Montgomery County's solid wastes." The following strategies are listed to accomplish this objective:

- "Provide appropriate industrially zoned land necessary to support present and future waste management facilities, including local recycling;
- Consider land use implications when developing a comprehensive solid waste management program;
- Minimize the environmental and other negative impacts of facilities that handle waste products through proper siting and design;
- Explore source reduction of waste through means such as charging collection fees in proportion to the amount of trash produced;
- Increase and promote the public and private use of recycled goods so that the amount of land devoted to landfills is minimized; and
- Cooperate with neighboring jurisdictions in sharing management practices and devising regional waste management strategies so that efficient solutions to waste management can be achieved."

2.3.1 Zoning Requirements Affecting Solid Waste Activities

Chapter 59 of the County Code defines zoning requirements and establishes zones designating agricultural, residential, commercial, industrial, or a mixture of uses at specified densities.² Certain uses are permitted or allowed by special exceptions approved on a case-by-case basis by the Board of Appeals. This Board reviews and holds public hearings on applications for special exceptions. The Board of Appeals

² This plan shall not be used to create or enforce local land use and zoning requirements.

also considers variance requests relating to deviations from prescribed limitations such as setbacks and height restrictions. A zoning text amendment is the mechanism by which the County Council can modify the Zoning Ordinance and authorize changes, additions, or deletions to zones or standards governing the use of zones.

The Zoning Ordinance limits private recycling facilities to specific industrial zones. The Zoning Ordinance limits privately owned transfer stations, landfills, and incinerators to the I-2 heavy industrial zone if the County Board of Appeals grants a special exception determining that the specific I-2 parcel is suitable for a transfer station, landfill, or incinerator. The County Zoning Ordinance expressly prohibits certain uses, including privately owned and operated incinerators, in industrial zones.³ Privately owned incinerators are allowed in industrial zones only if publicly operated. The County historically has reserved relatively small amounts of land for industrial uses.

2.3.2 Agricultural Preservation

Preservation of agriculture is a high priority in the County. More than 90,000 acres of the County's 316,800 acres are actively farmed. The County and the State have programs for the preservation of agricultural land. Both the State and the County have established agricultural easements using property deeds that carry restrictions to limit non-agricultural use of the property while also providing "right-to-farm protection." The County also applied the Rural Density Transfer (RDT) zone to most agricultural areas in the northern and western parts of the County. Property owned in the RDT zone may trade Transferable Development Rights (TDRs) from their agricultural zone to redirect development to certain non-agricultural sections of the County. Development in the RDT zone is limited to one dwelling per 25 acres. Historically, most landfill candidate sites have been located within RDT zoned areas.

2.3.3 Environmental Safeguards

Guidelines and regulations ensuring environmental safeguards regarding land use are applied to projects and specific properties undergoing "development review." Development review is a process managed by M-NCPPC through which subdivision and other development projects are evaluated by staff prior to consideration of these projects by the Planning Board. This review process considers issues of environmentally sensitive areas (stream valleys, wetlands), air quality, noise, water quality, conservation, and open space. The process can reduce the environmentally negative effects of construction, such as improper grading, needless loss of trees, and improper flood plain development. The County has promulgated a tree ordinance placing requirements on developers to minimize tree removal. All of these requirements may be in addition to requirements established by construction, building, and occupancy permits.

Public facilities are subject to review by M-NCPPC in a process known as Mandatory Referral. Pursuant to the Mandatory Referral requirement, M-NCPPC reviews and makes recommendations regarding plans for new County owned solid waste facilities.

2.3.4 Transportation Considerations for Solid Waste Activities

Solid waste collection vehicles must reach and service all areas of the County. In doing so, solid waste vehicles must safely navigate a wide range of road surfaces and conditions in a manner that minimizes noise, odor, and litter disturbances to the community.

³ See Section 59-C-5.22 of the County Zoning Ordinance.

Chapter 48 of the County Code and regulations administered by DEP regulate the operation of solid waste vehicles to address potential nuisance and safety issues. County regulations require that solid waste collection and transfer vehicles must be inspected and registered. Loads of solid waste must be contained or covered during transportation to minimize litter. Collection of solid waste cannot occur before 7 a.m. near residential neighborhoods. State and local transportation laws and regulations impose other safety requirements regarding the handling of heavy vehicles, such as speed and weight limits.

There are additional restrictions to transporting solid waste on County roads. County DOT prohibits truck traffic on specified roads in the County. In addition, any new development, including a waste acceptance facility that would generate more than 50 peak hour vehicle trips would require review by M-NCPPC pursuant to the Adequate Public Facilities Ordinance. In such cases, M-NCPPC may recommend improvements to the transportation network.

The County has a policy to minimize solid waste traffic on County roads. In the 1980's, the County constructed the Shady Grove Processing Facility and Transfer Station to reduce the number of vehicle trips to the Oaks Landfill. In 1995, the County established a rail haul system to transport solid waste from the Transfer Station to the RRF in order to reduce solid waste truck traffic through communities. In 1997, the County entered into a long-term contract with Brunswick Waste Management Facility, Inc. for disposal of RRF ash bypass waste and non-processible wastes that primarily uses rail transport of these materials. A map of major roadways in the County appears as Figure 2.4.

Montgomery County Major Roadways

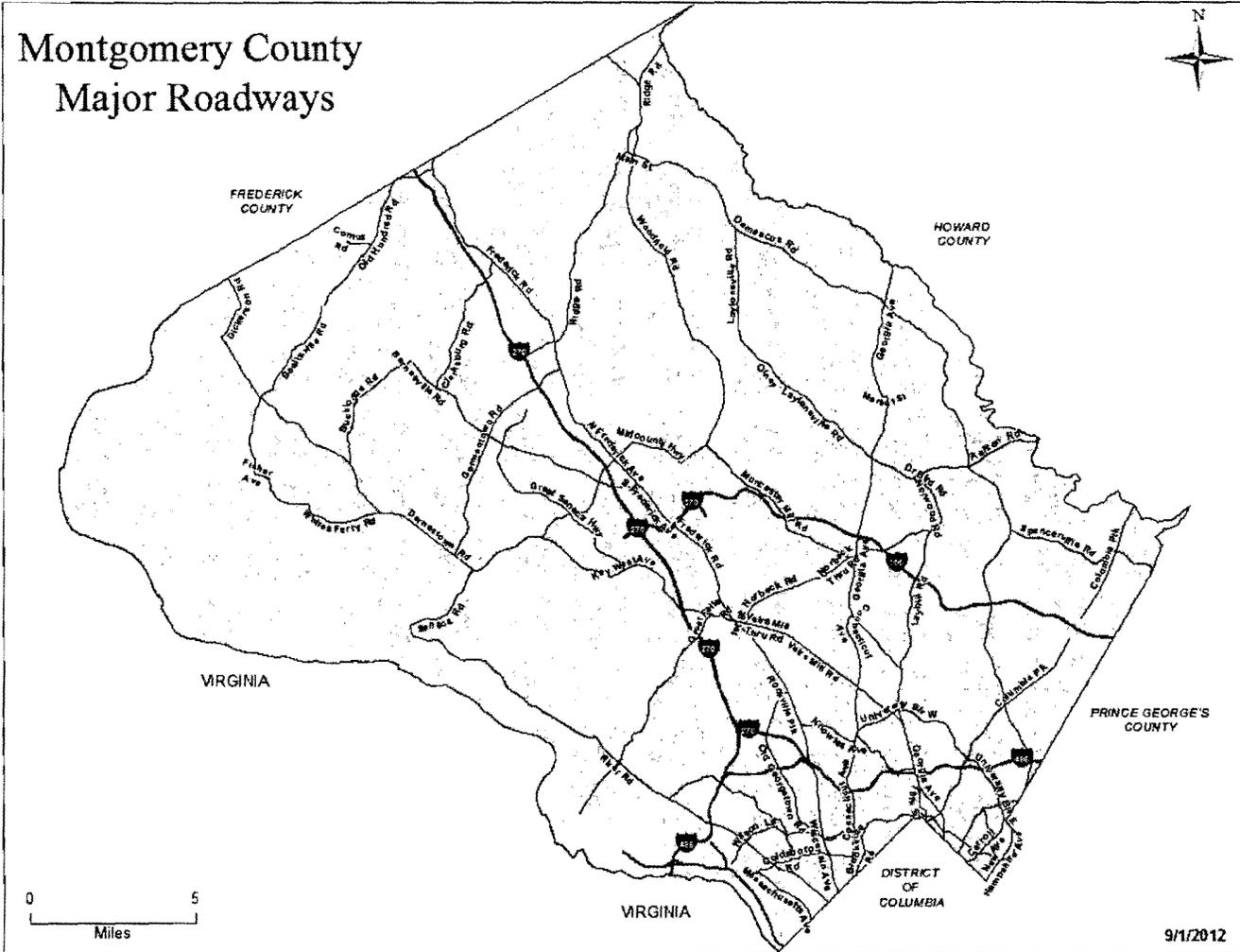


Figure 2.4
Map of Major Roadways in Montgomery County

2.4 SUBSIDIARY PLANS

Title 26.03.03.02B of COMAR requires that “each county plan shall include all or part of the subsidiary plans of the towns, municipal corporations, sanitary districts, privately owned facilities and local, State and federal agencies having existing, planned or programmed development with the county to the extent that these inclusions shall promote public health, safety and welfare.” No subsidiary solid waste management plans have been received by the County for inclusion in this Plan.

Chapter 3: Solid Waste Generation, Collection, and Acceptance Systems

This section addresses all of the solid waste categories contained in COMAR 26.03.03.03.D (a) through (l). A series of data tables are provided with the existing and projected annual generation of each waste category. The section also addresses the collection methods and solid waste acceptance facilities that are available to manage each solid waste category. This chapter is organized into the following subsections:

- 3.1 Solid Waste Generation
- 3.2 Solid Waste Collection Methods
- 3.3 Solid Waste Acceptance Facilities

Acronyms and solid waste terms used in this chapter and throughout this document are defined in Appendix A.

3.1 SOLID WASTE GENERATION

Table 3.1 displays CY 2012 solid waste generation measurements by waste type as well as solid waste generation projections for the CYs 2013, 2018, and 2023. Many subsequent sections of this chapter refer back to Table 3.1.

As specified later in this section, most ten-year solid waste generation projections are calculated using M-NCPPC forecasts for County population and employment. These forecasts are included as Table 2.1 and Table 2.3 in Chapter 2 of this Plan.

**Table 3.1
Municipal Solid Waste Generation in Montgomery County, Maryland (Tons/Yr)**

Item	Waste Category	2012 (Actual)	2013	2018	2023
a	Residential wastes	309,083	327,568	309,550	296,620
b	Commercial wastes	187,211	184,588	172,008	166,122
c	Industrial (solids, liquid, etc.)	101,419	99,998	93,183	89,994
d	Institutional (schools, hospitals etc.)	17,771	17,522	16,328	15,769
e	Land clearing and demolition debris (rubble)	191,455	193,788	207,982	224,849
f	Controlled hazardous substance (CHS)	381	386	414	447
g	Dead animals (tons included in Items b, c and d)	246	248	260	272
h	Bulky or special wastes	0			
i	Vehicle tires	23	23	24	25
j	Wastewater treatment plant sludges	6,034	6,088	6,377	6,661
k	Septage	18,000	18,000	18,000	18,000
1	Asbestos	53	54	58	62
2	Concrete/brick dirt	2,817	2,851	3,060	3,308
3	Special medical waste	3,089	3,127	3,356	3,628
4	Witness burns	2	2	2	2
5	Soil	15,735	15,927	17,093	18,480
6	Total Waste Disposed (Sum of Above)	853,073	869,921	847,435	843,968
7	Total Recycled	699,067	724,786	841,979	945,741
7a	MRA Materials Recycled	592,149	616,917	729,972	834,064
7b	Non-MRA Materials Recycled	106,918	107,869	112,007	111,676
8	Total Waste Managed	1,552,140	1,594,707	1,689,415	1,789,709
9	Total Waste Generated	1,408,438	1,437,639	1,526,037	1,619,731
	Recycled Ash (Included in Item 7)	135,100	145,896	152,245	158,164
	Backend Metal (Included in Item 7)	8,602	11,172	11,133	11,814
10	MSW Generated (see Appendix B for Details)	1,080,344	1,117,120	1,185,220	1,260,829

Notes:

Items a to k: Items based on COMAR Regulations 26.03.03.03

Items 1 to 5: Items based on MDE instructions

Item 9: Total Waste Generated = Total Waste (tons) - MSW Ash Recycled (tons) - Backend Scrap Metal (tons)
= 1,552,140 tons - 135,100 tons - 8,602 tons = 1,408,438 tons

Data included in this Plan are gathered from a variety of sources. Certain solid waste data are obtained directly from scales at County facilities. For example, tons of refuse processed at Shady Grove Processing Facility and Transfer Station and tons of recyclables handled at the MRF are recorded on-site. Other data points are derived from external sources. The County requires private solid waste collectors to report the amount of refuse and recyclables transported to non-County facilities. Periodic studies commissioned by the County provide other key data points such as the changes in per capita or per employee waste generation rates and the relative composition of wastes in the disposal stream.

3.1.1 Municipal Solid Waste (Residential, Commercial, Industrial, & Institutional)

Municipal Solid Waste (MSW) consists of solid waste generated at residences, commercial establishments and institutions. MSW does not include land clearing and demolition debris, controlled hazardous substances, automobiles, biosolids or other solid waste streams requiring specialized handling. These other solid waste types are discussed later in this chapter.

The Montgomery County recycling rate calculation report is developed using a comprehensive accounting methodology that incorporates all data available on County MSW flows. For the purposes of a base year for this Plan Update, Appendix B displays the result for the County for CY 2012 in terms consistent with the State of Maryland methodology as stipulated in the MDE Maryland Recycling Act guidelines for CY 2012, dated November 28, 2012. Beginning with CY 2012, and for each subsequent calendar year, Montgomery County will utilize the State of Maryland methodology as stipulated in the MDE guidelines that meet the requirements of the Maryland Recycling Act for measuring its recycling rate, and will include the Source Reduction Credit used to calculate the Waste Diversion Rate by the State of Maryland. See also Sections 3.1.9 and 5.2.4.4.

Table 3.1 also displays MSW recycled and disposed according to four categories specified in COMAR 26.03.03.03.D “residential waste”, “commercial waste”, “industrial waste” and “institutional waste”.

The total County MSW generation follows the methodology detailed in Appendix B which yields 1,080,344 tons. Generation projections for CYs 2013 to 2023 are adjusted for increases in County population and employment only.

The accounting of MSW generated in the County is independent of the location at which the MSW was processed. Refuse generated in the County may be processed at the County’s Transfer Station or at a private facility located outside the County. No privately operated MSW disposal facilities exist within the County. County recycling and composting facilities primarily handle materials generated by the single-family residential sector. Recyclables generated by the multi-family residential and non-residential sectors are processed at both private facilities and the County MRF. Privately operated recycling facilities are located both within the County and in adjacent jurisdictions.

The County validates generation rates by analyzing public and private sector waste disposal and recycling practices. County Executive Regulation 5-13AM requires collectors and haulers transporting solid waste in the County to submit semiannual reports about their activity. Reports must specify the quantities of recyclables by categories of material and the quantities of solid waste disposed, and must indicate whether the material is delivered, including destinations located inside or outside the County, and must distinguish MSW from C&D. See also Section 3.2.7.1.

3.1.1.1 Residential Solid Wastes

Residential solid waste consists of household waste generated both from single-family and multi-family (e.g., apartment, condominium) residences. As shown previously

in Table 3.1, residential solid waste generation in CY 2012 was 309,083 tons. This total residential waste generation figure includes only processed MSW. These data have been derived using a combination of weight reports from the County's Solid Waste Transfer Station, MRF, and Yard Trim Composting Facility records supplemented with information provided under County Executive Regulation 5-13AM by solid waste collectors and haulers (See Section 3.2.7.1).

3.1.1.2 Commercial, Industrial and Institutional Sources

Commercial, industrial and institutional solid wastes comprise all MSW generated from non-residential sources. Commercial solid waste generally consists of refuse and recyclables generated by offices, bars and restaurants, retail and wholesale establishments, and hotels. Industrial solid waste consists of refuse and recyclables generated by manufacturing, transportation and utility activities. Institutional solid waste consists of refuse and recyclables generated primarily from health service, government and education activities.

The regulation governing this plan's content requires distinction of "commercial", "industrial" and "institutional" MSW generation. Montgomery County estimates non-residential waste generation according to eighty-one land use types as recorded by the State Department of Assessments and Taxation. Aggregation of those land uses into commercial, industrial and institutional categories generated the following distribution of non-residential waste generation among the "commercial", "industrial" and "institutional" categories: Commercial 61.1 percent, Industrial 33.1 percent, and Institutional 5.8 percent.

Non-residential waste generation figures include both waste disposed and waste recycled. As indicated by the sum of lines (b) through (d) in Table 3.1 shown previously, non-residential waste disposed in CY 2012 was 306,401 tons. Commercial, industrial and

institutional waste generation tonnages shown previously reflect an allocation of total non-residential waste generation in proportion to the above distribution. Total non-residential waste generation data have been derived using weight reports from the County's Solid Waste Transfer Station; along with information provided under County Executive Regulation 5-13AM by solid waste collectors and haulers (See Section 3.2.7.1).

3.1.1.3 Recycling at Special Events in Montgomery County

Consistent with Section 9-1712 of Environment Article, Annotated Code of Maryland, Montgomery County already works with the agencies that issue event permit approvals for special events using public streets, public facilities or public parks for their event, serve food or drink, and states that they will have 200 or more persons in attendance, to stipulate the event organizer must do the following:

- Provide a recycling receptacle immediately adjacent to each trash receptacle at the special event;
- Ensure that all recycling receptacles are clearly distinguished from trash receptacles by color or signage; and
- Ensure that all recyclable materials (as mandated by Montgomery County regulation) deposited into recycling receptacles at the special event are collected for recycling.

To the extent feasible, Montgomery County will recommend to the event organizer described above that they consider collecting food scraps for recycling.

Montgomery County may at its discretion:

- Require the event organizer to report to the County on recycling activities; and

- Conduct investigations of special event locations to enforce recycling requirements.

3.1.2 Land Clearing and Construction and Demolition Debris (C&D)

Land clearing and demolition debris includes rock fragments, soil, masonry, concrete, asphalt, brick, glass, plastics, mortar, wood, paper and metals. When consolidated from a construction or demolition site, these materials are not MSW.

As indicated in Table 3.1, land clearing and demolition debris generation in the County was 191,455 tons in CY 2012.

Based on County and private sector scale records, private C&D disposal activity is reported to the County pursuant to Executive Regulation 58-92AM. Assuming that generation is proportional with population and employment change, projected total generation of land clearing and C&D for the Year 2023 is 224,849 tons. This is without regard for economic condition influences.

3.1.3 Controlled Hazardous Substances

Controlled Hazardous Substances (CHS)¹ include hazardous waste as defined in COMAR 26.13.01 and special medical wastes as defined in COMAR 26.13.11. These solid wastes require separate collection and disposal from MSW.

³ For regulatory definition, see Section 7-201, the Environment Article of the Annotated Code of Maryland.

3.1.3.1 Hazardous Waste

A hazardous waste as defined in COMAR 26.13.01 is a solid waste which, because of its quantity, concentrations, or chemical, or physical characteristics, poses a substantial present or potential hazard to human health or the environment. In general, State regulations fully regulate any hazardous waste generator that: generates 100 kilograms or more of hazardous waste per month; generates 1 kilogram or more of acute hazardous waste per month; or, stores 100 kilograms or more of hazardous waste on site.²

The estimated 381 tons of hazardous wastes generated in the County are derived from EPA biannual report in 2009 and extrapolated at the same rate as County employment growth. The projected County generation for the Year 2023 is 447 tons.

The MDE regulates Treatment, Storage, or Disposal (TSD) facilities of hazardous waste and requires the certification of drivers and vehicles that transport hazardous waste. There are two facilities in the County with TSD permits to store hazardous waste for up to 90 days: the National Institutes of Health in Bethesda and the Walter Reed National Military Medical Center in Bethesda. All hazardous waste generated and stored in the County is shipped out of the County for treatment, storage and disposal.

Household Hazardous Wastes (HHW) as well as hazardous waste produced in small quantities by non-residential generators are not included in the COMAR 26.13.01 definition of hazardous wastes. See Chapter 5 of this Plan for a description of County efforts to manage household and small quantity generator hazardous wastes.

² For a complete description of State controlled hazardous waste generator requirements, see COMAR 26.13.02.

3.1.3.2 Special Medical Waste

Special medical waste is generated by hospitals, doctors' offices and medical testing and research laboratories. Special medical waste includes utensils, bandages, containers or any other material issuing from all human patient care, diagnosis and surgical areas, animal bedding and feces, disposable laboratory equipment, and their contents, materials resulting from and/or exposed to infectious animal care and laboratory procedures, all disposable needles and syringes, all other disposable materials from out-patient care for human and animal patients, where presence of pathogenic organisms are diagnosed or suspected.

The MDE regulates special medical waste incinerators. At present, no permitted special medical waste incinerator operates in Montgomery County. All special medical waste generated within the County is transported for disposal at private facilities outside of Montgomery County. The MDE licenses special medical waste haulers. As shown in Table 3.1, special medical waste reported by licensed haulers was 3,089 tons for CY 2012.

3.1.4 Animal Carcass

Animal carcasses are a COMAR listed solid waste from various sources including: domestic pets, roadways, County animal shelters, research facilities, farms, restaurants and groceries.

There are no rendering facilities for animal carcasses located in the County. Most farm animal carcasses, bone and fat from restaurants, groceries, and other food services are recycled by rendering facilities in Virginia, and Pennsylvania. Animal shelter and road-kill carcasses are processed at out-of-County special medical waste incinerators or animal

rendering facilities. One privately owned pet crematorium operates under State permit in the County.

In CY 2012, animal carcasses were estimated to comprise 246 tons of solid waste generated in the County (Table 3.1). This is based on approximately 185 tons of dead animals estimated by the contractor to the County Police Department as collected from County roadways, plus 61 tons of dead animal carcasses reported by the Montgomery County Animal Shelter. For the purposes of this Plan, the 2012 animal carcass waste tonnage is projected to increase in the future in proportion to residential population.

3.1.5 Vehicle Scrap Tires

Federal guidelines suggest that scrap tire generation is proportional to population and results in one tire scrapped per capita per year.

The State of Maryland Scrap Tire Law³ prohibits the disposal of tires in landfills. Under the provisions of the Law, scrap tires are collected and managed through a State licensing system for the collection, storage, transportation and disposal of scrap tires. The State also regulates scrap tire recycling facilities. There are no permitted scrap tire recycling facilities located in the County. However, many auto service centers in the County arrange for private recycling of their customers' tires at facilities outside of the County.

County residents may drop off up to five (5) scrap tires per year at Shady Grove Processing Facility and Transfer Station for recycling. In CY 2012, the County received 193 tons of tires for recycling. Licensed scrap tire companies transport scrap tires from the Transfer Station to one of several State permitted scrap tire recycling facilities.

³ Section 9-228, the Criminal Article of the Annotated Code of Maryland.

3.1.6 Wastewater Treatment Biosolids

Biosolids are a COMAR listed solid waste that refers to municipal wastewater solids, formerly referred to as sewage sludge. Current detailed information on the County management of wastewater is available in the “Ten Year Comprehensive Water Supply and Sewerage Systems Plan.”

Biosolids are generated by the five waste water treatment plants (WWTP) that serve the County. Over 90 percent of the domestic wastewater that is discharged to the public sewerage system in the County is treated at the Blue Plains WWTP. WSSC presently manages its share of biosolids from the Blue Plains WWTP through contracts for beneficial agricultural cropland applications.

WSSC is in the design phase of its Anaerobic Digestion/Combined Heat & Power (AD/CHP) project which will be located at the Piscataway WWTP. This project represents a major change in how biosolids will be dealt with in Montgomery County and Prince George’s County. Details are described in Sections 4.2.8 and 5.2.2.

The four other WWTP facilities in the County are: Seneca, Damascus, Hyattstown, and Poolesville. The total amount of biosolids generated at these WWTP facilities is based on the 2012 average daily flows. The CY 2012 average daily flows of these waste water treatment plants are as follows, in mega gallons per day: Seneca 14.853, Damascus 0.802, Hyattstown 0.047, and Poolesville 0.513.

Current biosolids generation at the four WWTP facilities is estimated at 5,867 dry tons per year and can be estimated for the purposes of this plan to be approximately 6,477 dry tons per year by 2023.

3.1.7 Septage

Approximately 50,000 homes in Montgomery County use a septic system rather than a public WWTP. In addition, about two dozen homes rely on sewage holding tanks. Septic system biosolids and sewage holding tanks are periodically pumped by private haulers permitted by WSSC. Pumped biosolids and sewage is discharged into the sanitary sewerage system at a controlled entry point located at the WSSC Muddy Branch facility.

Using assumed tank capacities and discharge frequencies, the County estimates septage generation at approximately 18,000 wet tons annually. WSSC has a "Septage Discharge Facility Planning & Implementation" project in the CIP which would result in the construction of 3 discharge facilities (the abandoned Rock Creek WWTP, Anacostia Waste Water Pump Station No. 2, and the Piscataway WWTP).

3.1.8 Waste Importation and Exportation

3.1.8.1 Importation of Waste into the County

As a matter of policy, County operated solid waste facilities are used only for solid waste generated in the County (see Section 5.1.2.1.b). As a result, no MSW is imported from other jurisdictions to County operated solid waste facilities. With the exception of three active private recycling facilities, no major private solid waste facilities exist in Montgomery County that would attract waste generated outside the boundaries of the County (See Section 3.3 for complete list of solid waste facilities in County).

3.1.8.2 Exportation of Waste from the County

Approximately 164,000 tons of non-recycled MSW generated within Montgomery County is disposed of at facilities outside the County, as shown on Table 4.3. Based on Table 4.4, approximately 44 percent of the C&D generated in the County is handled by

the County Transfer Station, and 56 percent is exported to private facilities. All other types of solid waste are processed primarily, or exclusively, at out-of-County facilities.

3.1.9 Calculation of MSW Recycling Rate and Waste Diversion Rate

As discussed in Section 3.1.1, Montgomery County is following the State's method for Recycling and Diversion Rate accounting. The MRA, Section 9-1705 of the Environment Article, Annotated Code of Maryland, requires each County to document recycling rates. MDE has developed "Tonnage System Reporting Guidelines for CY 2012" for calculating recycling rates for the purpose of compliance with MRA requirements. In addition, the State recognizes specific source reduction activities carried out by a jurisdiction that yields a combined recycling and diversion rate under the MRA by awarding them an additional credit of up to 5 percent.

Montgomery County's 70 percent recycling goal includes the State's 5 percent diversion credit. (In adopting the State's recycling rate method, the County discontinues including back yard composting and grasscycling in its recycling rate calculation, see Appendix H.) The County expects that the State will continue to award its full 5 percent Diversion Rate credit due to the County's ongoing waste reduction efforts. See also section 5.2.4.4.

**Table 3.2
Municipal Solid Waste Recycling Rate: County Calculation (Tons/Yr)**

	2012 (Actual)	2013 (Estimated)	2018 (Projected)	2023 (Projected)
Total MSW Generated	1,080,344	1,117,120	1,185,220	1,260,829
Total Recycled	699,067	724,786	841,979	945,741
MRA Materials Recycled	592,149	616,917	729,972	834,064
Non-MRA Materials Recycled	106,918	107,869	112,007	111,676
Ash Included Above	135,099	145,896	152,245	158,164
Recycling Rate	54.8%	55.2%	61.6%	66.2%
Diversion Rate	59.8%	60.2%	66.6%	71.2%

The tonnage projections provided in Chapter 3 (See Table 3.3) envision the County reaching approximately 61.6 percent recycling in CY 2018, and 66.2 percent in CY 2023, as shown in Table 3.2. Regarding these projections, it should be understood that Montgomery County's system of finance, requiring a nexus between its system of solid waste charges and tonnages, dictates that published County solid waste tonnage projections be consistent with those of its approved Fiscal Plans. Annually, within its budget process, the County updates the solid waste tonnage projections underlying its proposed Fiscal Plan, and that Fiscal Plan, which encompasses a seven year span, is proposed each March 15.

As a matter of prudent fiscal policy and process, the County's tonnage projections published in any year may not presume any future-year approvals of new, as yet un-appropriated programs or initiatives other than those proposed for the subject Budget Year. The tonnage projections in this Plan are consistent with the tonnage projections associated with the County Executive's published Six Year Operating Budget and Fiscal Plan. This Fiscal Plan in any year cannot presume the existence of any future-year recycling initiatives (as they may require future year Council Approval), but rather only business as usual for the five years following the then-next budget cycle fiscal year. In the current instance, the tonnage projections in this Plan are consistent with those of the County's FY14-19 Fiscal Plan.

3.2 WASTE COLLECTION METHODS

Under the direction of the Director of DEP, the Chief of DSWS is responsible for solid waste collection in the County except as specifically designated. Jobs also include Overseeing the collection of solid waste, responding to inquiries and complaints related to collection services and other County solid waste program activities, and enforcing solid waste laws and regulations.

3.2.1 Single-Family Collection District

Pursuant to County Code, Section 48-29, and implementing regulations, the entire County is a collection and disposal district. Code Sections 48-29, 48-35 and 48-44, the County is authorized to enter into multi-year contracts for the collection of solid wastes within the collection Subdistrict A and to collect charges from the dwelling units that are served. Any city, town, village, special taxing area or community may, by its own initiative, become included in or excluded from the collection district. The County must not collect solid waste from any building with 7 or more dwelling units.

3.2.2 Collection Service Subdistricts

The County (Collection District) is divided into two solid waste collection subdistricts; Subdistrict A and Subdistrict B, as shown in Figure 3.1. DSWS maintains official maps of the subdistricts.

3.2.2.1 Collection Subdistrict A

Within Subdistrict A, the County provides refuse and recycling collection services, through contracts with private collectors one or more times per week, at the discretion of the County Executive. In addition, homeowners or occupants of residences with one or two units in Subdistrict A, may at their own expense, contract

directly with the collection contractor to obtain supplementary solid waste collection services. In CY 2012, Subdistrict A included approximately 90,986 single-family residences⁴.

Bulky objects generated by single-family residences and residential buildings with six or fewer units in Subdistrict A are collected separately by County-contracted collection services. Certain bulky objects, such as white goods and scrap metal items are collected for recycling. Non-recyclable bulky objects are collected for disposal. Bulky object collection does not include construction and demolition debris.

3.2.2.2 Collection Subdistrict B

The County provides for recycling collection services in Subdistrict B in the same manner as does in Subdistrict A; however refuse collection services in Subdistrict B are provided by private collectors called Independent Collection Contractors. An Independent Collection Contractor must enter into a collection authorization with the County under terms acceptable to the County which allows it to collect solid waste from single-family residences. The Independent Collection Contractor contracts directly with its customers for the collection service. In CY 2012, Subdistrict B included approximately 120,377 single-family residences.

3.2.2.3 Collection Subdistrict Transfer

Under the authority of Subsection 48-29 of the County Code, these service subdistricts may be expanded or reduced by Method 2 regulation.

⁴ Single-family residences, in this context, include detached dwellings, duplexes, town homes, and multi-family residences in buildings composed of six or fewer dwelling units.

Montgomery County Collection Subdistricts

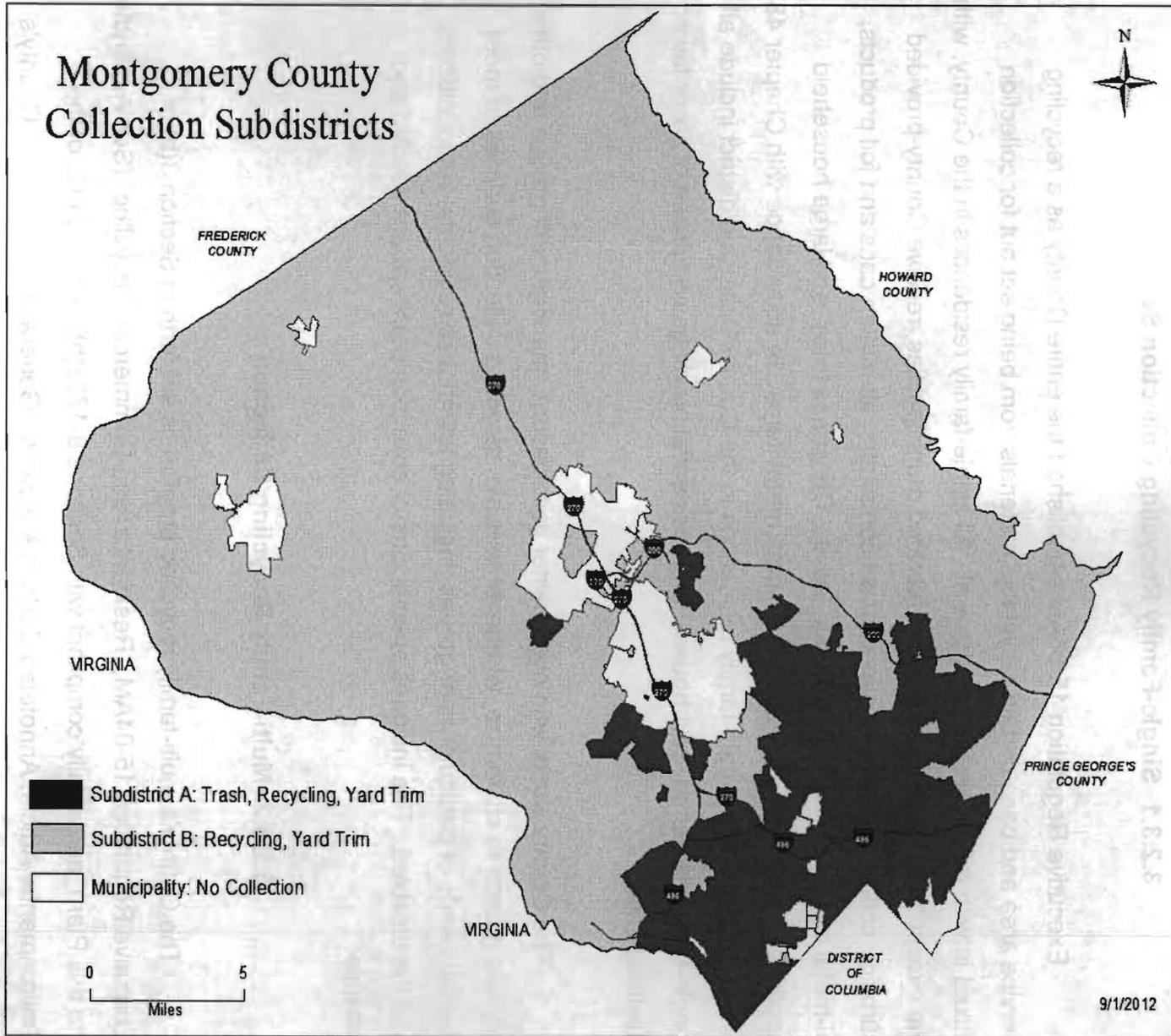


Figure 3.1
Map of Collection Subdistricts A and B

3.2.3 Residential County Recycling Collection

3.2.3.1 Single-Family Recycling Collection Service

Executive Regulation 15-04AM established the entire County as a recycling service area and bans certain recyclable materials from being set out for collection mixed in with refuse set out for disposal. All single-family residences in the County, with the exception of those in certain incorporated municipalities, receive County-provided curbside collection of mixed paper, glass containers, aluminum cans and foil products, bi-metal cans, plastics, grass, brush, leaves, Christmas trees, and large household appliances (“white goods”) and other scrap metal items. In accordance with Chapter 48 of the County Code, single-family residences in the County Collection district include all single-family detached, townhouses, and residential buildings comprised of six or fewer dwelling units.

The County works with homeowner associations, management groups and other citizens groups to customize, whenever feasible, recycling collection services to meet special needs of particular user groups, including townhouse residents, senior citizens and the disabled. This includes special bins or collection points where needed and feasible.

3.2.3.2 Multi-Family Recycling Collection

The County’s multi-family recycling program is set forth in Section 3(b) of Executive Regulation 15-04AM, “Residential and Commercial Recycling” (See Appendix I to this Plan), and is fully compliant with Sections 9-1703(b), (12) and (13) of the Environmental Article, Annotated Code of Maryland. Generally, Montgomery County’s multi-family recycling program mirrors its single-family recycling program, except that privately contracted collectors, rather than County or County-contracted collectors,

provide a separate collection of specified recyclable materials. The same spectrum of recyclable materials collected from the single-family sector is stipulated and includes, among other materials plastic, metal and glass containers. Section 3(b)(3)(c)(8) of Executive Regulation 15-04AM requires, among other things, that “Collectors must collect and deliver to a recycling facility materials that have been source separated from the solid waste stream, unless the recyclable materials are not acceptable. If a collector determines that the recyclable materials are not acceptable then the collector must inform the generator or responsible agent in writing using a form provided by the Department. The collector must indicate the name of the property, name of the responsible agent and specify a collector name and phone number for additional information”.

3.2.3.3 Processing, Marketing and Disposition of Recovered Materials

All single-family residential mixed paper and commingled recyclable materials received through the curbside collection program as described in Section 3.2.3.1, above, are transported to the County’s MRF.

At the MRF, residential mixed paper is transferred to trailers and shipped to a private recycling company for grade separations and transport to paper mills and other secondary paper fiber markets.

Commingled glass, aluminum, bi-metal and plastic containers are run through a mechanical and hand separating system. Separated recyclables are shipped to private brokers or dealers in the secondary materials markets. (Regarding the MRF, see also Section 3.3.1.3).

Grass and leaves are shipped by truck and rail to the County Yard Trim Composting Facility where they are composted in an open-air windrow operation using mobile turning and shredding equipment (see Section 3.3.1.4). Finished compost is sold commercially in bulk and bagged form as a soil amendment product. Community agreements limit bagging production at the facility to 500,000 bags per year.

Brush and Christmas trees are chipped at the Transfer Station and provided as free “green” mulch to residents at selected sites around the County. The majority of mulch is sold to commercial vendors as market conditions allow.

White goods and other scrap metals are sold to private scrap metal recyclers. Motor oil, antifreeze, vegetable oil, auto batteries, computers, televisions, usable building materials and textiles are recycled through various outlets. (See Section 4.1.2.5 for a description of the County’s electronics recycling program.)

Section 3.2.3.2, above, describes how recovered materials from multi-family properties are collected for recycling. Collectors may deliver the recovered materials to the County MRF, but generally those materials are delivered to private sector recyclers. Section 3(c) of County Executive Regulation 18-04 requires, among other things, that “Haulers, collectors, and other persons must deliver recyclables acceptable for recycling only to recycling facilities”. Executive Regulation 15-04AM, requires, among other things, that owners of multifamily properties file with the DSWS a plan demonstrating how the property will achieve minimum 50 percent recycling (Section 3(b)(3)(B)(1)). Section 3(b)(3)(C)(2) of Executive Regulation 15-04AM requires those owners to annually report to the DSWS which entities provided recycling collection service, and the related tonnages recycled. Likewise, Executive Regulation 18-04 requires haulers and collectors to report (every six months) to DSWS the number of tons hauled, and to what recycling facilities. For additional details on the provisions of these regulations please see Appendix I.

3.2.3.4 Electronic Recycling

DSWS' electronics recycling program is consistent with the provisions of the Statewide Electronics Recycling Program Act (Act), which took effect on October 1, 2007. The program is consistent with the Act. It provides for the recycling of computers, including desktop personal computers, laptop computers and computer monitors, and. Additionally the program provides for the recycling of covered electronic devices, which means a computer or video display device with a screen that is greater than 4 inches measured diagonally. Other electronics items are acceptable for recycling under the program.

The County has a drop-off program for computers (CPUs), monitors and related electronic items at the Transfer Station, and it recently expanded this program to include TV sets, computer monitors, cell phones, and virtually any electronic device with a cord. Material is accepted from County residents and businesses. Some computer components in working order are salvaged for reuse; hazardous and toxic materials in unusable components are recovered for proper disposal.

DEP recently began conducting several electronic collection events per year at various, more convenient, locations around the County. For compact fluorescent lamps (CFLs) the County will continue to work to expand the number and locations of retailers who accept CFLs for recycling, and will continue to publicize this information through the DEP website and other educational opportunities. Currently, the County accepts CFLs and fluorescent tubes from residents for no fee through its Household Hazardous Waste (HHW) program for residents and as Universal Wastes for a small fee from businesses. Clean Harbors Environmental Services, Inc. is the contractor that provides these services seven days a week at the Shady Grove Processing Facility and Transfer Station. The hours are 7:00 a.m. to 8:00 p.m. Monday to Friday; 7:00 a.m. to 5:00 p.m. on Saturday; and 9:00 a.m. to 5:00 p.m. on Sunday. These extensive hours encourage

greater use of the facility and accommodate almost any schedule for residents and businesses. Clean Harbors processes and separates the glass, metal, and mercury from the bulbs and ships the materials to recycling markets.

3.2.4 County Leaf Collection Service

MCDOT vacuums leaves from public rights-of-way within the Leaf Collection District (see Figure 3.2) from November through January and at such other times as the Department may determine. Leaves collected from public rights-of-way are composted at the Yard Trim Composting Facility. The County has implemented a regulation (Executive Regulation 6-99AM⁵ in Appendix F) allowing communities to opt in/out of the leaf collection district.

3.2.5 Waste Collection in Incorporated Municipalities

There are 19 incorporated municipalities within Montgomery County with responsibility for the collection of refuse and recyclables from within their jurisdictions. See Table 2.2 for a list of municipalities. Municipalities have the option of delivering refuse to the County Transfer Station and recyclables to the County MRF.

3.2.6 Independent Waste Collection

The collection and disposal of wastes generated on multi-family residential properties (those with seven or more dwelling units) and non-residential (commercial, industrial and institutional) properties are the responsibilities of the property owner. Wastes from these sources are either collected by a private collection company or self-hauled to a waste acceptance facility.

⁵ Citation of any County Executive Regulation in this Plan is for informational purpose only and does not constitute incorporation into the Plan, such that the regulation cannot be amended by County process without amending this Plan.

House Bill 1290 “Environmental-Recycling-Public-School Plans” of the 2009 Maryland General Assembly added a new sub-section (b)(10) to §9-1703 of the Environment Article, Annotated Code of Maryland setting recycling requirement for public schools. The County’s strategy for the collection, processing, marketing, and disposition of recyclable materials from public schools is described in “Montgomery County Public Schools Recycling Action Plan, June 2013” and “Montgomery County Recycling Plan for Publicly Funded Colleges and Special Schools”. These two documents were prepared by the Montgomery County Public Schools (MCPS) and DEP, respectively, for the purpose of satisfying subsection (b)(10) of §9-1703 and are incorporated herein by reference for that purpose.

Private commercial collectors also provide recycling collection service to multi-family residential and non-residential properties. These collectors deliver recyclable material to private facilities located inside and outside the County.

Private commercial collectors also provide refuse collection service to single-family residences in Subdistrict B, as described above and refuse and recycling collection to single-family residences in some incorporated municipalities.

3.2.6.1 Collection Frequency

Regularly scheduled collection service is mandatory for all sources, except for commercially generated construction and demolition debris.

Refuse removal frequency is to be in accordance with the quantity and type of wastes generated and the on-site storage capacity of the generator. Refuse generators either provide collection services or contract with collectors doing business in the County.

Highly putrescible wastes, such as seafood waste, are removed from commercial premises daily, unless the waste is discharged directly into a sanitary sewer system, or is stored in refrigerated storage. As stated in Section 48-24(e)(2) of the Montgomery County Code, the existence of objectionable odors at the nearest adjoining premises is evidence of insufficient removal frequency.

3.2.6.2 Collection of hazardous and special medical wastes

Hazardous and special medical wastes are not put out for regular refuse collection. Hazardous wastes are transported by permitted hazardous waste haulers to permitted TSD facilities. Special medical wastes are to be destroyed by proper incineration on the premises or transported by a permitted special medical waste hauler to a permitted special medical waste disposal facility.

Montgomery County Leaf Collection District

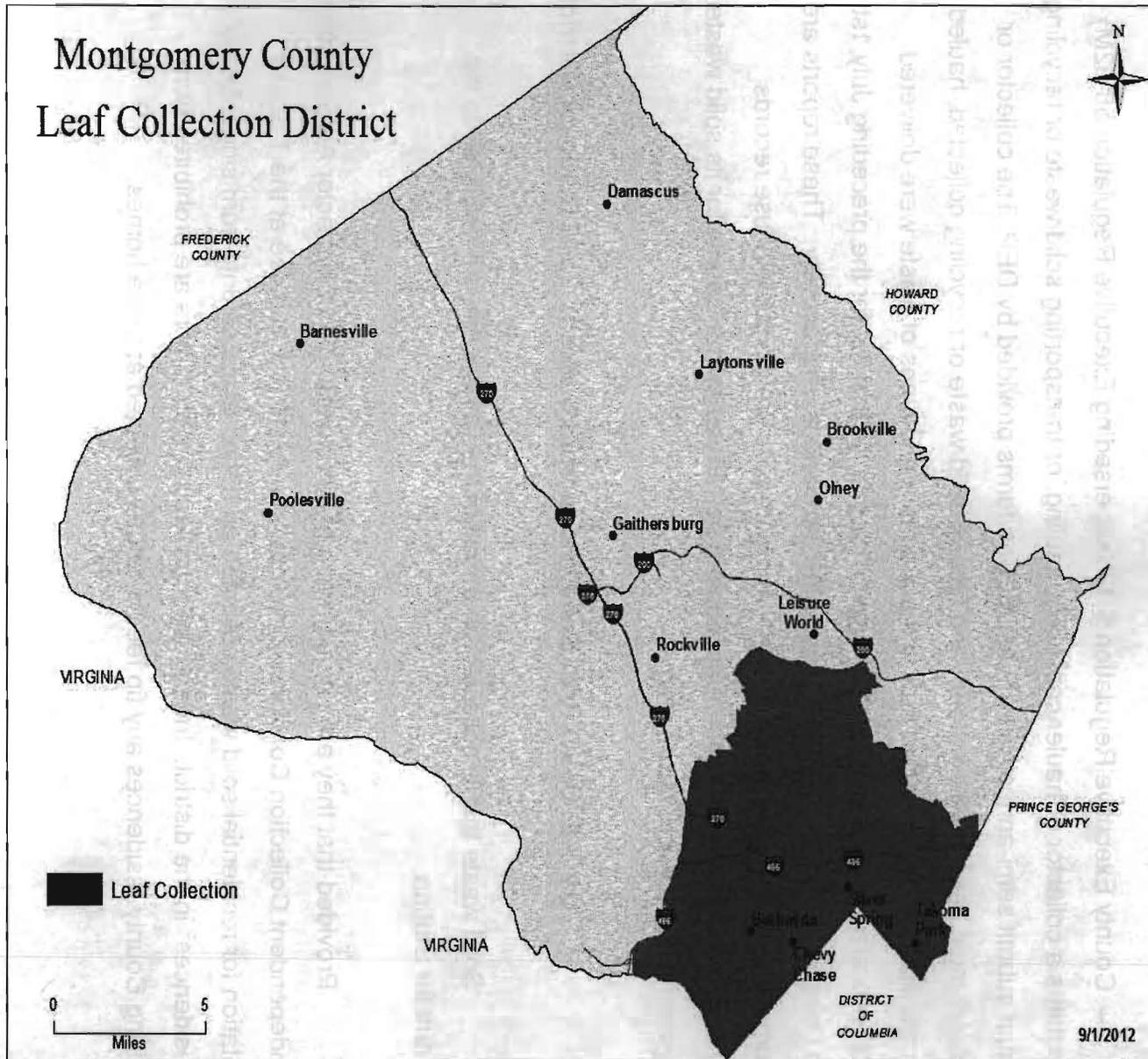


Figure 3.2
Map of Leaf Collection District

3.2.7 Waste Collection and Transportation Conditions

3.2.7.1 Solid Waste Tonnage Reporting

County Executive Regulation 5-13 (superseding Executive Regulation 58-92M) requires a collector or hauler collecting, hauling, or transporting solid waste or recycling must submit semi-annual reports to DEP, on forms provided by DEP. The collector or hauler must describe the amount and type of solid waste or recycling collected, hauled or transported, and to which facility the amounts and types of waste were delivered. Reports are collected due each February 1st and August 1st for the preceding July 1st to December 31st and January 1st to June 30th periods, respectively. These reports are compiled by DEP and, together with County transfer station scale house records, provide an important part of the accounting performed by the County for its solid waste system-wide tonnage accounting.

3.2.7.2 Delivery of Solid Waste from Collection and Disposal District

Solid waste that is collected on behalf of the County may be delivered to the Transfer Station.

Provided that they are not in breach of the Independent Contractor Authorization, Independent Collection Contractors are not required to pay a tip fee at the Transfer Station for residential solid waste collected on behalf of the County from single-family residences⁶ in the district. Independent Collection Contractors are prohibited from billing County residences any tip fee for refuse collected at those homes.

⁶ The County charges the tipping fees applicable to that refuse by means of a pre-paid disposal fee charged to the owners of single-family properties generating that waste.

3.2.8 Litter

3.2.8.1 Maryland Litter Control Law

The Maryland Litter Control Law⁷ makes it unlawful for any person or persons to dump, deposit, throw or leave, or to cause or permit the dumping, depositing, placing, throwing or leaving of litter on any public or private property in this State, or on any waters in this State, unless it is deposited at a properly permitted waste disposal facility, placed in a proper receptacle, or is lawfully deposited on private property in a manner consistent with public welfare.

All law enforcement agencies, officers, and officials of the State or any political subdivision thereof, or any enforcement agency, officer or any official of any commission of this State or any political subdivision thereof, are authorized, empowered and directed to enforce compliance with the Litter Control Law.

3.2.8.2 County Litter Control Authority

Whenever any readily movable property of any kind, such as, but not limited to, furniture, appliances, personal effects, etc., is abandoned or left in violation of any law, ordinance or order on public or private premises, it may be removed in accordance with Chapter 32-1 of the Montgomery County Code.

3.2.9 Septage Collection

Septage is collected, primarily in those parts of Montgomery County which are not served by sewers, by private contractors operating under a permit from WSSC.

3.3 WASTE ACCEPTANCE FACILITIES

As displayed in Table 3.3, there are several waste management facilities in Montgomery County. In Maryland, landfills, transfer stations, resource recovery facilities and special medical waste incinerators require a solid waste and/or air emissions permits from the MDE. Recycling and publicly-owned natural wood waste composting facilities generally do not require an MDE Refuse Disposal Permit or Air Quality Permit. Solid waste facilities may be subject to other permit requirements (such as storm water runoff control). As discussed in Chapters 2 and 5 of this Plan, private solid waste facilities are subject to County zoning requirements. The State is currently working to establish a comprehensive and centralized regulatory framework to encourage more composting facilities including food waste composting.

⁷ Section 10-110, the Criminal Law of the Annotated Code of Maryland (2010).

**Table 3.3
Solid Waste Acceptance Facilities Located in Montgomery County**

Facility Type/Name	Location (Maryland Grid Coordinates)	Acreage	Owner	Permit Type	Operating Status	Remaining Life	Types of Waste	Annual Tons
Construction Debris Reclamation Facilities C&D Recovery LLC	24220 Frederick Rd Clarksburg (1226619, 578608)	35	Environmental Alternatives Reclamation, Inc.	Refuse Disposal Processing Facility Permit	active	indefinite	construction and demolition debris	74,690
Transfer Stations, Public Shady Grove Processing Facility and Transfer Station	16101 Frederick Rd Derwood (1263505, 529641)	45	Montgomery County	Refuse Disposal Permit	active	indefinite	MSW, nonprocessibles yard trim and other recyclables	470,196 ⁸ 34,902 ⁹ 60,231 35,069
Site 2 Landfill Site (not constructed; held in reserve, see Section 3.3.1.7)	near Martinsburg Rd & Wasche Rd Dickerson (1183472, 553143)		Montgomery County	permitted (See Sub- section 5.2.1.6(c))	820-acre land reserved for possible future need	--	--	--

⁸ Amount loaded on rail to the RRF

⁹ Non-burnable materials going to recycling

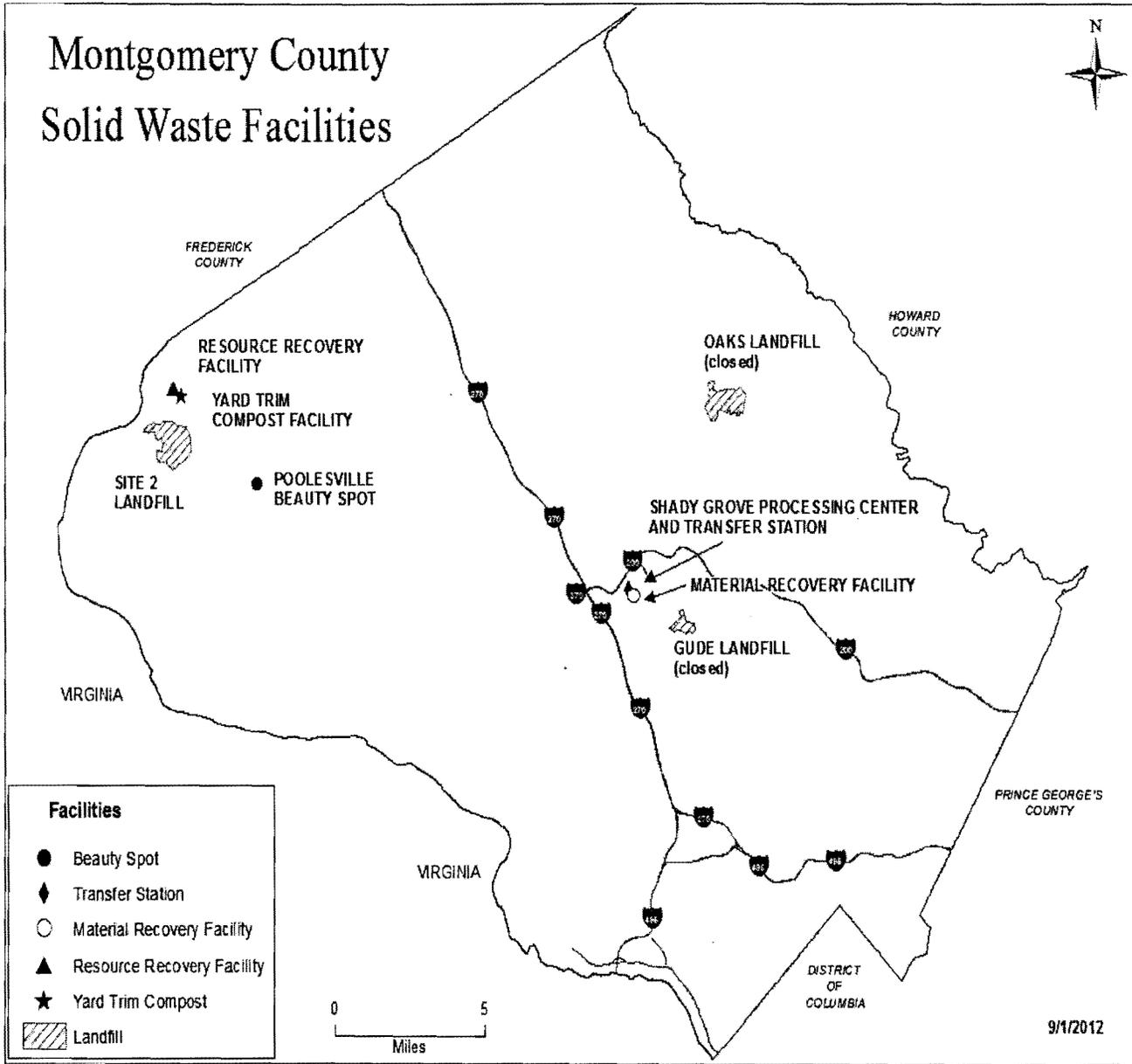
3.3.1 County Solid Waste Facilities

The County's existing solid waste management system is served by several principal facilities, each described below. The locations of each County-owned or County controlled (i.e., by contract) facility, comprising its MSW management system, appear in Figure 3.3.

3.3.1.1 Shady Grove Processing Facility and Transfer Station

Refuse collected by permitted solid waste haulers and collectors is processed at the Shady Grove Processing Facility and Transfer Station. The Transfer Station is located on a 45-acre site adjacent to the MRF site in Derwood. The Transfer Station has been in operation since the spring of 1982 and has a waste operating permit limit of 821,500 tons per year. In 1995, modifications were completed at the Transfer Station as part of the development of the Transportation System to facilitate rail haul of processible waste to the RRF. Further modifications were completed in 2008 to expand the tipping floor area and building, add a fourth compactor, improve on-site roads, increase the number of trucks scales and expand the citizen drop-off area. There are four solid waste compactors each compresses up to 30-ton loads of solid waste into logs that are mechanically discharged into 40-foot containers. Containers of compacted waste are driven to the rail yard for shipment to the RRF. Non-processible waste received at the Transfer Station is transported to the Honeygo Run Reclamation Company Rubble Landfill and Recycling Facility in Perry Hall, Maryland where some of the material (rock, concrete, asphalt, soil, dimensioned lumber, cardboard and metal) is recycled. Processible waste can also be bypassed directly to the County's contracted landfill if necessary. To safeguard the Transfer Station from unacceptable radioactive waste, radiation detectors are located at the entrance to the tipping floor, the inbound truck scale, at the public unloading facility and the contractor's dedicated scale. Inspectors also routinely check waste loads for other types of unacceptable materials.

Montgomery County Solid Waste Facilities



Facilities

- Beauty Spot
- ◆ Transfer Station
- Material Recovery Facility
- ▲ Resource Recovery Facility
- ★ Yard Trim Compost
- ▨ Landfill

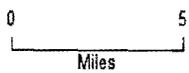


Figure 3.3
Facilities of the County Solid Waste Management System

9/1/2012

The Transfer Station provides a public unloading area for unloading refuse and recyclable materials delivered in passenger vehicles. This area receives all of the materials accepted in the County's residential curbside collection program. It also promotes reuse and waste toxicity reduction by accepting materials including computers, electronics, automotive fluids and batteries, household hazardous wastes, rechargeable batteries, building materials, textiles, and tires. In September 2013, bulky rigid plastics were added for recycling drop-off, including toys, playhouses, large buckets, milk/soda crates, landscape items, laundry baskets, lawn furniture, closet organizers, dish drainers, tote boxes/lids, food grade drums, pet carriers, flower pots/trays, large water bottles, garbage cans/baskets, recycling bins, shelving, trays, automotive parts, pallets, traffic signs, composite lumbers, PVC/PET blister packs, and cloth hangers.

The Transfer Station also includes areas for yard trim (grass, leaves, brush, and Christmas trees) collected through the curbside recycling program or delivered to the site by residents and landscapers. Most of the leaves and grass are first ground and then transferred to the County Yard Trim Composting Facility. Brush and Christmas trees are ground on site into mulch and transported to County sites where it is available for no charge to County residents or sold to commercial mulch vendors.

3.3.1.2 Resource Recovery Facility

In August 1995, the County began operation of a mass-burn RRF in Dickerson, Maryland. With the exception of occasional bypass as necessary, all non-recycled processible waste delivered to the County's Shady Grove Processing Facility and Transfer Station is consolidated and transported by rail to the RRF for waste-to-energy incineration. In addition to energy recovery, ferrous metal is recovered from RRF residue and sold to scrap metal dealers. To safeguard the RRF from radioactive waste, radiation detectors are located at the entrance to the tipping floor and in the ash handling system area.

The RRF consists of three 600 tons per day mass-burning, refuse-fired boiler units producing high pressure, high temperature steam for electrical power generation. The RRF is located on 34 acres of land adjacent to the electric generation station near Dickerson owned by GenOn Energy, Inc. An Electricity Sales Agreement provides that NMWDA markets all electricity, net of in-plant usage by the RRF.

NMWDA financed the cost of designing and constructing the RRF and related transportation improvements necessary for the project. NMWDA owns the facility, leases the facility property from the County and contracted for the facility design, construction, and operation through a Service Agreement with Covanta Montgomery, Inc., a subsidiary of Covanta Holding Corporation. The County has entered into a Waste Disposal Agreement with NMWDA for the disposal of non-recycled waste.

3.3.1.3 Materials Recovery Facility

The MRF, also known as the Recycling Center, is located on an approximately 10-acre parcel of land in Derwood, Maryland, contiguous to the Transfer Station. Recyclable materials collected at the curb from single-family residences including mixed paper and commingled containers are accepted at the MRF. The MRF also receives recyclables from some multi-family residences and some commercial sources. MES operates the MRF under the terms of an intergovernmental agreement with the County.

Residential mixed paper is transferred at the MRF onto OPS containers and shipped to the OPS mixed paper recycling facility. The MRF has a transfer capacity of 346 tons of mixed paper per shift, and is operated one shift per operating day.

Commingled containers, including glass containers, plastics, tubs and lids, aluminum, ferrous and bi-metal cans and aluminum foil, are sorted and baled at the

MRF through a combination of mechanical and hand separation. Sorted and baled recyclables are sold to various markets for remanufacture. The MRF has a sorting capability of about 115 tons of mixed containers per shift, and is operated generally on the basis of one shift per operating day. The MRF receives materials five days a week and operates the sorting lines four or five days a week depending upon material volumes.

3.3.1.4 Yard Trim Composting Facility

In 1983, the former WSSC sewage sludge composting facility on the “Matthews Farm” near Dickerson, Maryland was converted into a County managed leaf composting facility. In 1992, the County began composting both leaves and grass at the facility. Leaves and grass are composted at the facility in an open-air windrow operation using mobile turning and shredding equipment. The facility produces compost that is dried and screened for commercial bulk and bagged markets. Facility operations occur on a 48-acre bituminous pavement pad. The entire facility site covers 118 acres.

The MES operates the Yard Trim Composting Facility under terms of an intergovernmental agreement with the County. Agreements between the County and the Sugarloaf Citizens Association require that the facility accept no greater than 77,000 tons of yard trim per year and that the bagging operation not exceed 500,000 bags per year.

3.3.1.5 Beauty Spots: Satellite Drop-off Centers

DEP operates one satellite drop-off facility (also referred to as the convenience center or “Beauty Spot”) for the purpose of citizen disposal of non-putrescible residential solid waste. This convenience center is located at MCDOT the Division of Highway Services (DHS) transportation depot in Poolesville at 19200 Jerusalem Road. Another

facility in Damascus at 26149 Ridge Road was closed in 2010 due to space constraints and traffic concerns. Operating hours for citizens' waste disposal are limited to weekends, from 9:00 a.m. to 5:00 p.m. on Saturday; and from 9:00 a.m. to 1:00 p.m. on Sunday. Typical materials received at the centers are large, bulky items such as home remodeling debris, furniture, and bulky trash.

During operating hours, two DHS employees are present to direct incoming traffic, operate the machinery used to move the waste, and monitor the site. In addition to providing service during the weekend operating hours, the DHS employees work at the site during the week to load remaining waste quantities into stand-by roll-off containers that were not loaded out over the weekend.

The County contracts to provide empty waste containers and transport loaded containers. Generally, the contracted hauler provides empty roll-off containers at the depots prior to 3:00 p.m. on Friday of each week, and hauls loaded containers from 1:00 p.m. to 5:00 p.m. Saturday and Sunday to remove the waste delivered to the site.

3.3.1.6 Private C & D Recovery Processing Facility

In addition to the County's Transfer Station, there is one large private C&D recovery processing facility located within the County—C&D Recovery, LLC, which is permitted to receive 250,000 tons per year of C&D (not MSW). This major outlet for C&D is supplemented by 32 other private facilities in the region accepting Montgomery County C&D. See Chapter 4 for detailed discussion.

3.3.1.7 Out-of-County Contract Landfill

In 1997, the County entered into a contractual agreement to transport RRF ash, non-processible waste and bypass waste for disposal at a private landfill in Brunswick

County, Virginia, at least until the Year 2017. In 2010, this contract was amended to allow the beneficial reuse or recycling of the ash residue at any landfill facility owned by Republic Services. Ash residue is currently delivered to the Old Dominion Landfill in Henrico County, Virginia where the ash is screened into two grades, one for alternate daily cover and one for road base for internal landfill roads. Additional removal of metals occurs during the RRF ash processing. The County retains the right to use dedicated space at the contracted landfill in Brunswick County, Virginia, if ever required. Non-processible waste is sent to the Honeygo Run Reclamation Company Rubble Landfill and Recycling Facility in Perry Hall, Maryland. The County no longer manages Regulated Asbestos Containing Material (RACM) and does not use the landfill for its disposal. The current contract for out-of-County waste transportation and disposal services was extended until June 2017. Prior to that time, the County will prepare a solicitation to continue similar services.

3.3.1.8 Land Reserved for Potential Future In-County Landfill

The County has acquired approximately 820 acres along Wasche Road near Dickerson, Maryland to be held in reserve for use in the event economic conditions or changes in law render out-of-County waste disposal infeasible. The location reserved for possible future landfill use is known as "Site 2." While the out-of-County landfill option remains viable, the County intends to maintain the current agricultural use of the Site 2 location. With the exception of activities to preserve select historic structures on the former "Chiswell Farm," the County will not make any improvements to the site as long as the out-of-County landfill option remains viable. (see Appendix D)

3.3.2 Waste Transportation System

The waste transportation system primarily consists of moving wastes from the Transfer Station to the RRF, from the RRF to the out-of-County landfill, and from the Transfer Station to the out-of-County landfill.

3.3.2.1 Transfer Station to RRF: Processible Waste and Yard Trim

Processible waste received at the Transfer Station is hauled 18 miles by rail to the RRF. Processible waste is rail hauled in forty-foot long intermodal containers. Containers are stacked two high on special purpose rail cars and travel via an existing railroad right-of-way between a railroad yard adjacent to the existing Transfer Station and a 1.2 mile access track and rail yard adjacent to the RRF. Trains are pulled by CSX Transportation locomotives using CSX tracks.

In addition, a portion of the yard trim sent to the Yard Trim Composting Facility is transported from the Transfer Station via rail.

3.3.2.2 RRF to Out-of-County Landfill: RRF Ash

Since September 2010, DEP through its out-of-County waste transportation and disposal contract began the recycling and beneficial reuse of all ash from the RRF. The ash is shipped via rail to Petersburg, Virginia and taken by truck to Old Dominion Landfill in Henrico County, Virginia where it is screened into two products; alternative daily cover and road base. These products are used within the confines of modern lined landfill cells at facilities owned by Republic Services. There is also additional metals removal of both ferrous and non-ferrous metals achieved during the ash screening and processing at Old Dominion Landfill. Thus, all ash (residue and metals) emanating from the RRF are recycled.

3.3.2.3 Transfer Station to Out-of-County Landfill: Other Wastes

Brunswick Waste Management transports non-processible waste received at the Transfer Station via over-the-road trailers to the Honeygo Run Reclamation Company Rubble Landfill and Recycling Facility located in Perry Hall, Maryland where some components of the waste including asphalt, concrete, soil, dimensioned lumber, metal, and cardboard are recycled. Bypass waste, if it is ever generated, can be sent to the Republic Services landfill in Brunswick County, Virginia.

Chapter 4: Assessment of Solid Waste Management Needs

The County balances a variety of competing demands to address its solid waste management needs. This chapter identifies County solid waste management needs and outlines a plan direction to address those needs. In considering how best to address County solid waste management needs, this chapter also provides an assessment of current conditions and constraints as well as existing programs and facilities designed to accommodate the solid waste generated within the County. This chapter is organized into the following subsections:

- 4.1 Management Needs: Municipal Solid Waste
- 4.2 Management Needs: Special Waste Streams
- 4.3 Constraints on New Solid Waste Acceptance Facilities
- 4.4 Solid Waste Outreach, Education and Promotion
- 4.5 Investigation of Compliance Issues and Enforcement of Recycling Regulations
- 4.6 System Approach to Greenhouse and Ozone-Related Emissions

Acronyms and solid waste terms used in this chapter and throughout this document are defined in Appendix A.

The County manages solid wastes in accordance with the following objectives:

- The County implements solid waste management practices that are both environmentally and fiscally sound and that provide reliable long-term solutions to County solid waste management needs;

- The County funds the solid waste management system through a mechanism that provides a secure, sufficient, and equitable source of funds to enable the County to operate an integrated waste management system of waste reduction, recycling, and disposal; and
- The County solicits and includes concerns of the public at an early stage and throughout the solid waste management decision-making process.

4.1 MANAGEMENT NEEDS: MUNICIPAL SOLID WASTE

As presented in Chapter 3, approximately 1,080,344 tons of MSW were generated in the County during CY 2012 and 1,260,829 tons are projected to be generated in CY 2023. To address its waste management needs, the County employs the following techniques: (1) waste reduction; (2) recycling and composting; (3) resource recovery; and (4) landfilling. All of these components are interrelated and integral to the County's solid waste management system. The success of one element within the system is often dependent on the successful implementation of others. An understanding of this interdependence is critical to the fiscal and operational health of the system.

4.1.1 Waste Reduction

Waste reduction is the preferred method in the County's solid waste management hierarchy. Reductions in waste generation lessen the burden of solid waste management by decreasing the amount of material entering the system. The County's waste reduction plan includes the following elements.

4.1.1.1 Per Capita Per Employee Waste Generation

Current Conditions and Constraints: The Department projects future waste generation based on M-NCPPC projections of future population and employment growth and on the Department's best professional assessment of per capita and per employee waste generation trends. Notwithstanding assumptions in per capita and per employee waste generation rates, the County must aggressively implement waste reduction and recycling programs.

Needs Assessment and Plan Direction: The County must regularly and systematically monitor waste per capita and per employee generation trends to refine waste generation projections. On-going monitoring and periodic revision of actual waste generation rates will assist the County in evaluating the need for adjustments to the solid waste programs in accordance with the zero growth policy.

4.1.1.2 Waste Reduction Information and Programs

Current Conditions and Constraints: The County promotes waste reduction through outreach, education, technical assistance and training using various media, including development, production and distribution of educational and motivational materials, public and private schools outreach, training and support of recycling and composting volunteers, workshops, demonstrations and seminars. The central elements of this effort are the SORRT Program (Smart Organizations Reduce and Recycle Tons), and the TRRAC Program (Think Reduce and Recycle at Apartments and Condominiums) (see Section 4.4.1 of this Plan). These programs provide waste reduction, reuse, recycling, grasscycling, composting, and buying recycled guidance to the commercial and multi-family sectors.

The County provides drop-off locations at the Shady Grove Processing Facility and Transfer Station for yard waste, reusable construction materials, electronics, scrap metal,

mixed paper, commingled containers, tires, motor oil, antifreeze, vegetable oil, textiles, household hazardous wastes, and other materials.

Needs Assessment and Plan Direction: The County will continue to promote waste reduction through outreach, education, technical assistance and training for single-family and multi-family residents, multi-family property owners, managers and staff, as well as business owners, managers and employees. Both national and local data indicate trends toward increased waste generation. Should multi-year trends indicate changes in overall waste generation, the County will adjust its baseline per capita and per employee generation assumptions.

4.1.1.3 Waste Reduction Opportunities in County Government

Current Conditions and Constraints: The County adopted an Environmental Policy on July 29, 2003, promoting recycling, waste minimization, energy conservation and environmentally responsible business practices for all of its own departments and agencies. In September 2009, the County Executive launched a paper and printing reduction initiative with the goal of reducing the government's impact on the environment and to save tax dollars. In April 2010, the County Executive introduced a new "green policy" requiring departments and offices to post all newsletters and annual reports on the County's website unless printing was required due to legal requirements or under special circumstances approved by the Chief Administrative Officer. In June 2011 the County Executive formalized this green policy by issuing Administrative Procedure 5-23 which directs County departments and offices to decrease environmental impact by evaluating operational needs and initiating waste reduction efforts which decrease the amount of paper used, the quantities of materials printed, and the amount of money spent on paper and postage. Waste reduction and reuse efforts in its operations include setting as the default setting two-sided copying in printers and copiers in offices and promoting the use of electronic mail in place of paper memoranda. In addition to two-sided copying, and use of e-mail and electronic media in education, outreach and training efforts provided

throughout County, M-NCPPC, MCPS, WSSC and other facilities, DEP advocates and encourages a “Just in Time” ordering system, a “First-in First-out” use policy, establishing inventory control procedures, date-stamping incoming materials, routing of printed materials, posting of employee notices, and use of durable, reusable items such as cloths for cleaning, ceramic mugs, durable cups, etc.

Needs Assessment and Plan Direction: Opportunities remain for the County to reduce its waste generation further, particularly office paper from offices, schools, service centers and other public facilities. The County will attempt to serve as a model for the community by implementing its Environmental Policies to perform its mission while also producing less resulting waste.

The need to carry out MDE-specified waste reduction activities is underscored by the fact that the County has adopted as part of its 70 percent recycling goal with the full 5 percent source reduction credit awardable by the State. See Section 5.2.1.8.

4.1.1.4 Regional Waste Reduction Efforts

Current Conditions and Constraints: The County participates in regional efforts to promote waste reduction, including those involving the Metropolitan Washington Council of Governments (MWCOG), MDE, the Maryland Recyclers' Network and other regional entities. Coordination of efforts also occurs within the MDE County Solid Waste and Recycling Managers groups. The County monitors and supports appropriate State and national legislative initiatives on waste reduction.

Needs Assessment and Plan Direction: Large scale waste reduction involves modifications in consumer and commercial behavior. Affecting this type of change often involves adjusting economic and societal behavior that extends beyond the boundaries of the County. A regional approach toward waste reduction will permit the leveraging of resources and increased effectiveness.

4.1.1.5 Waste Reduction Incentives

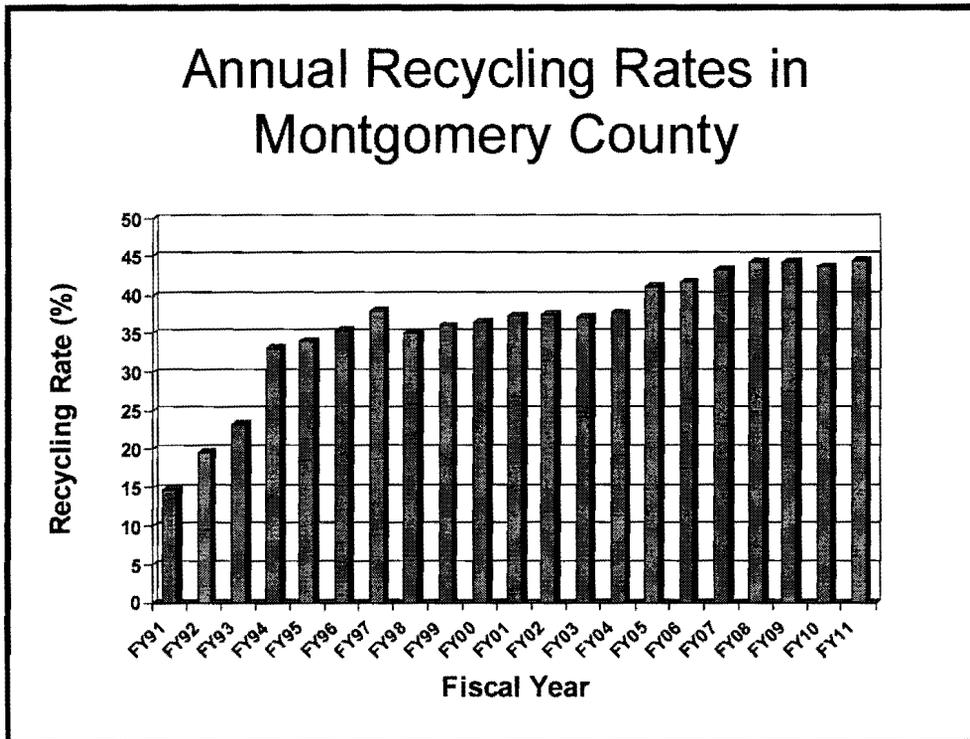
Current Conditions and Constraints: The County provides education and technical assistance to all types of waste generators emphasizing the economic benefits of waste reduction and increased recycling for lowering waste disposal costs.

Needs Assessment and Plan Direction: Refuse Tipping Fee avoidance provides an economic incentive for waste generators who pay a contractor for waste removal and disposal. In addition, the system benefit charge financing method described in Chapter 5 provides financial incentives for the non-residential sector to reduce waste generation whereby property owners who document a lower than average waste generation rate for their land use type can be assessed a reduced base system benefit charge. Independent of the benefits of simply shifting waste from disposal to recycling, the County's Cooperative Collection Methods (See Section 4.1.2.3) should continue to emphasize these fiscal incentives for waste reduction.

4.1.2 Recycling Achievement, Opportunity and Direction

Figure 4-1, below, shows the historical achievement in the total tonnage of MSW recycled in Montgomery County over the last twenty years.

Figure 4.1



The figure is presented in terms of County Fiscal Years (FY) due to the basis of accounting that the County has used up until this Plan update. Hereafter, the annual data presented in this Plan is in terms of Calendar Years, as required by MDE.

Notwithstanding the FY basis, Figure 4.1 shows that the County has made nearly continuous progress in advancing its recycling achievement. As shown in Appendix B, during Calendar Year 2012, about 600,000 tons of municipal solid waste generated within Montgomery County, were recycled. In recent years, the County faced challenges in trying to continue increasing its recycling rate. These challenges included an economic downturn that resulted in less recyclable packaging associated with consumer purchasing and continuing trends in the light-weighting of containers and newsprint, and declining print news subscriptions.

MSW is comprised of many different types of materials. In fact, it is comprised of virtually every “thing” in our everyday culture. Markets determine what particular types of

material are recyclable. Thus, not all types of waste are recyclable, and the opportunities for increased recycling lay in the quantities of those materials that are recyclable, but are still being disposed.

Table 4.1, appearing on the next page, enables one to take stock of specific opportunities to increase recycling, by material type, both in terms of tonnage potential and in terms of individual "capture rates" (defined below). The table was constructed by applying the results of the County's FY12 waste composition sampling study, and applying that composition to the known disposal tonnages. It is important to note that while those disposal tonnages were based on certified truck scales (see Appendix B), the *composition* of the disposed MSW was determined on the basis of statistical sampling of disposed MSW. Thus, while a sound methodology, inferences based on Table 4.1 must be regarded as estimates. Notwithstanding that limitation, meaningful suggestions arise. Some of these inferences are in the form of "capture rates". A capture rate can be regarded as a recycling rate individualized with respect to a specific type of material, or grouping of material types. Table 4.1 reveals the locus of opportunities for increased recycling.

For example, Table 4.1 indicates that of all the waste glass bottles and jars generated in the single-family sector, 83.2 percent, or 16,017 tons, were captured for recycling, leaving 16.8 percent, or 3,234 tons of glass disposed. That 83.2 percent capture rate may be considered remarkable when it is recognized that it comes about solely as a result of the collective routine independent behavior of Montgomery County citizens. "Madison Avenue" advertising executives surely covet this sort of "market penetration".

Taking an example at the other end of the spectrum, the Table 4.1 indicates that 60 percent of the non-residential paper was captured during CY 2012, leaving 40 percent, or 53,612 tons of recyclable paper, disposed--a much larger opportunity for enhanced recycling with respect to materials that the County has banned from disposal.

**Table 4.1
Waste Recycling by Material Type: Achievement and Opportunity**

Basis for composition of disposed waste is the 2012 waste sorts reconciled to system-wide CY12 disposed and recycled tonnages*.		CY12 Actuals									Opportunity			Currently Disposed (Tons)
		Single-Family			Multi-Family			Non-Residential			Disposed by Sector (tons)			
		Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Single-Family	Multi-Family	Non-Residential	
Banned ER15-04	Subtotal, Banned Components	239,426	185,587	77.5%	35,324	8,474	24.0%	316,229	227,729	72.0%	53,838	26,850	88,500	
	Paper	92,355	59,467	64.4%	18,180	3,343	18.4%	134,171	80,559	60.0%	32,888	14,837	53,612	101,338
	Glass	19,252	16,017	83.2%	4,542	590	13.0%	14,485	6,168	42.6%	3,234	3,952	8,318	15,504
	Other Ferrous	12,294	9,211	74.9%	2,154	1,378	64.0%	71,988	68,220	94.8%	3,083	776	3,768	7,627
	Yardwaste	99,701	94,635	94.9%	4,585	3,003	65.5%	76,154	71,104	93.4%	5,066	1,582	5,050	11,897
	Narrow-Neck Plastics	8,226	3,453	42.0%	3,200	39	1.2%	9,985	256	2.6%	4,772	3,161	9,730	17,663
	Ferrous/Bimetal Containers	4,279	2,191	51.2%	1,396	104	7.4%	6,344	1,245	19.6%	2,089	1,293	5,099	8,480
	Aluminum Beverage Cans	1,587	594	37.4%	613	17	2.8%	1,754	176	10.0%	983	595	1,579	3,167
	Other Aluminum (Foil)	1,286	19	1.5%	506	0	0.0%	1,263	1	0.1%	1,267	506	1,262	3,034
	Other Non-Ferrous Metal	446	-	0.0%	148	-	0.0%	84	-	0.0%	446	148	84	678
Potential and Encouraged	Food Waste	45,605	-	0.0%	15,996	-	0.0%	87,449	7,337	8.4%	45,605	15,996	80,112	141,713
	Shopping Bags	1,021	-	0.0%	504	-	0.0%	1,229	20	1.6%	1,021	504	1,209	2,735
	Other Film Plastic	18,478	-	0.0%	5,652	-	0.0%	27,099	437	1.6%	18,478	5,652	26,662	50,792
	Plastic Flower Pots	584	58	10.0%	28	1	2.4%	475	4	0.9%	525	27	471	1,023
	Plastic Tubs and Lids	2,776	218	7.9%	1,137	2	0.2%	4,794	16	0.3%	2,558	1,135	4,777	8,470
	Other Rigid Plastic	5,232	1,309	25.0%	2,025	170	8.4%	10,252	2,932	28.6%	3,923	1,855	7,320	13,098
	Textiles & Leather (no Rugs)	13,579	100	0.7%	4,684	1	0.0%	9,804	7	0.1%	13,479	4,683	9,796	27,958
	Carpets / Rugs	1,344	-	0.0%	1,144	-	0.0%	12,181	8,894	73.0%	1,344	1,144	3,288	5,776
	Wood Waste (including Pallets)	651	-	0.0%	278	50	17.9%	5,973	3,881	65.0%	651	229	2,092	2,972
	Whole Tires (as Rubber)	2,220	2,220	100.0%	716	555	77.5%	4,030	2,776	68.9%	-	161	1,254	1,415
	Lubricants (e.g. Motor Oil)	107	6	5.6%	0	0	100.0%	344	256	74.6%	101	-	88	189
	Electronics	5,107	1,771	34.7%	1,954	20	1.0%	6,889	1,349	19.6%	3,336	1,934	5,539	10,809
	Batteries	83	93	100.0%	1	1	83.0%	2,464	2,464	100.0%	-	0	-	0
	Latex Paint	633	269	42.4%	43	3	7.1%	147	20	13.6%	365	40	127	531
Tire Steel	278	-	0.0%	89	-	0.0%	504	-	0.0%	278	89	504	871	
No Markets	Other Wood	4,316	-	0.0%	1,468	-	0.0%	8,283	-	0.0%				
	Other Glass	637	-	0.0%	396	-	0.0%	508	-	0.0%				
	Disposable Diapers	10,778	-	0.0%	5,189	-	0.0%	4,794	-	0.0%				
	Other Waste	57,048	-	0.0%	17,667	-	0.0%	72,686	983	1.4%				
RRF Ash		62,487			15,652			53,996						
TOTAL	409,914	254,119	62.0%	94,298	24,928	26.4%	576,131	313,101	54.3%	145,502	60,300	231,738	437,541	

Notes:

Banned ER15-04: These materials are required to be recycled under Executive Regulation 15-04, and are banned from disposal in waste from all sectors.

Potential and Encouraged: Markets vary for these materials. Although not subject to the disposal ban, recycling is encouraged for all materials for which there are available markets.

No Markets: No existing or anticipated markets for these materials.

With respect to new materials for targeting enhanced recycling achievement, food waste stands out, as a potential volume opportunity. Overall, Table 4.1 confirms the feasibility of the County's new 70 percent waste reduction and recycling goal. The County finds that achieving its overall 70 percent waste reduction and recycling goal should be reasonably achievable, even if ambitious.

As reviewed in Chapter 3 and in Appendix B, the County's overall waste diversion and recycling rate for CY 2012 was 59.8 percent. By comparison, it can be seen that a shift of 109,621 tons (of any combination of materials) from disposal to recycling, would have been necessary for the County to have achieved a 70 percent waste reduction and recycling for the CY 2012 period. Thus, the incremental historical advances demonstrated by Figure 4.1 together with the material-specific capture rates and tonnage opportunities identified in Table 4.1 support, as ambitious but achievable, the County's goal of 70 percent recycling by Calendar Year 2020.

The challenges toward meeting that new goal are multiple—to annually advance recycling achievement within the fiscal constraints of approved programs, to track achievement, to continually identify new opportunities for enhanced recycling achievement, and to ultimately achieve the goal.

Needs Assessment and Plan Direction: To do this, the County maintains an ongoing recycling planning and implementation process. Formally punctuating that process, the County annually publishes its "Recycling Plan Update". That Plan reports on specific program achievements, lays out how the County's recycling goal is being pursued under approved programs, and identifies potential additional initiatives that can be introduced in a subsequent budget year, if needed, to meet the County's recycling goal. The Recycling Plan Update can be obtained by contacting DEP. The County will continue to update that plan annually, and will introduce additional programs and initiatives if needed.

Montgomery County has already surpassed all State recycling requirements, and as will be discussed in subsequent sections of this Plan, the County provides a disposal system that is more than adequate to dispose of all non-recycled or non-recyclable MSW even if the recycling rate does not increase as projected in this Plan.

4.1.2.1 Single-Family Residential Sector Recycling

Current Conditions and Constraints: As mandated by Executive Regulation 15-04AM, the County provides curbside collection of recyclable materials to over 211,000 single-family residences in unincorporated areas of the County. Residents of 36,000 single-family households located in incorporated municipalities receive municipally arranged recycling service.

In 1992, separated materials recycled through the County's curbside collection program included glass, plastic, aluminum and ferrous containers and newspaper. In 1994, the County added collection of yard trim (grass, leaves and brush) to the curbside service. In 1996, the County added household scrap metal items (swing sets, iron railings, large appliances, disassembled metal sheds, etc.) to the curbside recycling program. In 2000, the County added mixed paper (unwanted mail, catalogs, books, magazines, cardboard, newspaper, office paper and telephone books) to the curbside recycling program. In 2008, the County added even more plastic items to the curbside recycling program, including plastic containers, jars, tubs, lids, cups, buckets, pails, and flower pots. In 2009, the County added non-hazardous aerosol cans, reusable durable plastic containers and lids, coated paper, milk/juice cartons, frozen food boxes, wax coated boxes, paper beverage cups, and drink/juice boxes to the curbside recycling program. In 2012, the County added #1 PET thermoform plastics to allow residents to recycle: plastic packaging such as clamshell containers, trays, deli containers, lids, domes and cups to the curbside recycling program. The County also provides leaf vacuuming services in the Leaf Collection District described in Section 3.2.4 of this Plan.

To support the recycling collection program, the County operates a MRF in Derwood, Maryland. This facility provides for separation of commingled containers and also serves as a transfer point for transport of mixed residential paper to a private recycling facility located in the County where the paper is separated into various grades before sending to market. The County also operates a leaf and grass composting facility in Dickerson, Maryland.

Field surveys have indicated that participation in the curbside recycling program has exceeded 80 percent of eligible households. Table 4.1 shows that in CY 2012, single-family homes in the County set out over 30,000 tons of commingled recyclable containers and almost 60,000 tons of tons of mixed paper.

In CY 2012, the single-family residential sector accounted for 37.7 percent of the total County municipal solid waste generation (MSW) and recycled 62.0 percent of the MSW it generated.

In addition to a strong education and outreach program, a key to this success is that the County uses large (65 gallon), heavy duty, wheeled, and lidded carts for collecting residential mixed paper (RMP) from single-family homes. Where these carts are found to be too large to be easily stored (e.g., at many townhouses) the County offers more moderately sized carts. In all cases, virtually all forms of unsoiled paper are accepted. In fact, the County has banned disposal of recyclables mixed in with disposable trash, any form of paper that could otherwise be recycled if not soiled (see County Executive Regulations 15-04AM and 18-04, Appendix I).

Needs Assessment and Plan Direction: While a large percent of residents participate in the curbside recycling program, waste composition studies conducted at the Transfer Station reveal significant quantities of recyclable materials discarded as refuse. Greater capture of existing materials may add several percentage points to the single-family residential recycling rate.

The County has developed a single-family residential recycling system that relies on source separation of recyclable paper, containers, yard trim and scrap metal at the curb in front of each resident's home. Source separation allows for more optimal and efficient re-use and marketing of recyclables. Given the County's investment in a curbside collection system and the MRF, the County does not envision a need to develop additional recycling drop-off centers (see Section 4.1.2.4). However, outreach, education and enforcement are continuing important needs in the single-family sector. Also, while the recycling effectiveness of county-wide distribution of large lidded wheeled carts has been proven, residents, in particular town houses, continue to request carts of varying sizes. DEP will attempt to accommodate cart size variation requests that it believes will foster increased recycling and monitor results.

With respect to those recyclable materials that have been banned from disposal as a group, Table 4.1 indicates a single-family recycling capture rate of 77.5 percent. Even discounting the most highly recycled component, yard waste, the single-family sector is capturing 62 percent of those materials that are banned from disposal.

A recent survey of homes receiving County collection services indicated that residents *believe* that they participate at a high rate of compliance with the County's recycling program. The same survey indicated a lack of awareness and use of the County's curbside scrap metal collection service. Indeed, relative to the multi-family and non-residential sectors, Table 4.1 indicates higher single-family recycling capture rates and thus higher overall compliance with recycling rules within the single-family sector. However, as also indicated in Table 4.1, there remained 53,838 tons of recyclable materials, banned from disposal, disposed of by single-family residences, including 42,000 tons of residential paper. This indicates that recycling outreach, education and enforcement are continuing needs in the single-family sector.

4.1.2.2 Multi-Family Residential Sector Recycling

Current Conditions and Constraints: Executive Regulation 15-04AM mandates recycling of aluminum, bi-metal, steel, glass and plastic containers, mixed paper, scrap metal, Christmas trees and yard trim at all apartment and condominium properties. While property owners and managers administer the collection of recyclables for multi-family residences, the County provides technical assistance, education, and training regarding on-site collection alternatives and management of collection contracts. Education and training is also provided directly to residents.

The County enforces multi-family recycling regulations through mandatory reporting requirements and a combination of site investigations, on-site verification of exemptions, and fines.

In CY 2012, the multi-family residential sector accounted for 8.6 percent of the total County waste generation. Multi-family residents recycled 24,928 tons or 26.4 percent of the waste generated in that sector. Waste composition studies conducted at the Transfer Station reveal significant quantities of recyclable materials from multi-family residences discarded as refuse.

Needs Assessment and Plan Direction: Advancements are necessary to maximize recycling in the multi-family sector. Opportunities exist to increase recycling by the multi-family residential sector. The primary strategy for increasing multi-family residential recycling is to conduct on-site technical assistance and training to provide specific and tailored guidance to promote full compliance with County regulations and enforcement actions, and to increase recycling participation and capture rates. In addition, DEP continues to assess the current costs of recycling and waste disposal collection experienced by multi-family properties and determine the feasibility of collection scenarios which would successfully decrease the costs of recycling, thus creating economic incentives to recycle, and to recycle more. DEP consistently evaluates market

conditions in the region, and recommends recycling of other materials for which markets are available and favorable, relative to disposal.

4.1.2.3 Non-Residential Sector Recycling

Current Conditions and Constraints: Executive Regulation 15-04AM, enacted in 2005, mandates recycling of glass, plastic, aluminum and ferrous containers, mixed paper, scrap metal, Christmas trees, and yard trim by more than 35,000 organizations in the non-residential sector. While commercial, industrial and institutional property owners and managers administer the collection of recyclables for their sites, the County provides technical assistance, education and training regarding on-site collection alternatives and management of collection contracts. Education and training is provided to business owners, managers, and employees.

The County enforces non-residential recycling regulations through mandatory reporting requirements and a combination of site investigations, on-site verification and fines.

In CY 2012, the non-residential sector accounted for 53.7 percent of the total County solid waste generation and recycled 313,101 tons or 54.3 percent of the solid waste generated by that sector. Waste composition studies conducted at the Transfer Station reveal significant quantities of recyclable materials from the non-residential sector discarded as refuse.

Needs Assessment and Plan Direction: Advancements are necessary to maximize recycling in the non-residential sector. Smaller scale businesses sometimes lack the resources, training, and experience to readily incorporate on-site recycling.

Referring again to Table 4.1, substantial opportunities exist to increase recycling in the non-residential sector. The primary strategy for increasing non-residential recycling

is to conduct direct on-site technical assistance and training, to provide specific and tailored guidance to promote full compliance with County regulations and enforcement actions. In addition, DEP has studied the costs of recycling and waste disposal collection experienced by businesses and organizations and has demonstrated repeatedly via its Cooperative Collection Methods (discussed next) the feasibility of collection scenarios which successfully decrease the realized and internalized costs of recycling, thus creating economic incentives to recycle, and to recycle more. DEP also consistently evaluates market conditions in the region, and recommends recycling of other materials for which markets are available and favorable, relative to disposal. The County Executive's Recycling Task Force plays a large role as an advocate for effective and efficient County recycling initiatives. The business community will continue to be consulted in this effort.

Cooperative Collection Methods: Small-scale business owners especially have expressed concerns over the years, such as the cost and availability of recycling and refuse collection services due to the relatively small amount of materials that they generate. Businesses in more densely developed Central Business Districts (CBDs) regularly face space constraints when it comes to placement of recycling and refuse collection containers outside of their establishments. Small businesses face an often disproportionate administrative burden when securing and contracting collection services on their own.

As a result of these concerns, DSWS has been conducting cooperative recycling and refuse collection study projects for small businesses in the Silver Spring, CBD. This same scenario has been and is applicable in settings within the Bethesda and Wheaton CBDs. DSWS support included: on-site waste analysis of each business' waste stream, determining the amount of recyclable material generated, practical advice for securing collection services, education, training and follow up.

Based upon the data collected, the implementation of cooperative recycling and refuse collection projects has saved money for every participating businesses on their

monthly refuse and recycling collection costs as well as reducing their required administrative efforts in terms of contracting for recycling and refuse collection services. Furthermore, the participating businesses have been achieving a recycling rate exceeding the County's 70 percent recycling goal. DEP will continue evaluating this and other opportunities for expanded implementation to increase recycling by businesses.

4.1.2.4 Drop-Off Programs

Current Conditions and Constraints: Collection constraints or market conditions limit the feasibility and cost effectiveness of regular collection of certain recyclables at their point of generation. The County provides receptacles at the Shady Grove Processing Facility and Transfer Station (and select other sites) for generators to unload self-hauled recyclables. The County offers drop-off services for: yard trim, mixed paper, bottles and cans, textiles, tires, books, bicycles, used motor oil, antifreeze, vegetable oil, automobile batteries, building materials, consumer electronics, household hazardous materials, and white goods/scrap metal (large home appliances). Chlorofluorocarbon (CFC) refrigerants are removed from white goods in accordance with federal and state regulations. The County also offers one-day drop-off recycling events in various locations throughout the County for shredding and recycling of confidential paper, as well as donation and reuse of household items and clothing which are in usable condition. In September 2013, bulky rigid plastics were added for recycling drop-off, including toys, playhouses, large buckets, milk/soda crates, landscape items, laundry baskets, lawn furniture, closet organizers, dish drainers, tote boxes/lids, food grade drums, pet carriers, flower pots/trays, large water bottles, garbage cans/baskets, recycling bins, shelving, trays, automotive parts, pallets, traffic signs, composite lumbers, PVC/PET blister packs, and cloth hangers.

Needs Assessment and Plan Direction: The County will continue to provide drop-off services for certain recyclable materials. The County may modify the drop-off services as needed to reflect changes in the collection program or market conditions.

DEP will continue to monitor the needs and opportunities including the need for more electronics recycling and evaluate whether there is a need to continue satellite electronics recycling events. Pending fiscal constraints, DEP will continue to offer one-day drop-off recycling events for shredding and recycling of confidential paper in various locations throughout the year.

4.1.2.5 Electronic Recycling Program

Current Conditions and Constraints: DSWS' electronics recycling program is consistent with the provisions of the Statewide Electronics Recycling Program Act ("Act"), which took effect on October 1, 2007. The program provides for the recycling of computers, which includes desktop personal computers, laptop computers and computer monitors, and is consistent with the Act. Additionally, and again consistent with Act, the program also provides for the recycling of covered electronic devices, which means a computer or video display device with a screen that is greater than 4 inches measured diagonally. Other electronics items are acceptable for recycling under the program.

The computer recycling program started in 2000, and this was expanded to include televisions in October, 2007. In April, 2008, this program was again expanded to include cell phones, PDAs, digital cameras, and CD players, and essentially all other types of consumer electronics. Currently, this program recycles about 55 tons of computers and 100 tons of televisions and other electronics per month. County residents may drop-off unwanted electronics at a dedicated drop-off site, which has an enclosure and a canopy, seven-days-a-week on the County's Transfer Station's campus. Additionally, DSWS began a satellite event electronics recycling program in June 2008, using Park & Ride lots and schools as event sites for residents and businesses that are at a distance from the Transfer Station. These satellite events are currently being conducted four to six times a year in different geographic areas of the County and will continue as long as there appears to be reasonable participation. Currently, Creative Recycling, whose main processing facility is located in Morrisville, North Carolina, receives material collected via

the County's electronics recycling programs. The contract with Creative Recycling requires the recycling of all material except residue (non-electronic material).

Needs Assessment and Plan Direction: The County will continue to provide drop-off services for certain recyclable materials. The County may modify the drop-off services as needed to reflect changes in the collection program or market conditions.

4.1.2.6 Private Sector Recycling Infrastructure

Current Conditions and Constraints: For many years, land use standards were obstacles to a recycling infrastructure in the County. In 1997, the County Council approved an amendment to the County Zoning Ordinance that provides for the location of a "recycling facility" as a permitted use in select industrial zones. There are now two large private sector paper processing facilities operating in Montgomery County—Office Paper Systems, in Gaithersburg, and Georgetown Paper Stock, in Rockville, which together recycled 193,000 tons of paper in CY 2012. The reported annual throughput capacity of these facilities is 125,000 tons per year (TPY) and 200,000 TPY, respectively. So, there is no lack of nearby paper processing capacity. Montgomery Scrap, located in Rockville, MD, illustrates the proximity of the metals recycling market. In addition, substantial quantities of other recyclables, particularly from the non-residential and multi-family residential sectors, find their way to nearby processing and recycling facilities located near but outside of the County. For food waste composting, there are two pilot scale facilities developed by Carrol and Prince George's Counties. But these facilities are not yet sized or prepared to accept substantial quantities of outside waste, and the next nearest facility accepting food waste for recycling is located in Curtis Bay, Baltimore, and otherwise the nearest food waste facilities are located in Virginia.

Needs Assessment and Plan Direction: The lack of nearby food waste acceptance and recycling facilities limit immediate expectations for increased food waste recycling, since the distance to facilities (e.g., Baltimore, Richmond) raises the cost and

thus limiting the economic feasibility of additional private sector food waste recycling. However, the State of Maryland is currently working to establish a comprehensive and centralized regulatory framework to help engender the development of food waste composting capacity in the State, and these rules are expected in early 2015. Once that regulatory framework pursuant to the 2009 Maryland General Assembly is established, the expected role for private sector deployment of food waste recycling infrastructure can be clarified. If possible, County planning will proceed in the direction of a strategy that takes most cost-effective advantage of private sector services.

4.1.3 County Provided Disposal System

While the County strives to achieve its overall 70 percent recycling goal, the County's overall solid waste management system needs to be sufficiently robust to assure proper management of all MSW generated in the County. For proper disposal of waste that is either not recycled or not recyclable, Montgomery County employs both Resource Recovery and Landfilling. Consistent with its sustainability objectives, Resource Recovery is preferred over landfilling, but the combination of both is provided to assure a complete system.

4.1.3.1 County Resource Recovery Facility

Current Conditions and Constraints: In August 1995, the County began operation of a mass-burn RRF in Dickerson, Maryland. Waste that is delivered to the County's Shady Grove Processing Facility and Transfer Station and considered processible at the RRF is transported by rail to the RRF for "waste-to-energy" processing and ferrous metals recovery. Processing at the RRF recovers heat generated from the controlled combustion of MSW to produce steam which drives a turbine to generate electricity which is competitively marketed to the grid. In addition to renewable energy recovery, ferrous metals are recovered from RRF residue and competitively sold into the scrap metal market. The permitted calendar year throughput capacity of the RRF facility

is 657,000 tons per year (indexed to waste with a higher heating value of 5,500 BTU per pound).

Needs Assessment and Plan Direction: The County will regularly monitor and evaluate all aspects of RRF operations to ensure that waste transport and processing is conducted in a cost efficient and environmentally sound manner.

4.1.3.2 County-Provided Landfilling

Current Conditions and Constraints: For disposal of RRF residue, bypass and non-processible waste, the County has secured a long term out-of-County hauling and disposal agreement with Brunswick Waste Management Facility, LLC. (BWMF). Under the agreement, the contractor must accept at the Transfer Station, RRF, or other county delivery site, handle transport and dispose of all waste delivered by or on behalf of the County in accordance with applicable law. The contractor must provide all equipment necessary and there is no upper limit on the tonnage that must be accepted and disposed by the contractor. The initial term of the County's agreement extends through 2012 but is now extended through 2017. This contract was modified in 2010 to allow the beneficial reuse and recycling of ash residue as alternate daily cover and road base for internal landfill roads at any of the landfills owned by Republic Services, the parent company of BWMF, Most of the ash processing is currently occurring at the Old Dominion Landfill in Henrico County, Virginia. The same contract also provides for back-up landfill capacity in Georgia, or other approved locations. This is discussed further in the next chapter (Section 5.2.1.5.). With respect to the FY19 planning horizon, there will be a need to secure an additional two years of capacity. A new solicitation for ash recycling and landfill services should be issued in FY15, assuring that a new contract is in place before 2017, when the current contract expires.

The County has also purchased property off Wasche Road in the Dickerson area (known as "Site 2") for use as a future landfill site if needed, and has obtained a waste disposal permit for a landfill on this site.

Needs Assessment and Plan Direction: The County intends to retain the Site 2 property through the ten-year planning period and beyond for use in the event economic conditions or changes in law render out-of-County waste disposal infeasible. If the need arose to use the Site 2 landfill, it would provide at least ten years of disposal capacity.

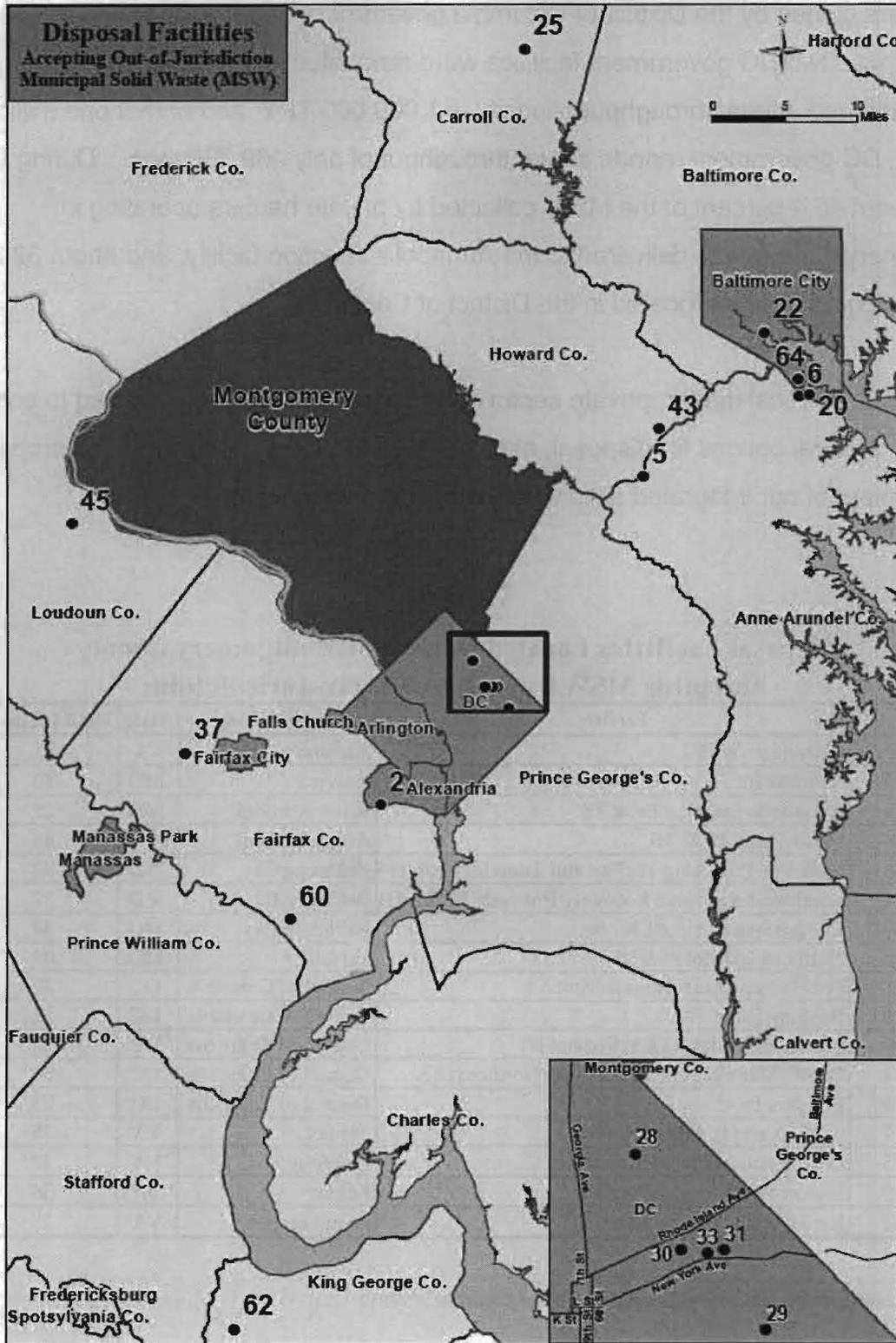
4.1.4 Regional Non-County MSW Disposal Facilities

Private sector collectors in Montgomery County have many options other than the County's Transfer Station to take their MSW.

Current Conditions and Constraints: Figure 4-2 shows the locations of disposal facilities accepting out-of-jurisdiction MSW, and corresponding Table 4.2 shows their road-distances from the center of Montgomery County.

During CY 2012, private sector collectors chose to dispose of 154,522 tons of MSW at out-of-County facilities. The most popular of these, with respect to Montgomery County collectors, were the Annapolis Junction, and the District of Columbia transfer stations. Capacities of these facilities are not fully utilized. The Annapolis Junction facility is permitted for 3,000 TPD, but typically handles only about 2,000 TPD. The District of Columbia transfer stations have recently been expanded.

Figure 4.2
Facilities Located Outside of Montgomery County and Accepting Out-of-Jurisdiction MSW



In the District of Columbia, there are four transfer stations where private haulers who serve Montgomery County take their waste. Two of these—Fort Totten and Benning Road—are owned by the District of Columbia government and the other two are private. Both of those two DC government facilities were renovated in the 2008-2009 timeframe. Their combined annual throughput capacity is 1,000,000 TPY, and of that one million TPY capacity, DC government reports a total throughput of only 469,766 tons.¹ During CY 2012, about 46.4 percent of the MSW collected by private haulers operating in Montgomery County was delivered to the Annapolis Junction facility, and about 32.3 percent went to facilities located in the District of Columbia.

As a practical matter, private sector collectors have, and are expected to continue, to utilize regional options for disposal, and recognizing this is important to the proper management of our integrated solid waste management system.

Table 4.2

**Disposal Facilities Located Outside of Montgomery County
Accepting MSW from Out-of-Their-Jurisdictions**

FAC ID	Facility	Jurisdiction	State	Road Distance
2	Alexandria WTE	Alexandria	VA	31
43	Ameriwaste	Howard	MD	30
5	Annapolis Junction PF & TS	Anne Arundel	MD	25
6	Curtis Creek PF & TS	Anne Arundel	MD	39
20	Baltimore Processing Facility and Transfer Center	Baltimore City	MD	40
22	Southwest Resource Recovery (formerly BRESKO)	Baltimore City	MD	37
64	Chesapeake Compost Works	Baltimore City	MD	44
25	Northern Landfill PF&TS	Carroll	MD	45
28	Fort Totten Trash Transfer Station	District of Columbia	DC	22
29	Benning Road TS	District of Columbia	DC	32
30	Consolidated IPC (a.k.a) Federal IPC	District of Columbia	DC	24
31	Waste Management of MD, Inc (Northeast TS)	District of Columbia	DC	32
33	Rodgers Brothers	District of Columbia	DC	23
37	Fairfax County TS - a.k.a I-66	Fairfax	VA	28
45	Old Dominion Transfer Sstation	Loudoun	VA	37
60	Lorton WTE	Fairfax	VA	36
62	King George County Landfill	King Georges	VA	75

¹ Personal communication with Jeffery Dickerson, District of Columbia, 2/5/2013.

**Table 4.3
Private Sector MSW Export in CY 2012**

ID	Facility	Location	Tons	Percent
5	Annapolis Junction	Jessup, MD	81,851	49.8%
28	Fort Totten	Washington, DC	37,932	23.1%
31	Waste Mgmt.	Washington, DC	13,664	8.3%
30	Federal IPC	Washington, DC	12,484	7.6%
43	Ameriwaste	Elkridge, MD	8,215	5.0%
60	Lorton WTE	Lorton, VA	5,480	3.3%
2	Alexandria WTE	Alexandria, VA	1,494	0.9%
	17 Other Facilities	Various Locations	3,125	1.9%
		Total	164,246	100.0%

4.1.5 Municipal Solid Waste Composting

Current Conditions and Constraints: With the exception of yard trim composting and a limited amount of food waste, no measurable portion of the County's MSW stream is processed through composting.

Mixed MSW composting is a developing technology that has not been included as a component of the County's solid waste management system. Moreover, no private facilities currently exist in the region to compost mixed MSW, and based on the commercial status of these technologies, none is expected in the near future.

As a categorical component of MSW, food waste represents an estimated 141,713 tons of disposed waste (13 percent of total MSW generation) according to Table 4.1, and thus the largest single categorical opportunity for increased recycling. Limited private sector efforts have been made in the region to separately collect select sources food wastes for composting, but with uncertain results and uncertain outlook. Of an estimated 142,000 tons of food waste generated in CY 2012, only about 7,000 tons of food waste

was recycled. This was essentially due to a few small collectors, working with a handful of specialized waste generators (e.g., groceries and restaurants), who have endeavored to become leaders in food waste recycling by partnering to separately collect food waste and deliver it to a fledgling few food waste composters. So far, however, food waste composting has encountered several hurdles. For example, most attempts to develop food waste composting operations in Maryland have resulted in suspension of operations due to one or another State regulation. Even the County's own food waste pilot program (County office building cafeteria in Rockville) had to find an alternate, out-of-state processor to accept its food waste for composting. Montgomery County believes that the State recognizes the need for, and is working hard to establish, a cogent set of rules to both regulate and promote composting capacity, including food waste. Another hurdle will be a clear understanding of best management practices that waste generators can follow to work with their collectors in order to take advantage of composting facilities that do come on the scene.

Needs Assessment and Plan Direction: The solid waste management system developed by the County has been designed to achieve all State and County goals and requirements without reliance on large scale mixed MSW composting. This County does not envision a need to engage in mixed MSW composting during the next ten years. However, developments in composting of separately-collected food waste should be tracked and opportunities examined as potentially contributing to increased recycling within the planning horizon. In particular, the County should continue to work with MDE to help clarify regulations governing the permitting and operation of food residual composting so as to remove impediments to the development of new food residual composting facilities in our region. Once MDE adopts clear and comprehensive regulations governing the siting, permitting, construction, and operation of food composting facilities in Maryland, DEP should develop a strategy to contractually obtain access to or promote the development of food waste composting capacity to service Montgomery County waste generators. Meanwhile, DEP should continue to conduct pilot projects and establish best management practices for food residuals collection, transportation and processing.

4.1.6 Solid Waste with Hazardous Characteristics

Current Conditions and Constraints: Some common household and business waste materials in MSW may have hazardous characteristics (toxicity, ignitability, corrosivity, or reactivity). Waste materials with hazardous characteristics that may be found in homes and small businesses include: pesticides, oil-based paints, paint thinners and solvents, batteries², fuels, used motor oil, brake fluid, antifreeze, photographic chemicals and compact fluorescent light bulbs (CFLs).

Household hazardous waste (HHW) is not required to be handled separately as hazardous waste under state and federal law if certain conditions are met. However, DEP programs have been implemented to promote the source separation of these materials from MSW, along with a program for handling waste from businesses that qualify under USEPA rules as small quantity generators.

In July 2004, the HHW program began operation of a permanently staffed site at the Shady Grove Processing Facility and Transfer Station. In August of 2006, the HHW program expanded its operations from approximately four days per week to seven days a week. Since 2010, the HHW program expanded its hours to exactly match the 83 hours per week that the Transfer Station is open. This has resulted in participation increasing to 80,000 drop-offs by residents per year. Participation at satellite events substantially decreased after the expansion of HHW program hours at the Transfer Station, so satellite events are currently not being conducted. Since its inception, the HHW program has processed hundreds of tons of toxic, flammable, corrosive and reactive materials.

In 1996, the County launched the ECOWISE program to receive materials from businesses that generate small quantities of such wastes. Businesses served by this

² The battery types that require special disposal are: rechargeable nickel-cadmium (Ni-Cd) and nickel metal hydride (NiMH) batteries, small sealed and automotive lead acid batteries, and lithium, mercuric oxide, silver oxide batteries.

program are known as "small quantity generators." Montgomery County is the only jurisdiction in the State of Maryland to provide this service to businesses.

DEP currently accepts CFLs as part of its Household Hazardous Waste program. Since CFLs and fluorescent tubes are Universal Wastes, not hazardous wastes, the County's HHW contractor accepts them from businesses at any time for a small fee, and they do not need to wait for the once-a-month ECOWISE program which serves small quantity generators. Also, for electronics recycling, see discussion in Section 4.1.2.4., above.

Needs Assessment and Plan Direction: DEP will pursue additional opportunities that are cost effective to expand participation in both the County's HHW and small quantity generator programs.

There is growing use of and interest in CFLs. Some private retailers such as Home Depot and IKEA stores have begun to offer CFL recycling opportunities at their stores. These retailers contract CFL collection services with their current hazardous waste collection company or through designated CFL recycling collection companies and programs. DEP will encourage retailers in the County to offer recycling opportunities of this nature to their customers. DEP will also maintain updated information of retailers' locations and recycling opportunities offered on its website.

4.2 MANAGEMENT NEEDS: SPECIAL WASTE STREAMS

4.2.1 Rubble and Demolition Type Waste Needs

As reported in Table 3.1, there was a total of 210,060 tons of non-MSW, demolition type waste generated in the County during CY 2012 (broken out as: 191,455 tons of land clearing and demolition, 2,817 tons of concrete brick and dirt, 15,735 tons of soil, and 53 tons of asbestos). Those tons were disposed. Another 30,077 tons of this type of

material was generated in the County and recycled (though not counted in the County's recycling rate), for a total of 240,137 tons generated in CY 2012 of non-MSW, rubble and demolition type waste to be managed. Historically, the bulk of this type of waste was handled almost exclusively by the private sector, but in recent years, the County's role has increased.

Current Conditions and Constraints: As reported in Chapter 3, during CY 2012, the County received at its transfer station 106,382 tons (or 44 percent of the total C&D generated), and private facilities received about 133,755 tons (or 56 percent of the C&D total generated). Table 4.4, below, presents more specifically, the generation and disposition of the 240,137 tons of C&D generated in the County during CY 2012.

**Table 4.4
C&D Generation and Disposal**

Total C&D Generation, CY12	240,137	100%	Breakouts	100.0%
Received by Montgomery County	106,382	44%		
Recycled by County (does not count toward recycling rate)			30,077	12.5%
Disposed by County via its Out-of-County (OOC) Landfill Contract			4,825	2.0%
Burned by County in RRF (remaining ash also disposed in OOC Landfill)			71,480	29.8%
Handled Entirely by the Private Sector	133,755	56%		
Clarksburg C&D (This in-County facility is permitted for 250,000 TPY)			46,425	19.3%
32 Other private facilities, located outside of Montgomery County			87,330	36.4%

In addition to the County's Transfer Station, there is one facility located within the borders of the County, Clarksburg, Maryland, which is permitted to accept and process C&D for recycling. The Clarksburg facility opened in 2005, and is permitted to receive up to 250,000 TPY of C&D. During CY 2012, however, that facility accepted only 46,425 tons. Most of this was delivered by collectors affiliated with the owner. This apparent underutilization of capacity is at least partly attributable to the fact that not all types of C&D can be processed at the facility due to limitations on the separations that can be achieved at this facility relative to the conditions of the mix collected and potentially delivered, together with the abundance of alternate C&D acceptance facilities in the region (discussed below). There may also be private and economic circumstances. The Clarksburg facility appears to maintain its tipping fee slightly higher than the County's.

As noted in Table 4.4, above, there are another 32 facilities, located outside of the County, that accept C&D from Montgomery County sources.

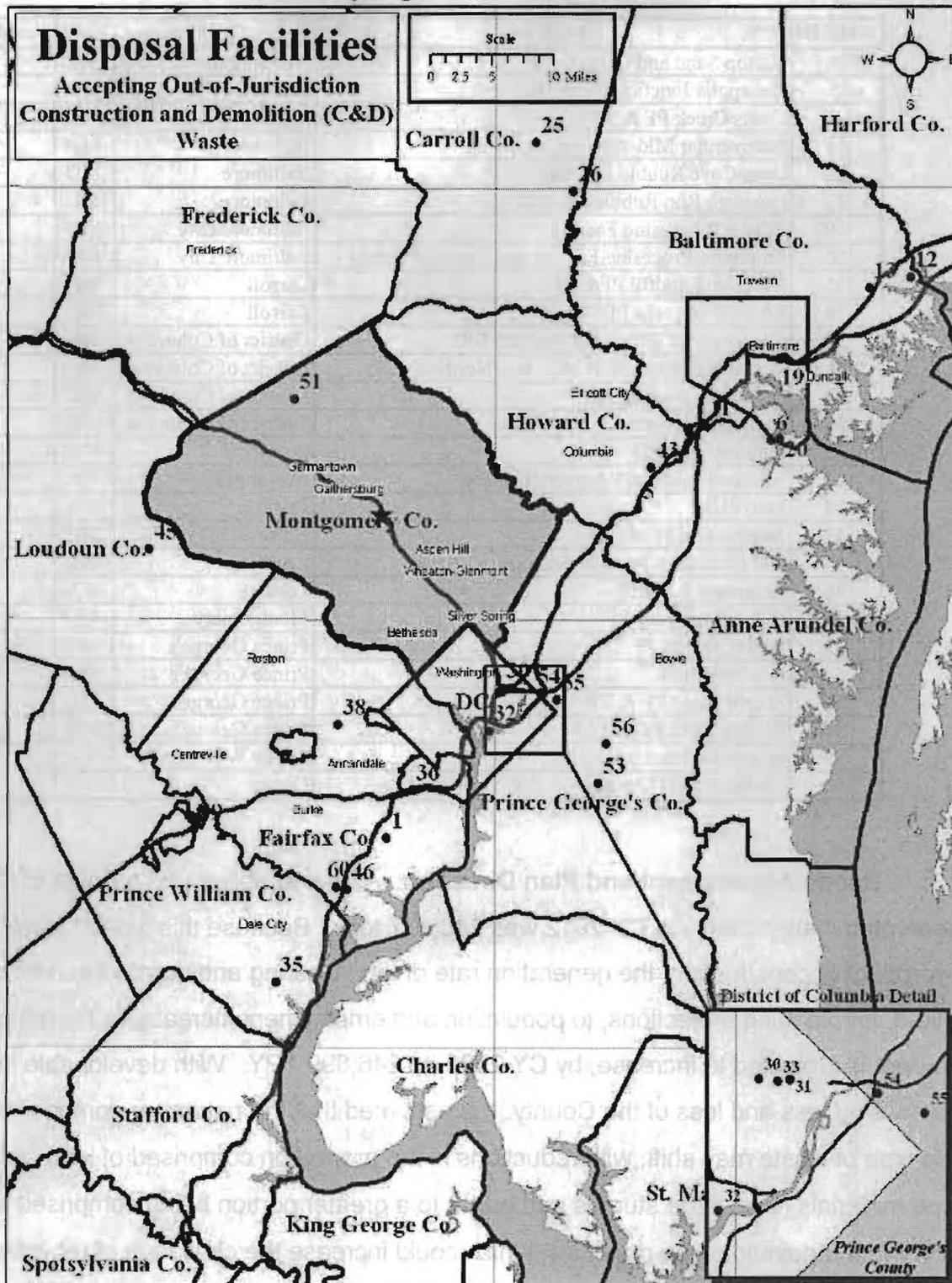
Recently, the County modified its out-of-County hauling and disposal contract to enable select recyclable C&D received by the County at its transfer station to be transported for recycling at the Honeygo Run facility located northeast of Baltimore (facility identification number 13 in Figure 4.3 and Table 4.5). This modification provides for the recycling of mixed dirt, rocks, brick, concrete as well as any remaining metal, dimensioned lumber and cardboard in the C&D loads and is a promising avenue for recycling mixed loads this type of material received by the County.

Some of the facilities noted above accepted quite small quantities of C&D, in particular those located farther away. Figure 4.3, below, shows a map of most of these facilities.

Figure 4-3 map show all available privately run options in jurisdictions adjacent to Montgomery County in Maryland which are known to accept C&D type materials. With respect to facilities in Virginia and DC the map only shows those reported by private haulers as being or having been used for disposition of C&D generated within Montgomery County. As a consequence Figure 4-3 does not necessarily represent the total number of available facilities for C&D.

Figure 4.3

Facilities Accepting Out-of-Jurisdiction C&D Waste



**Table 4.5
Disposal Facilities Accepting Out-of-Jurisdiction C&D Materials**

FAC_ID	Facility	County	State	Road Distance
1	Hilltop Sand and Gravel	Alexandria	VA	35
5	Annapolis Junction PF & TS	Anne Arundel	MD	25
6	Curtis Creek PF & TS	Anne Arundel	MD	39
11	Recovermat Mid-Atlantic, LLC PF	Baltimore	MD	31
12	Days Cove Rubble Landfill	Baltimore	MD	65
13	Honeygo Run Rubble Landfill SE	Baltimore	MD	61
19	Edison Processing Facility	Baltimore City	MD	51
20	Baltimore Processing Facility and Transfer Center	Baltimore City	MD	40
25	Northern Landfill PF&TS	Carroll	MD	45
26	Roll-Off Express PF	Carroll	MD	64
30	Consolidated IPC (a.k.a) Federal IPC	District of Columbia	DC	24
31	Waste Management of MD, Inc (Northeast TS)	District of Columbia	DC	32
32	DC Rock, Washington	District of Columbia	DC	28
33	Rodgers Brothers	District of Columbia	DC	32
35	Potomac Landfill	Dumfries	VA	46
36	Alexandria Waste Recovery Facility	Alexandria	VA	31
38	Merrifield	Fairfax	VA	22
43	Ameriwaste PF & TS	Howard	MD	35
45	Old Dominion Transfer Sstation	Leesburg	VA	37
46	Rainwater Landfill	Lorton	VA	37
51	C & D Recovery PF	Montgomery	MD	13
53	Dower House PF	Prince George's	MD	38
54	Kenilworth PF	Prince George's	MD	30
55	Sheriff Road PF & TS	Prince George's	MD	32
56	Ritchie Land Rubble LF	Prince George's	MD	34
59	Manassas Transfer Station	Prince William	VA	39
60	Lorton C D D Landfill	Lorton	VA	36

Needs Assessment and Plan Direction: As noted above, the amount of C&D generated in the County in CY 2012 was 240,137 tons. Because this type of waste is a byproduct of construction, the generation rate of land clearing and demolition debris is linked, for planning projections, to population and employment increases. Therefore, this amount is projected to increase, by CY 2023, to 246,699 TPY. With developable land comprising less and less of the County, it is assumed that the nature, or composition, of this type of waste may shift, with reductions in the proportion comprised of land clearing type materials (e.g., large stumps and earth) to a greater portion being comprised of tear-down and renovation type materials, which could increase the challenge of recycling and disposal of that material.

As Figure 4-3 and Table 4-5 show, there is no shortage of destinations in addition to Clarksburg or the County Transfer Station which can and do receive C&D generated in Montgomery County. In addition, seven of the 27 facilities inventoried above are equipped for some type of processing for recycling C&D.

Based on the foregoing, no additional County program for C&D appears to be needed at present to provide disposal capacity for private sector generated C&D.

However, the County's hierarchical preference that waste be recycled rather than disposed dictates a planning direction with respect to C&D management. Specifically, the County will, to the maximum extent practicable, utilize its newly amended out-of-County haul contract to recycle the C&D that it receives at its transfer station, and also will continue to explore the fiscal and operational feasibility of increased recycling for land clearing and demolition debris generated from County roadway construction projects.

It should be understood that C&D recycling does not influence the County's recycling rate calculation since C&D is not Municipal Solid Waste (MSW) and is not eligible for recycling credit under the Maryland Recycling Act.

4.2.2 Asbestos Disposal

Current Conditions and Constraints: Since the closing of the County's Oaks Landfill in 1997, The County's solid waste facilities no longer accept Regulated Asbestos Containing Material (RACM) generated in the County. The County does not use its out-of-County landfill, in Brunswick County, VA, for RACM disposal either. Generators of this type of waste contact licensed and permitted asbestos contractors who are experienced in the proper removal, handling, transportation and disposal of RACM in a regulated disposal facility.

Needs Assessment and Plan Direction: There is no need for change to the existing County asbestos disposal policy.

4.2.3 Controlled Hazardous Substances

The term, "Controlled Hazardous Substances (CHS)," refers to hazardous waste as defined in COMAR 26.13.01 and special medical waste as defined in COMAR 26.13.11. These waste materials must be source separated from MSW and require special handling and disposal practices to protect public health and the environment. The management needs of hazardous waste and special medical waste are discussed below.

4.2.3.1 Hazardous Waste Management

Current Conditions and Constraints: Montgomery County generates less hazardous waste than many communities because of its relatively low level of industrial and manufacturing activity. County regulation requires any business that uses, stores, treats, or transfers 50 pounds or more of hazardous materials, including hazardous waste to obtain a Hazardous Materials Use Permit and to register annually with the County FRS, Local Emergency Planning Council (as mandated by federal law). The WSSC regulates the industrial waste discharges into the sanitary sewer system.

All other hazardous waste regulations are implemented and enforced by the State and Federal governments. MDE uses a manifest system to regulate hazardous waste from its point of generation, through its transportation, interim processing and storage, and finally to its ultimate disposal facility. MDE has responsibility for the permitting of TSD facilities, including hazardous waste disposal facilities.

Businesses which generate less than 100 kilograms of hazardous waste (or 1 kilogram of acute hazardous waste) per month, or which store less than 100 kilograms of hazardous waste are considered "small quantity generators" and are exempt from most

State hazardous waste management regulations. Small quantity generators operating in Montgomery County may be eligible to dispose of hazardous waste materials through a special drop-off collection program sponsored by DEP (see Section 4.1.6).

Needs Assessment and Plan Direction: No changes in the County's involvement in hazardous waste management are anticipated in the next decade.

4.2.3.2 Hazardous Waste Emergency Response

Current Conditions and Constraints: Under the County's Emergency Operations Plan, the Fire and Rescue Services (FRS) is the primary agency for Oil and Hazardous Materials Response. DEP is responsible to provide FRS support to hazardous material response by providing limited detection, monitoring, and sampling and analysis operations in accordance with DEP Response Procedures for Hazardous Materials Spills. DEP is also responsible to provide support to manage hazardous material incident clean-up operations including coordinating the county's efforts in decontaminating public and private properties and the environment.

DEP periodically updates a Response Procedures Manual to provide specific guidance dealing with releases of hazardous material. Items such as sewage releases are also included in the manual.

Hazardous waste spill incidents, when outside assistance is required, are reported through calls made to "911" within the County are referred to the County Emergency Communications Center. All spills are reported to MDE in accordance with the County's approved Storm Water Management Prevention Plans. The County FRS hazardous incident response team responds to spills of oil and other hazardous substances. Larger spills may require assistance from the MDE spill team and/or a private cleanup contractor. FRS is responsible for on-site materials containment and stabilization. Once FRS has

rendered the incident site safe, DEPC coordinates for the removal of the hazardous materials.

Under the County's Water Quality Ordinance (Montgomery County Code, Chapter 19, Section 19-35), DEP can issue fines for illegal dumping on County roads, rights-of-way, streams and storm drains. Through the County's Water Quality Ordinance, DEP established specific procedural guidelines to address any illegal storm drain connections. If an illegal storm drain connection is identified, DEPC may write a Notice of Violation to the responsible party and require corrective actions, including the cleanup of any spilled material and requiring a legal means of discharge. Enforcement of illegal connections is the responsibility of DEPC and the WSSC.

Needs Assessment and Plan Direction: The hazardous waste spill response system adequately serves County needs. No major structural modifications to the system are envisioned during the next 10 years.

4.2.3.3 Special Medical Waste

Current Conditions and Constraints: Special medical waste is generated by hospitals, doctors' offices, medical and research laboratories. State regulations govern the transport and disposal of special medical waste. Special medical waste must be transported by state-licensed haulers and processed at permitted facilities under a State manifest reporting system.

State law provides a residential use exemption (e.g., for home insulin users) for disposal of home medication material as MSW.

Special medical waste incinerators operate under State permits. At present, no permitted special medical waste incinerators operate in Montgomery County (see Table 3.12).

DEPC enforces air quality provisions of the County Code, reviews State installation and operating permits, and works with the County DPS to enforce compliance with the ventilation requirements of County building standards in relation to any incinerator which operates in the County.

Investigations of improper disposal of special medical waste are conducted by DEPC. If suspicious waste is identified at the Transfer Station, the facility manager contacts DEPC. DEPC investigates and supervises the removal of any improperly disposed special medical waste.

Needs Assessment and Plan Direction: Aside from the licensing and investigative efforts listed in the paragraphs above, the County does not participate in special medical waste management or regulation. Currently all special medical waste generated in the County is processed at private facilities located outside of the County.

4.2.4 Animal Carcass Waste

Current Conditions and Constraints: There are no animal carcass waste rendering facilities in the County. In CY 2012, private renders in Virginia and Pennsylvania processed an estimated 246 tons of animal carcasses, bone and fat originating from the County. In addition, one privately owned pet crematorium operates under State permit in the County.

Needs Assessment and Plan Direction: Rendering facilities primarily collect meat byproducts from farms, restaurants, institutions and grocery stores. Domestic pet carcass generators include the County Police Department Animal Services Division, the Montgomery County Animal Shelter, and pet crematoria. Given facility siting constraints, new rendering facilities and incinerators are unlikely to set up operation in Montgomery

County. Over the next ten years, County animal waste generators likely will remain dependent on out-of-County rendering facilities.

4.2.5 Bulky Wastes

Current Conditions and Constraints: Bulky wastes include large household appliances (also known as white goods), other scrap metals and building materials. Bulky items are directed to different areas of the Transfer Station for recycling or disposal depending upon the materials. White goods and other scrap metals are sent to scrap metal dealers for recycling. Reusable building materials dropped off at the Transfer Station are picked up by non-profit organizations. Other bulky items that are unsuitable for disposal at the RRF are included with other non-processible waste sent for disposal at a private landfill under contract to the County.

Needs Assessment and Plan Direction: Existing facilities and programs appear sufficient to accommodate bulky waste materials.

4.2.6 Automobiles

Current Conditions and Constraints: Two automobile parts salvage companies operate in Montgomery County. However, no full scale automobile recycling facilities exist within the County. Retired automobiles generally are hauled to auto recyclers located outside of the County. The Montgomery County Police dispose of abandoned vehicles primarily through public auction. The police send approximately ten automobiles per year to scrap dealers.

Needs Assessment and Plan Direction: No further County involvement in automobile waste management appears warranted for the next decade.

4.2.7 Vehicle Tires

Current Conditions and Constraints: The State of Maryland developed a scrap tire program for the management of scrap tires in Maryland. Many auto service centers in the County arrange for private recycling of their customers' tires at facilities outside of the County. County residents may drop five or fewer scrap tires per year at the County's Transfer Station for recycling.

Needs Assessment and Plan Direction: The existing State scrap tire management system has sufficient capacity to recycle scrap tires generated in the County.

4.2.8 Wastewater Treatment Biosolids

Current Conditions and Constraints: The four wastewater treatment plants located in the County currently treat approximately 20 million gallons per day (MGD) of domestic wastewater and generate about 6,900 dry tons per year of biosolids.

There are currently six farms in the County with active permits issued by MDE authorizing Sewage Sludge Utilization for beneficial land use. These permits are held by Synagro Mid Atlantic, Inc., located in Baltimore, Maryland. Biosolids applied under these permits may originate from anywhere in the region. The testing standards and application guidelines for the land application of biosolids are regulated by MDE and the Maryland Department of Agriculture (MDA).

Needs Assessment and Plan Direction: WSSC is in the design phase of its Anaerobic Digestion/Combined Heat & Power (AD/CHP) project which will be located at the Piscataway WWTP. This project represents a major change in how biosolids will be dealt with in Montgomery County and Prince George's County. The project would receive biosolids from WSSC's other wastewater treatment plants (including the Seneca

and Damascus wastewater treatment plants in Montgomery County). Fats, oils, and grease collected by WSSC would also be sent through this process.

4.2.9 Septage

Current Conditions and Constraints: Approximately 50,000 homes in Montgomery County use a private septic system rather than the public sanitary sewerage system. In addition, about two dozen homes rely on sewage holding tanks. Septic system tanks and holding tanks are periodically pumped by private haulers permitted by the County. Pumped sewage is discharged into the WSSC or other municipal sanitary sewerage systems at controlled entry points.

Using assumed tank capacities and discharge frequencies, the County estimates current and future septic and holding tank septage generation is 18,000 wet tons annually.

Needs Assessment and Plan Direction: Current septage management practices are being reviewed by WSSC and DEP. WSSC has a “Septage Discharge Facility Planning & Implementation” project in the CIP which would result in the construction of three discharge facilities (the abandoned Rock Creek WWTP, Anacostia Wastewater Pumping Station No. 2, and Piscataway WWTP).

4.2.10 Other Wastes

Current Conditions and Constraints: As stated in Chapter 3, Montgomery County generates insignificant quantities of agricultural wastes and mining wastes.

Ferrous metals are extracted from the mix of RRF ash and residue are recycled for beneficial use, as described in Section 3.3.2.3.

Litter is considered MSW and is processed along with all other MSW received at County facilities.

Street sweepings are blended with MSW and sent to the RRF.

Needs Assessment and Plan Direction: The County has established appropriate and sufficient facilities and programs for the management of agricultural wastes, mining wastes, litter, recreational wastes, and street sweepings. No significant change in the management of these wastes appears warranted during the life of this plan.

4.3 CONSTRAINTS ON NEW SOLID WASTE ACCEPTANCE FACILITIES

4.3.1 Physical Constraints on Waste Acceptance Facilities

Current Conditions and Constraints: Several physical characteristics of the land in Montgomery County influence the siting of new solid waste acceptance facilities. These constraints include: topography, soil types, geologic conditions, aquifers, wetlands and surface waters.

A. Topography – The general topography of Montgomery County is illustrated by Figure 4.4. The County is dominated by a rolling plain or "low hill" landscape. Hills are concentrated in the northern part of the County and adjacent to the major stream valleys. The highest point in the County is 873 feet above sea level; the lowest point in the County is 52 feet above sea level. The average elevation gradient is 29 feet per mile.

In general, the effort and costs of site preparation for most solid waste facilities increase as the topographic variation increases. County Council Resolution 11-787 (1988) established County criterion for preferred landfill topography specifying that "gently rolling uplands will be preferred as landfill sites to flat, steeply sloping, or valley bottom areas." The complete list of County landfill site selection criteria appears in Appendix C. Although grading costs may increase as a result, this criterion intends to avoid low, flat areas, where poor drainage could result in ground water or surface water problems.

Steep areas would be prone to erosion; and valley bottom areas are crucial for watershed drainage and maintaining water quality.

B. Soil Types³ – The soils of Montgomery County consist of one of six general descriptions. The locations of these soil types appear in Figure 4.5.

“Glenelg-Gaila-Occoquan” soils are nearly level to strong sloping, well drained, deep and very deep soils that are loamy throughout. This soil type is found in the central part of the County and extends to the east and south. It is found on broad ridgetops and side slopes. Glenelg-Gaila-Occoquan soils make up approximately 41 percent of the County.

“Brinklow-Baile-Occoquan” soils are nearly level to moderately steep, well and poorly drained, moderately deep soils that are loamy throughout. This soil type is found in the northern part of the County. It is found on broad ridgetops and side slopes. Brinklow-Baile-Occoquan soils make up approximately 16 percent of the County.

“Urban Land-Wheaton-Glenelg” soils are nearly level to strongly sloping, well drained, very deep soils that are loamy throughout. This soil type is found in primarily in the Germantown area and in southern and eastern portions of the County. It is found on broad ridgetops and side slopes. Urban Land-Wheaton-Glenelg soils make up approximately 16 percent of the County.

“Penn-Brentsville-Readington” soils are nearly level to steep, well and moderately well drained, moderately deep and deep soils that are loamy throughout. This soil type is found in the western part of the County. It is found on broad ridgetops and side slopes. Penn-Brentsville-Readington soils make up approximately 14 percent of the County.

³ Source: Soil Survey of Montgomery County, Maryland, USDA Natural Resource Conservation Service in cooperation with the Montgomery Soil Conservation District, July 1995.

“Blocktown-Brinklow-Linganore” soils are gently sloping to steep, well drained and moderately deep soils that are loamy throughout. This soil type is found in the northern part of the County. It is found on broad ridgetops and side slopes. Blocktown-Brinklow-Linganore soils make up approximately 10 percent of the County.

“Chillum-Croom-Beltsville” soils are nearly level to steep, well drained and moderately well drained, very deep soils. This soil type is found in the eastern part of the County along the Prince George’s County line. It is found on broad ridgetops and side slopes. Chillum-Croom-Beltsville soils make up approximately 3 percent of the County.

C. Geologic Conditions⁴ – The County lies almost entirely in the Piedmont physiographic province where the bedrock consists predominantly of metamorphic rocks of the Paleozoic age. Consolidated sedimentary rocks of Early Triassic age occupy a down-faulted basin in the western part of the County. On hills and ridges along the eastern border, small erosional remnants of unconsolidated Cretaceous sedimentary rocks extend westward from the Coastal Plain in Prince George's County (see Figure 4.6).

⁴Source: "Bedrock Geology of Montgomery County," compiled by Jonathan Edwards, Jr., Maryland Geological Survey, Baltimore, MD. December 1992.

Montgomery County Topographic Regions

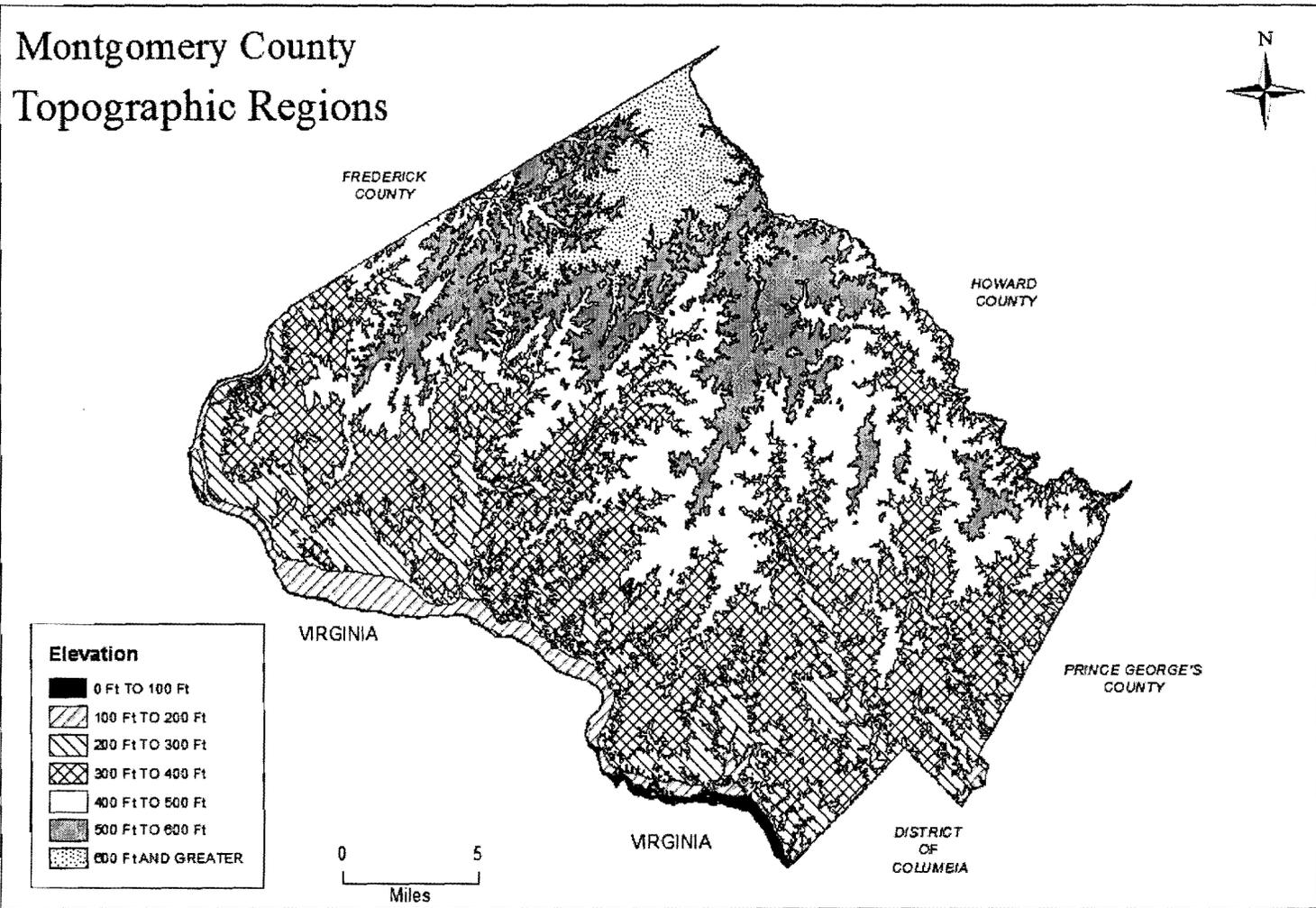


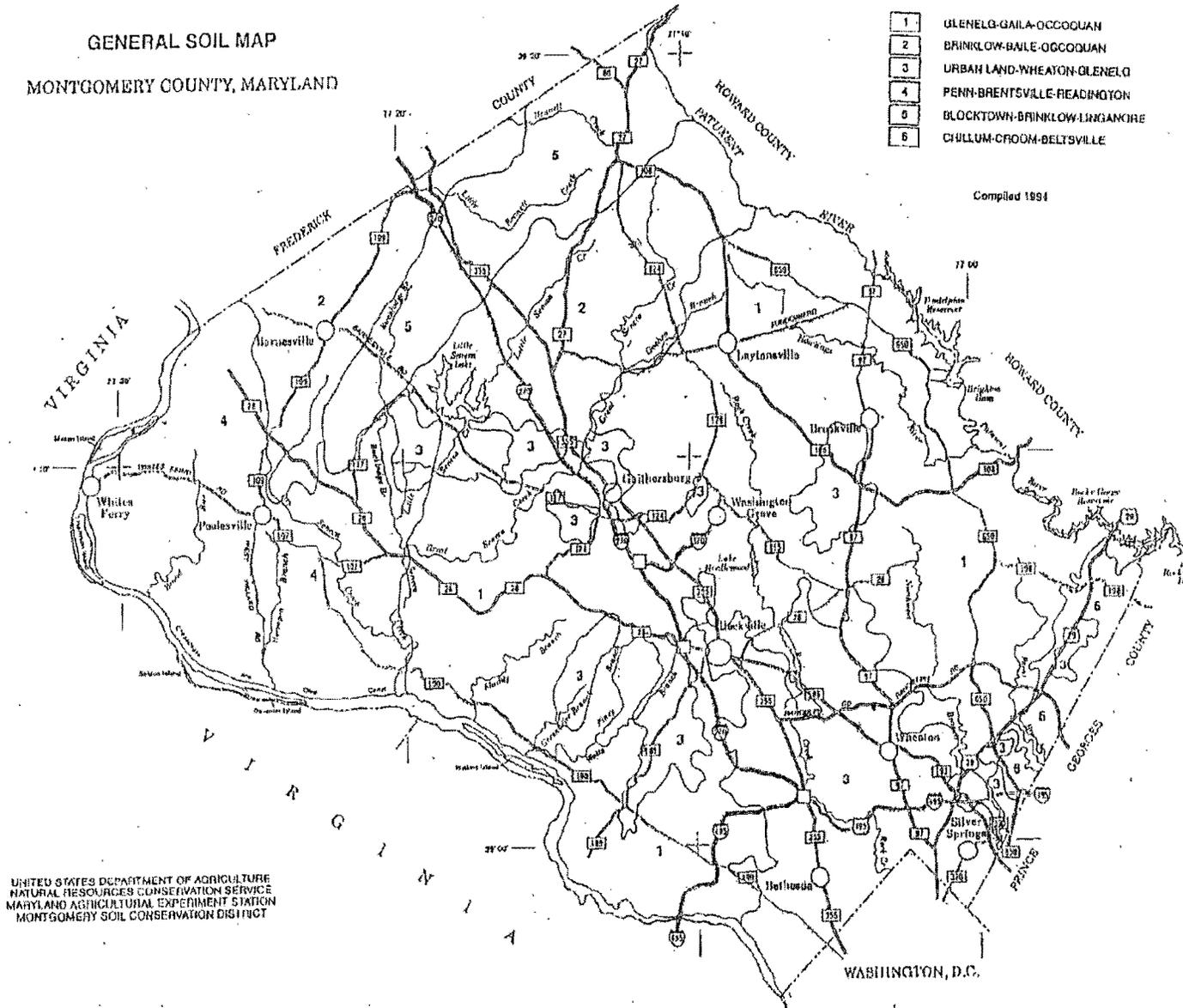
Figure 4.4
County Topographic Map

GENERAL SOIL MAP
MONTGOMERY COUNTY, MARYLAND

SOIL LEGEND*

- | | |
|---|-------------------------------|
| 1 | OLENELO-GAILA-OCODUAN |
| 2 | BRINKLOW-BALE-OCODUAN |
| 3 | URBAN LAND-WHEATON-OLENELO |
| 4 | PENN-BRENTSVILLE-READINGTON |
| 5 | BLOCKTOWN-BRINKLOW-LINGANCIRE |
| 6 | CHILLUM-CROOM-BELTSVILLE |

Compiled 1994



UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
MARYLAND AGRICULTURAL EXPERIMENT STATION
MONTGOMERY SOIL CONSERVATION DISTRICT

Figure 4.5
County General Soil Map

The bedrock in the eastern two-thirds of the Piedmont consists of rocks of the Wissahickon Group. The best example of these rocks is exposed in the quarry of Rockville Crushed Stone Company south of Hunting Hill. The serpentinite here is quarried for use as crushed stone aggregate. Quarries for building stone in the micaceous quartzite are located in several places of the western schist belt.

Fine-grained slaty rocks mapped as the Urbana (e.g., Harpers), Ijamsville, and Marburg phyllites occupy the Piedmont of Montgomery County west of a line running north-northeast from Blockhouse Point on the Potomac River to a point on the Patuxent River due north of Etchison, at Annapolis Rock. A large area in the western corner of the County is underlain by consolidated sedimentary rocks of Triassic age. This represents a small portion of the large Culpepper Basin in neighboring Virginia. Red Triassic sandstone was quarried for building stone at several places along the bluffs north of the Potomac River during the 19th century.

The general trend of the bedrock units across Montgomery County and the strike of the foliation and cleavage are northeast-southwest, but no one particular lithology appears to have had significant control on the topography.

Alluvial deposits consisting of gravel, sand, silt, and clay of recent age are present along the Potomac River, particularly in the wide bottomlands in the area of Triassic rocks west of Seneca. This alluvial fill is much less developed where the river channel has been cut into hard metamorphic rocks such as along the Potomac east of Seneca, along the Patuxent River, and in the larger streams tributary to these rivers.

GENERALIZED BEDROCK GEOLOGIC MAP OF MONTGOMERY COUNTY, MARYLAND

Compiled by Jonathan Edwards, Jr,
Maryland Geological Survey, 1992
Adapted from geologic maps of
Cloos and Cooke (1953) and Froelich (1975)

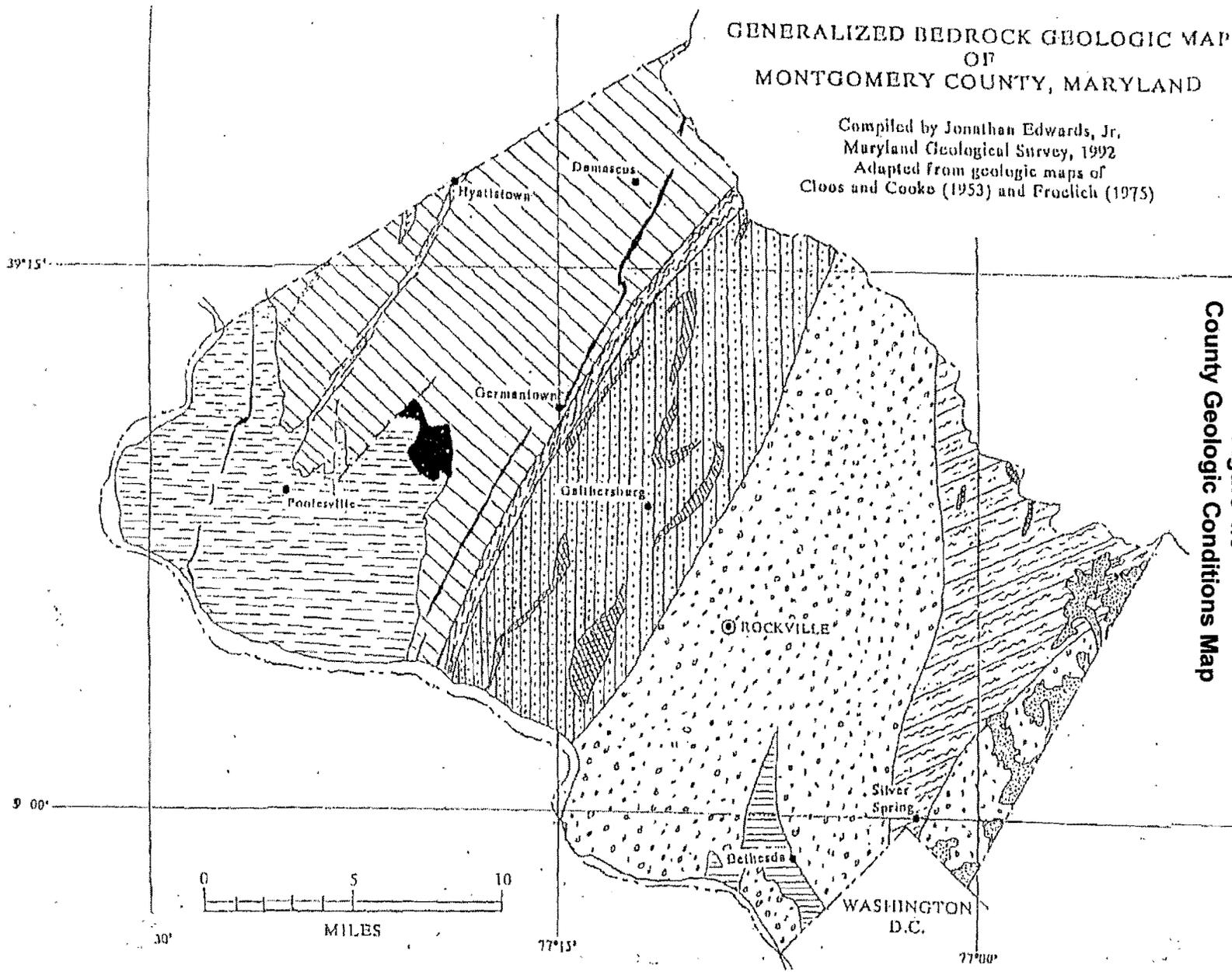


Figure 4.6
County Geologic Conditions Map

Figure 4.6 (con't)

EXPLANATION OF GEOLOGIC MAP

MESOZOIC

CRETACEOUS



Potomac Group: Unconsolidated deposits of quartz-pebble gravel; white, tan, and pink sand; and gray, white, tan, and pink clay of the Patuxent, Arundel, and Patapsco Formations

JURASSIC



Diabase Dikes and sills: Fine-grained, black basalt dikes and medium- to coarse-grained, black to dark greenish-gray diabase sill.

TRIASSIC

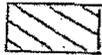


New Oxford Formation: Brick-red shale, siltstone, and red to gray sandstone. Cobble to pebble conglomerate at base.

EARLY PALEOZOIC



Pleasant Grove Formation: Fine-grained, dark greenish-gray metagraywacke and chlorite-muscovite-plagioclase-quartz phyllite*. Strongly sheared with tight internal isoclinal folds.



Marburg, Ijamsville, and Urbana, Formations: Fine-grained, greenish-gray, gray-tan, and purple-gray phyllite. Some phyllites are interlaminated with thin, tan, fine-grained silty quartz layers.



quartzite: Fine- to medium-grained, gray-tan to white quartzite with rounded grains of quartz. Some layers of pebble conglomerate occur.



Georgetown Mafic Complex: Medium- to coarse-grained, dark green metagabbro, black amphibolite, and gray metadiorite.

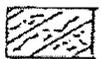
Wissahickon Group:



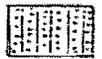
Sykesville Formation and Laurel Gneiss: Gray, medium- to coarse-grained plagioclase-muscovite-quartz gneiss containing deformed and metamorphosed pebbles and boulders of vein quartz, mica schist, granite gneiss, serpentinite, and amphibolite. Occurs with schist and metagraywacke identical to those of the western facies of the Wissahickon.



ultramafic and related rocks: Medium- to fine-grained, green to black chlorite-actinolite schist, chlorite-talc schist, and serpentinite.



Eastern schist facies: Medium- to coarse-grained, gray to brownish-gray, garnet-bearing biotite-plagioclase-muscovite-quartz schist interlayered with biotite-muscovite-quartz-plagioclase gneiss.



Western schist facies: Fine-grained greenish-gray to gray, chlorite-muscovite-quartz-plagioclase schist.

LATE PRECAMBRIAN



Metabasalt (Sams Creek Formation): Fine-grained, chlorite-epidote schist and medium- to coarse-grained plagioclase-actinolite diabase.

* Mineral constituents listed in order of increasing abundance.

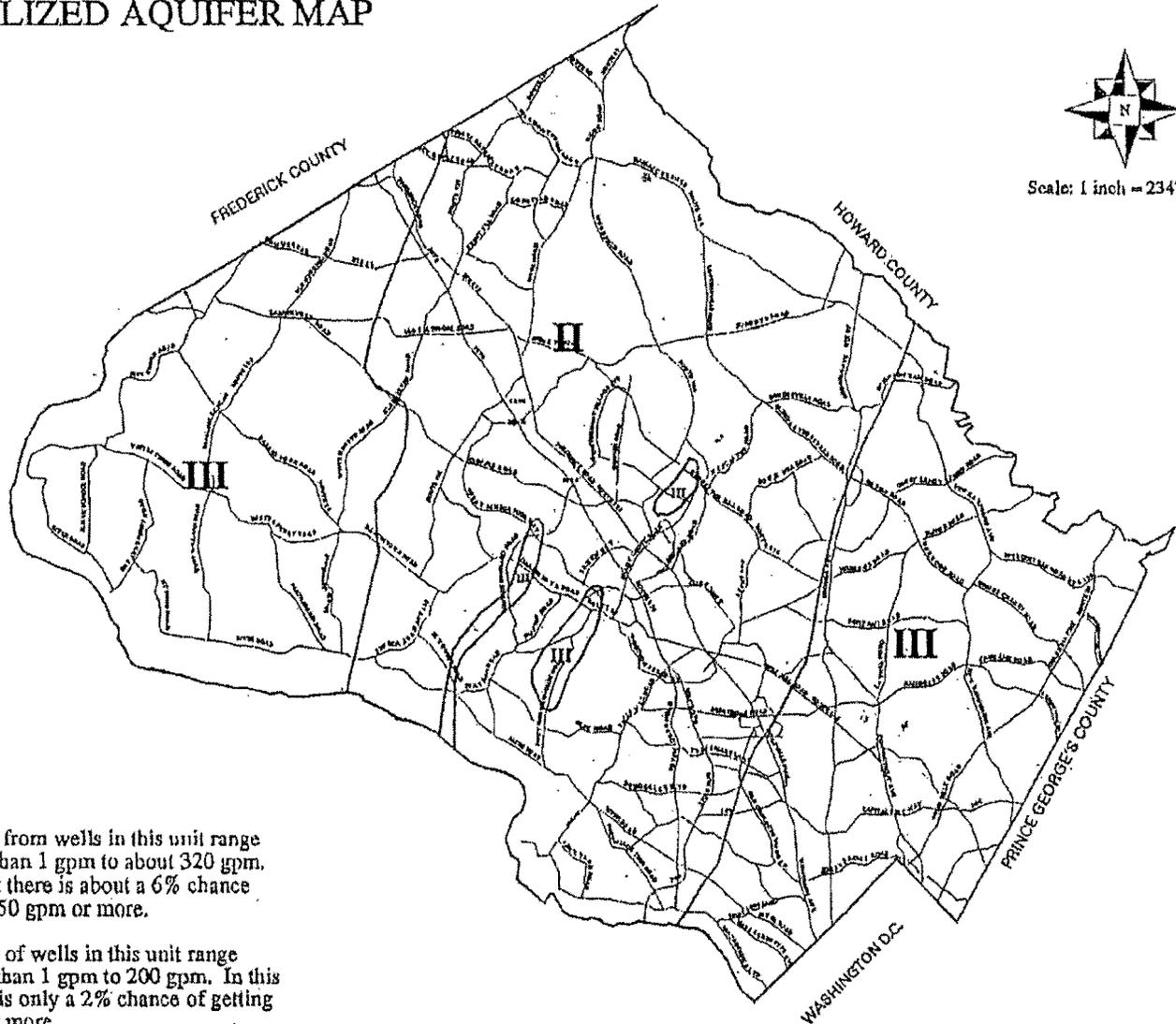
A large remnant of a high-level gravel terrace lies on Triassic bedrock between Martinsburg Road and Elmer School Road in the western part of the County. These gravels are floodplain deposits of the Potomac River when it flowed at a higher level in the late Tertiary or early Quaternary time, before eroding to its present channel. Smaller patches of this same material occur to the south along the bluffs overlooking the floodplain of the Potomac River.

D. Ground water and Aquifers⁵ – The major hydrogeologic units in the County are shown in Figure 4.7. Most of the ground water in these units occurs in the soil and weathered surface mantle which have an average thickness of 20-50 feet. Other ground water occurs in cracks and pores of the underlying rock.

The average annual depth of the ground water table in Montgomery County varies considerably from place to place depending on the type of rock, and the topographic situation as well as the annual rainfall. At an observation well at Fairland, in the Wissahickon schist of the eastern part of the County, average annual depth to ground water is between 8 to 10 feet. The comparable depth at an observation well at Damascus in the Ijamsville phyllite and a more rugged topography is between 30-45 feet. In the Manassas (New Oxford) siltstones and sandstones, the water table, as shown in scattered wells, lies at about 70-120 feet. However, this formation contains thin, saturated zones five to ten feet thick at lesser depths from which small quantities of water can be obtained. It is noteworthy that water at significantly greater depths in the Manassas formation has been reported from a well adjacent to the Potomac River. In general, however, the water in the ground lies chiefly in a surface zone about 150-250 feet thick.

⁵ Sources: 1986 Comprehensive Montgomery County Water Supply and Sewerage Systems Plan; U. S. EPA, FR57165-168 (1980), as per the Sole Source Aquifer Program, established under Section 1424(e) of the Safe Drinking Water Act of 1974.

MONTGOMERY COUNTY GENERALIZED AQUIFER MAP



- II** The yields from wells in this unit range from less than 1 gpm to about 320 gpm. In this unit there is about a 6% chance of getting 50 gpm or more.
- III** The yields of wells in this unit range from less than 1 gpm to 200 gpm. In this unit there is only a 2% chance of getting 50 gpm or more.

Figure 4.7
County Hydrogeologic Units Map

The U.S. EPA designated parts of Montgomery, Frederick, Howard, and Carroll Counties as the Maryland Piedmont Aquifer. Areas in Montgomery County encompassed in this designation include the following drainage basins: Monocacy River, Little Seneca Creek above its confluence with Great Seneca Creek, and the Patuxent River above its confluence with Cabin Branch Creek. Most of these basins are underlain by crystalline igneous and metamorphic rocks of the Piedmont, although small areas of Triassic sedimentary rocks are also included along the lower reach of Little Seneca Creek and near Dickerson.

In February 1998, the U.S. EPA determined that the Poolesville Area Aquifer System "is the sole source or principal source of drinking water for this area and if the aquifer system were contaminated would create a significant hazard to public health." The sole source designation subjects all federally assisted projects to EPA review to ensure that the project's design, construction and operation will not contaminate the aquifer so as to create a significant hazard to public health.

E. Wetlands – Regulations regarding the definition of, and allowable impacts to, wetlands continue to evolve. Wetlands are defined by the Planning Board's guidelines of February 1997 for Environmental Management of Development in Montgomery County as "an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation."

Information on the location of major wetland areas in the County is available through National Fish and Wildlife Service maps. The County's Department of Parks and Planning requires more accurate delineations of wetlands by a developer's engineer during the development review process. This detailed delineation is also required by federal and state agencies as a part of their wetland permit review processes.

In 1989, the Maryland Department of Natural Resources (DNR) prepared Nontidal Wetland Guidance Maps that showed the relative locations of large nontidal wetlands in Montgomery County. However, as stated in the instructions for the use of these maps, exact wetland boundaries and locations must be field determined using guidance that is provided by the Federal Government. Any new solid waste facility must address current federal and state wetlands requirements.

F. Surface Waters, Floodplains and Watersheds – The County's rivers, lakes, and streams provide drinking water, recreational opportunities, and wildlife habitat. Most of this surface water comes from naturally occurring run-off from rain and snow. All of the lakes in the County are man-made. The larger lakes were built for flood and sediment control and water supply. Some County waters also are used to receive treated sewage and excess storm water run-off. Ultimately, all waterways flow into the Chesapeake Bay. The major surface drainage patterns are illustrated in Figure 4.8.

The County has 26 drainage basins, flowing into four rivers. The County is bordered by two rivers, the Potomac and the Patuxent. Seventy percent of the County drains directly into the Potomac River and its major tributaries. Twelve percent of the County drains to the Anacostia River and then to the Potomac River. Six percent of the County north of Comus Road and MD 121 (east of I-270) drain toward the Monocacy River and on to the Potomac River via Bennett and Little Bennett Creeks. The remaining twelve percent of the County along the Howard County line, northeast of Route 198 and New Hampshire Avenue, drains into the Patuxent River. The above-mentioned roads generally follow ridge lines.

Montgomery County Subdivision Regulations prohibit building in a one-hundred year flood plain, except for certain transportation structures. Flood plains comprise low lying areas expected to be inundated by floods recurring every 100 years. The Department of Parks and Planning has flood plain maps for most streams in the County. The Federal Emergency Management Agency also publishes maps of flood plain zones

for the purposes of federal flood insurance programs. Flood plain location can affect the design of solid waste facilities. Engineering studies to identify the extent of flood plains have been performed for the RRF site and for the landfill property currently being held in reserve by the County.

G. Existing Water Quality Designations – MDE water quality standards identify water use designations for all surface waters in the County. Specific water quality criteria apply to each use designation. The use designation of County surface waters are listed below and shown in Figure 4.9.

- Use I Water contact recreation and protection of aquatic life: Waters which are suitable for: water contact sports, play and leisure time activities where the human body may come in direct contact with the surface water; fishing; the growth and propagation of fish (other than trout); other aquatic life, and wildlife; agricultural water supply; and industrial water supply.

- Use I-P Water contact recreation, protection of aquatic life and public water supply: Waters which are suited for all uses identified in Use I and are used as a public water supply.

- Use III Natural trout waters: Waters which are suitable for the growth and propagation of trout, and which are capable of supporting self-sustaining trout populations and their associated food organisms.

- Use III-P Natural trout waters and public water supply: Waters which include all uses identified for Use III waters and are used as a public water supply.

- Use IV Recreational trout waters: Waters which are capable of holding or supporting adult trout for put and take fishing, and which are managed

as a special fishery by periodic stocking and seasonal catching (cold or warm waters).

Use IV-P Recreational trout waters and public water supply: Waters which include all uses identified for Use IV waters and are used as a public water supply.

Needs Assessment and Plan Direction: Limited sites remain in the County with physical characteristics which are suitable for development of large new solid waste facilities, particularly landfills. As described in the next section, both the physical characteristics of the land and previous land development patterns have reduced the availability of in-county locations appropriate for siting large new solid waste facilities. As such, the County has and will consider both in-County and out-of-County alternatives to meet its long-term solid waste facility needs (see next section and Chapter 5).

4.3.2 Land Use Constraints

Current Conditions and Constraints: The County regulates the siting of solid waste facilities through provisions of this Plan, the County Code (primarily Chapter 48), and the Zoning Ordinance.

The County Zoning Ordinance includes standards for solid waste facilities.⁶ The Zoning Ordinance restricts privately owned transfer stations, landfills, incinerators and recycling facilities to select industrial zones. The County Zoning Ordinance expressly prohibits privately owned and operated incinerators in industrial zones.⁷ Privately owned incinerators are allowed in industrial zones only if publicly operated.

⁶ This plan shall not be used to create or enforce local land use and zoning requirements.

⁷ See Section 59-C-5.22 of the County Zoning Ordinance.

Montgomery County Watershed Boundaries

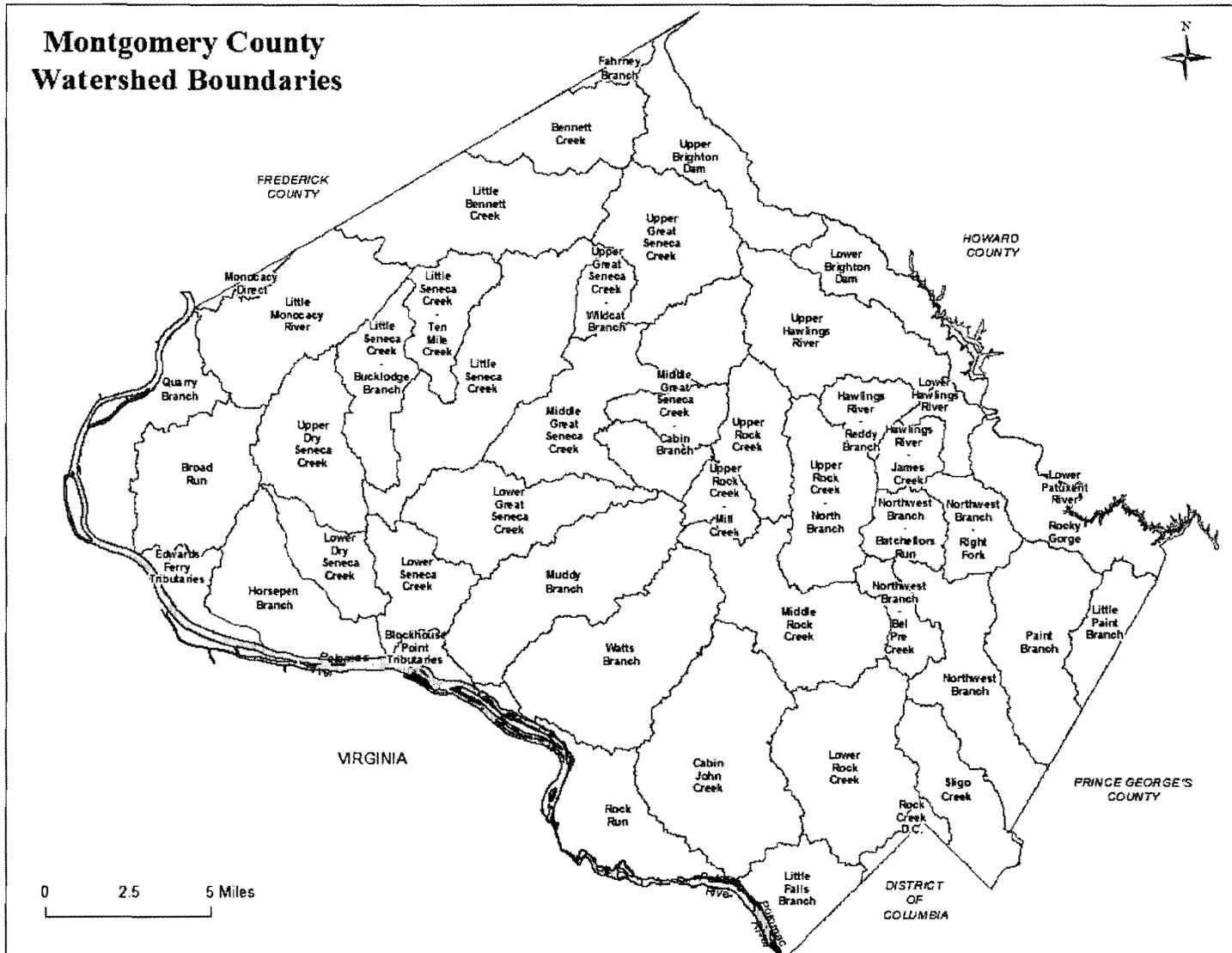


Figure 4.8
Surface Drainage Patterns Map

The Zoning Ordinance limits privately owned transfer stations, landfills and incinerators to the I-2 heavy industrial zone. Moreover, these facilities are permitted in the I-2 zone only if the County Board of Appeals grants a special exception determining that the specific I-2 parcel is suitable for a transfer station, landfill or incinerator. At present, no privately owned MSW transfer station, landfill or incinerator has satisfied both local land use requirements and MDE solid waste disposal facility permitting requirements. The County historically has reserved relatively small amounts of land for industrial uses. No more than seven vacant or re-developable (i.e., parcels where the value of the land exceeds the value of existing improvements) I-2 parcels of five acres or more exist in the County. The creation of new I-2 land seems unlikely during the life of this Plan given existing land use patterns as well as County and State land development policies.

The Zoning Ordinance allows a construction debris recycling facility in a Rural Service Zone provided that the facility meets special development standards set forth in Section 59-C-9.83 of the County Zoning Ordinance. These requirements set minimum standards for lot size, road frontage, distance to an interstate interchange, building set back, and on-site screening and landscaping. The facility also requires a construction debris recycling permit that satisfies the materials handling and reporting requirements of Section 59-C-9.84 of the County Zoning Ordinance.

Most of the southern and central portions of the County are unavailable for solid waste management uses given existing development and land use patterns. Extensive areas throughout the County, primarily along rivers and streams, are dedicated for parks and conservation purposes. A large portion of the northern land area of the County is designated as an Agricultural Reserve which is intended for the preservation of farmland and open spaces. The County Yard Trim Composting Facility, the RRF, as well as the land reserved for a potential future in-County landfill, are located within the Agricultural Reserve and in an area identified by the EPA as a Sole Source Aquifer (SSA) system. This designation requires that federally assisted projects in this area are subject to EPA review to ensure that the project's design, construction and operation will not contaminate

the aquifer so as to create a significant hazard to public health. Although this would not apply to a County financed project, these solid waste processing facilities must comply with State design and permit requirements that provide a high standard of environmental and public health protection.

A 1990 County study evaluated 16 in-County candidate landfill sites using 26 criteria adopted by the County Council in Resolution 11-787. County Council Resolution 11-1947 (1990) identified two potential future in-County landfill sites, "Site 2" in the vicinity of Dickerson, and another site in the vicinity of Boyds, both in the Agricultural Reserve. The County purchased 820 acres at Site 2 which will be held in reserve in the event economic conditions, changes in law or other circumstances render out-of-County waste disposal infeasible.

The County does not intend to site any new major solid waste processing facilities within the County during the next ten years. The sites for currently operating solid waste processing facilities as well as land reserved for potential future solid waste facility needs have been selected in the context of County land use master plans as discussed in Chapter 2 of this Plan. While only a few parcels of land use remain undeveloped in the County that are zoned to permit private solid waste processing facilities, existing solid waste processing facilities are adequate to handle projected waste generation for the next decade and beyond. Recent modifications to the County zoning ordinance will promote the suitable siting of new private recycling facilities in the County.

Needs Assessment and Plan Direction: The County's principal solid waste management facilities, including the RRF, the Yard Trim Compost Facility, the Shady Grove Processing Facility and Transfer Station and the MRF, have expected useful lives beyond the term of this Plan. The above land use constraints do not bear on the landfill used by the County, via contract, as it is located outside of the County. However, that facility has more than sufficient capacity and useful life for the balance of its contract period (see section 5.2.1.5.) as does the County's Site 2 back-up in-County landfill.

4.4 SOLID WASTE OUTREACH, EDUCATION, TECHNICAL ASSISTANCE, AND TRAINING

Education, technical assistance and training programs have become an essential component of the County's integrated solid waste management system. The County government has devoted considerable resources to solid waste education and outreach programs. Montgomery County residents and businesses receive information about their critical role in reducing waste, recycling, and using their purchasing power to support demand for recycled materials and products.

4.4.1 Public Outreach and Consumer Education

Current Conditions and Constraints: Montgomery County has conducted public information and outreach activities for many solid waste programs. The County has pursued an ongoing educational campaign to inform residents and businesses about recycling, waste reduction, and other solid waste management concerns. These efforts include the following subject matter:

- Single-family residential curbside recycling;
- Multi-family recycling;
- Non-residential recycling (by businesses, organizations, both for-profit and non-profit, as well as government facilities);
- Yard trim composting and grasscycling;
- Waste reduction;
- Reuse, including donation programs;

- Resident and business purchase of recycled/recyclable products; and
- HHW reduction and proper disposal.

Outreach activities employ a variety of information dissemination techniques designed to deliver the message in the most educationally effective, cost effective and appropriate manner. Information and education efforts employ the following techniques:

- Tours of solid waste facilities including, the Transfer Station, MRF, Yard Trim Composting Facility, and RRF;
- Brochures and fact sheets specific to various programs (including commercial recycling, multi-family recycling, curbside recycling, grasscycling, composting, special materials drop-offs, and HHW);
- A comprehensive Resident's Guide for recycling and solid waste services distributed to single-family residents;
- Development and distribution of specialized handbooks and resource guides (including the Business Recycling Handbook, the Multi-Family Recycling Handbook and the Handbook for Businesses Generating Small Quantities of Hazardous Waste);
- Video presentations regarding business recycling, single-family residential recycling, recycling in schools, multi-family recycling, waste reduction, buying recycled products and backyard composting;
- Cable television programs featuring current topics in solid waste management;
- Targeted direct mail campaigns;
- Multi-media educational campaigns to increase recycling awareness;

- Presentations to civic groups, schools, chambers of commerce, business associations and at special events;
- Outreach through the Solid Waste Services website;
- Training of volunteers to provide peer recycling outreach to citizen groups and increase the educational reach of staff;
- Educational materials and offerings in multiple languages, and utilizing graphics and illustrations to the maximum extent possible;
- Seminars and workshops on varied topics (including business recycling regulations and backyard/on-site composting techniques); and
- Incentives, including compost bins and lawn care products at no additional charge, to promote grasscycling and backyard composting.

On-going outreach activities include the Recycling Volunteer Program, the SORRT Program, the TRRAC Program, efforts to educate grasscycling and composting on-site, and a program to teach waste reduction and recycling in the County Public Schools.

Recycling Volunteer Program: This program is intended to increase citizen knowledge of, and participation in, County recycling, composting, grasscycling, waste reduction and HHW programs through effective use of community volunteers.

The County trains volunteer members of the community to perform several functions, including: (1) giving speeches and making presentations to civic associations, service clubs, and other organizations requesting information regarding the County's solid waste programs; (2) providing neighborhood-based waste reduction, recycling and buying recycled products information to peers; and (3) staffing recycling booths and exhibits at special events, such as the County Fair.

Recycling volunteers augment County resources through grass roots efforts to increase participation in the County's waste reduction and recycling programs. From its inception the Recycler/Composter citizen volunteers have contributed tens of thousands of hours of service and directly reached hundreds of thousands of people. The hours served by volunteers from 2008 are listed below.

<u>CY Year</u>	<u>Hours Served by Volunteers</u>
2008	1514
2009	1217
2010	1960
2011	1719
2012	1844

SORRT: The SORRT Program (Smart Organizations Reduce and Recycle Tons) serves as an information network that promotes and supports business recycling. Through SORRT, the County provides businesses, government agencies and private institutions with technical support, education materials, seminars and workshops and other guidance to advance waste reduction, recycling and procurement of recycling materials and products in the non-residential sector. SORRT provides this direct assistance to the owners, managers, employees and customers/patrons of businesses and organizations.

The SORRT Program reaches thousands of County businesses and organizations annually. A 1997 study determined that the average business or organization which directly received technical assistance through the SORRT program increased its recycling by 82 tons per year over the level achieved prior to their participation in SORRT.

TRRAC: The TRRAC Program (Think Reduce and Recycle at Apartments and Condominiums) serves as an information network that promotes and supports recycling in multi-family apartment and condominium developments. Through TRRAC, the County provides building owners, managers and residents with technical support, education materials, seminars and workshops and other guidance to advance waste reduction, recycling and procurement of recycling materials and products in multi-family residential buildings.

Waste Reduction and Recycling Education in Public Schools: DEP provides waste reduction and recycling outreach and education upon request by specific schools or teachers. In addition, DEP will support individual teachers who request assistance in developing, reviewing, updating or using instructional materials on waste reduction and recycling. As mentioned in Chapter 1, the County expects all public agencies including the public school system to comply with all waste reduction and recycling requirements imposed on County businesses.

The Department appraises the effectiveness of alternative education and outreach strategies and focuses its efforts on initiatives quantifiably demonstrated to have measurable positive effect on recycling performance. The County Executive's annual operating budget submission must include summary findings of participation studies, focus groups, surveys and other research used to evaluate the effectiveness of alternative techniques and must describe how these findings justify the specific outreach, education, and technical assistance proposed for funding in the upcoming fiscal year.

Needs Assessment and Plan Direction: As indicated in Chapter 3, the County recycled over 59.8 percent of its MSW stream in CY 2012. This rate has been achieved by creating recycling programs and by encouraging residents and employees to participate in the programs. The County recognizes that on-going outreach and education efforts are a critical element in both maintaining and expanding recycling and waste reduction achievements. Outreach and education, technical assistance and training will

play a central role in County strategies to meet its goal of 70 percent recycling (see Chapter 5).

4.4.2 Recycled Goods Procurement

Current Conditions and Constraints: Section 11B-56 of the Montgomery County Code includes the County goal that recycled paper and paper products should constitute at least 50 percent of the total dollar value of paper and paper products purchased by or for the County government. The same section of the County Code also mandates that County agencies either require the use of goods containing recycled materials or use of a percentage price preference (up to 10 percent) for recycled materials when purchasing goods. The Office of Procurement reviews all purchasing agreements to ensure compliance with the requirements of the County Code. DEP distributes information on the availability of products containing recycled materials to County businesses and municipalities to encourage them to use these materials.

Needs Assessment and Plan Direction: The Office of Procurement and DEP will take all practicable efforts to promote maximum use of recycled materials by County agencies.

4.4.3 Promotion of Recovered Material Markets

Current Conditions and Constraints: County procurement regulations requiring the use of materials containing recycled materials promote the development of the recycled products market. Furthermore, the SORRT and TRRAC Programs promote recycling market development by encouraging County businesses and organizations to purchase recycled materials and products. County consumer education and outreach campaigns endorse “environmental shopping,” including the purchase of products with recycled content.

Contractual arrangements between the County and those entities which market County collected recyclables provide incentives for the vendor to obtain the best market price and to minimize the amount of residue (non-marketable) material generated.

The County RRF produces ash equal to approximately 25 to 30 percent (by weight) of the inputted solid waste. Reuse of ash for secondary purposes is a developing technology.

Needs Assessment and Plan Direction: The County will continue to promote the development of markets for recyclable materials through County procurement requirements, and outreach efforts to the residential and business communities.

The County will continue to manage its recycling contract to maximize materials recovery. The County will evaluate the feasibility and cost effectiveness of the reuse of RRF ash in road aggregate, construction materials and other specialized products.

4.5 INVESTIGATION OF COMPLIANCE ISSUES AND ENFORCEMENT OF RECYCLING REGULATIONS

Montgomery County Executive Regulation 15-04AM mandates recycling in Montgomery County. The goal of the County is for compliance with the recycling requirements. In order to ensure compliance with the County's recycling regulation by the multi-family and non-residential sectors, DSWS has dedicated staff (Recycling Investigators) responsible for investigating and applying enforcement measures as necessary and appropriate to enforce the County's recycling laws.

DSWS uses a progressive method of ensuring compliance with the recycling regulation. Multi-family property or business owners, managers and/or official representatives must initiate actions to correct violations and compliance deficiencies when notified by the County. Notifications may take the form of verbal warnings, Notices of Violation and Citations. Depending on the nature of the violation or compliance

deficiency, the County will provide a specific timeframe within which the violation or deficiency must be rectified. This process begins with DSWS outreach and education to ensure awareness and understanding of the requirements. DSWS uses technical assistance, training and hands-on guidance, and further provides tailored and specific recommendations on how a multi-family (apartment and condominium) property or a business can set-up, maintain and expand their recycling program in compliance with the regulation. In instances where these techniques do not bring about compliance by a multi-family property or business, DSWS has the authority, ability and responsibility to use stronger means of enforcement to bring about compliance. Again, there is a progression of methods used, beginning with verbal warnings, issuance of notices of violation, and citations (which include levying of fines).

4.6 SYSTEM APPROACH TO GREENHOUSE AND OZONE-RELATED EMISSIONS

Montgomery County is dedicated to the goal of providing healthy and sustainable communities, and solid waste management plays a part.

4.6.1 Greenhouse Gas (GHG) Emissions

A scientific consensus has arisen that carbon dioxide (CO₂) and other greenhouse gases (GHG) released into the atmosphere will have a profound effect on the Earth's climate.

Current Conditions and Constraints: In order to assist local jurisdictions in evaluating the GHG effects of its solid waste management system decisions, the USEPA has developed its Waste Reduction Model ("WARM"). One constraint on the task of evaluating GHG effects is that the computer models and protocols available for complex functions such as waste management are in a state of flux. For example, the current model WARM model is in its 13th revision.

Needs Assessment and Plan Direction: Montgomery County's solid waste management system is comprised of a great variety of inter-related activities. A system-wide GHG emission inventory of Montgomery County solid waste management will need to account specifically for net emissions from: waste collection activities, the intra-facility vehicular transportation (e.g., rail and truck hauling), and other emissions intrinsic to the scope of Montgomery County's integrated solid waste management. The available, but evolving, USEPA "WARM" model can aid in assessing any significant net GHG impacts of future changes in the solid waste management system. Special efforts may be needed to gather data related to private sector waste collection.

4.6.2 Ozone-Related Emissions

Montgomery County is located in a non-attainment area with respect to National Ambient Air Quality Standards (e.g., for ground level ozone). As has been noted, the County's solid waste management system is comprised of many and various interrelated components. Collection trucks, intra-facility transfer trucks and trains, facility processes, equipment and intra-facility rolling stock, etc. — all contribute to ozone-related emissions (e.g., nitrogen oxides and volatile organic carbon). Reducing these emissions can contribute toward attaining a healthier community.

Current Conditions and Constraints: Any combustion process produces nitrogen oxides (NO_x). This includes all vehicles with internal combustion engines and any power generation based on combustion. In March of 2009, as part of a capital improvement program carried out at the County's RRF, NO_x emissions from that facility were reduced by approximately 50 percent—the equivalent of removing about 70,000 cars from the road. As noted above, the County's solid waste management system is comprised of many and various interrelated components. Many other components involve combustion, with attendant NO_x emissions, and also some significant sources of volatile organic compound (VOC) emissions. During 2012, the County completed a total

change out of its contract trash and recyclable materials collection vehicle fleet to Compressed Natural Gas (CNG), resulting in further NO_x, VOC and other emissions.

Needs Assessment and Plan Direction: In order to identify additional opportunities to assist with ozone-related emission reductions, the County should complete development of a solid waste system-wide emission generation inventory tool, to be used to aid in evaluating impacts of future changes in the solid waste management system and public outreach.

Chapter 5: Solid Waste Management System Plan of Action

This Solid Waste Management Plan is a planning document for the County government. The Plan is a dynamic document that may be amended by the County government in accordance with the requirements of Section 9-503(c) of the Environment Article, Annotated code of Maryland. The County will review and update the Solid Waste Management Plan at least once every three years in accordance with a schedule established by MDE and the requirements of Section 9-515(b) of the Environment Article, Annotated Code of Maryland. The scope and content of the Plan is written in accordance with the requirements in COMAR 26.03.03.

The preceding chapters include the best available estimates of the amount and kind of solid waste produced, the amount and kind of solid waste expected to require management during the planning period, and the constraints which are imposed on the site selection, construction and operation of solid waste management facilities.

This Chapter presents an abstract of the pertinent County policies and actions taken in response to its responsibilities. It is organized into the following major subsections:

- 5.1 General
- 5.2 The Solid Waste Management System
- 5.3 Adequacy of Existing System to Handle Waste Streams
- 5.4 System Financing

5.1 GENERAL

5.1.1 Definitions

A number of terms and acronyms, as defined in Appendix A, are used in connection with the County's solid waste management system. For the purposes of this Plan, these terms and acronyms shall have the meanings ascribed to them in Appendix A.

5.1.2 General Solid Waste Policies

Detailed policies and plans of action describing the County's strategies for managing each solid waste facility and program appear later in this Chapter. The following statements reflect the general solid waste policies of the County:

5.1.2.1 General Solid Waste Management Policy

A. The County's solid waste management preferences and practices shall be guided by the principles of sustainability. That is, actions taken today should be those judged least likely to make life more difficult for future generations. In keeping with this principle, waste reduction is the most preferred solid waste management technique, followed by reuse and recycling, then controlled combustion with energy recovery, and least preferred, landfilling. This general hierarchical policy has the following specific elements:

1. The County, within its practical scope and range of effectiveness, should undertake to affect all waste reduction measures feasible.

2. All waste reuse and recycling measures should be implemented which are practical with available technologies and reliable markets and that are not significantly more expensive in the framework of sustainability than the waste disposal measures that would otherwise be needed. Changing technologies, markets, and sustainability considerations should be reviewed regularly so that waste reuse and recycling may be expanded as new opportunities arise or, contracted if markets for particular materials disappear.

3. For MSW remaining after reduction, reuse and recycling, the County will operate a waste-to-energy Resource Recovery Facility (RRF) to recover renewable energy and minimize the volume of material that must be landfilled.

4. Landfilling is the least preferred disposal method for RRF ash, bypass waste, and nonprocessable waste that cannot be recycled or reused. "Bypass" is waste received by the County which is processible at the RRF, but which is not processed at the RRF and instead sent by the County to its out-of-County landfill. In-County landfilling will occur only in the event that economic conditions or changes in the law render out-of-County solid waste disposal infeasible.

B. County solid waste acceptance and disposal facilities are designed based upon projections of solid waste generated in the County. To conserve capacity at the RRF and at other solid waste acceptance and disposal facilities for the residents and businesses of the County, the use of these facilities is restricted to solid waste generated in the County. This restriction does not apply to private processing facilities in the County including Office Paper Systems (OPS). OPS operates a paper recycling facility in the County and processes all mixed paper received at the MRF. OPS also processes mixed paper from commercial sources in and outside of the County. As a result, the County processes incidental amounts of non-recyclable out-of-County residues from OPS and other private facilities. The processing of these residues is not

intended to impair the County's policy of reserving capacity at the RRF and other solid waste facilities for solid waste generated in the County.

In order to maximize the reach and effectiveness of the County's recycling program, any contract provision allowing the County to contract with other jurisdictions to receive their mixed paper must only be implemented after all reasonable efforts to maximize the County's mixed paper tonnage have been exhausted. These efforts include maximizing the recycling programs of all County agencies as well as strengthening the County's commercial mixed paper program. In addition, the County Council must approve any contract between the County and any other jurisdiction. This approval process includes an advertised public hearing.

C. The County builds and maintains solid waste acceptance and disposal facilities primarily to accommodate municipal solid waste generated in the County. The County facilities may not necessarily accommodate other types of waste.

5.1.2.2 General Refuse Collection Policy

The entire County is a collection and disposal district as authorized by Montgomery County Code Sections 48-8 and 48-29. The County must provide solid waste disposal and management services to all single-family residences in the entire district (see Section 3.2.2 of this Plan for details).

5.1.2.3 Facilities Siting and Community Impact

Montgomery County has identified sites for all major public facilities needed to accommodate projected municipal solid waste generation within the ten-year scope of this Plan (see Figure 3.3). It is the objective of the County to minimize the impact of

solid waste management facilities on the environment, on residents, and on any one area of Montgomery County.

Rail transfer of MSW, rather than trucking, from the County Shady Grove Processing Facility and Transfer Station to the RRF is used to minimize the vehicular traffic impact of these solid waste facilities. For yard trim, rail is also the preferred mode of solid waste transfer whenever economically and operationally feasible when there is room on the train.

The County provides environmental control measures to protect air quality and prevent water supply contamination in the vicinity of solid waste facilities.

5.1.2.4 Biosolids Management

It is the policy of the County to promote the beneficial use of biosolids as defined by the U. S. EPA. Landfilling and incineration are not the preferred means of biosolids management, as those techniques preclude the beneficial use of the nutrients and organic material in biosolids. As a matter of policy, the County promotes the beneficial uses of biosolids, including composting and anaerobic digestion. The County will not incinerate biosolids at the RRF.

5.1.2.5 Hazardous Wastes

Regulation of the transportation, treatment, storage and disposal of hazardous wastes is the responsibility of the State of Maryland. As a matter of policy, through the County Zoning Ordinance, the County does not permit hazardous waste disposal facilities within the County. The County will provide the means for the environmentally responsible receipt and disposal of household and commercial small quantity generators of hazardous wastes.

5.1.3 Administration of the Plan

5.1.3.1 Implementation

Under the direction of the County Executive, this Plan is developed and administered by the Director of DEP. Within DEP, DSWS provides staff support to the Director and:

A. Formulates and recommends to the County Executive the County Solid Waste Management Plan, revisions of the Plan, and such other revisions or amendments to the Plan as may, from time-to-time, be appropriate.

B. Coordinates public participation including SWAC in solid waste management planning.

C. Coordinates and recommends to the County Executive operating budgets and capital improvements to implement this plan.

D. Monitors technical developments and innovations in solid waste management.

E. Analyzes, reviews, identifies potential sites for solid waste management facilities and prepares and submits requests for appropriate permits, permit updates, revisions and modifications.

F. Reviews and comments on state solid waste refuse disposal permit applications, modifications, revisions and amendments for solid waste facilities.

G. Causes facilities and systems to be designed, constructed and placed in operation as these relate to solid waste management to implement the Plan, including the provision of appropriate investigations and studies, the development of contracts, the selection and supervision of contractors in accordance with appropriate state permits.

5.1.3.2 Coordination

A. M-NCPPC provides requested information regarding population, growth forecasts, planning factors and other developmental criteria specified by the County Council or County Executive.

B. MDE regulates County solid waste management practices and issues permits for the construction and operation of County solid waste management facilities.

C. WSSC provides requested information regarding engineering, design, present and future capacities and fiscal elements of biosolids management facilities and programs.

D. Title 26.03.03.02B of COMAR provides that the Plan include all, or part of the subsidiary plans of the towns, municipal corporations, sanitary districts, privately owned facilities and local, state and federal agencies having existing, planned or programmed development with the County to the extent that these inclusions shall promote public health, safety and welfare." No subsidiary solid waste management plans have been approved by the County for inclusion in this Plan.

5.1.3.3 Planning

Solid waste management planning is an ongoing activity conducted by DEP. The plan of action contained in this Chapter reflects the County's assessment of needs to manage solid waste systems during the next ten years. As conditions change, the County Executive and the County Council may alter, extend, or modify this Plan of action accordingly.

5.1.3.4 Public Participation

DEP coordinates public participation in solid waste management planning and provides administrative support and information to SWAC, DAFIG and other solid waste advisory committees created by the County Council, or by the County Executive.

A. Solid Waste Advisory Committee – SWAC is a legislatively created citizen advisory and oversight committee that consists of 15 members appointed by the County Executive and approved by the County Council. SWAC members serve three-year terms. The committee is advisory to the County Council and the County Executive on all matters relating to solid waste management within the County. Chapter 48, Sections 38-40 of the Montgomery County Code specifies the organization, membership, and activities of the committee.

B. Dickerson Area Facilities Implementation Group – DAFIG is a legislatively created citizen advisory group consisting of 12 voting members appointed by the County Executive and approved by the County Council (see Council Resolution 13-1498 in Appendix E). DAFIG advises the County on issues of concern to the community that is affected by County solid waste operations in the Dickerson area. The facilities under the purview of the DAFIG include the RRF, the Yard Trim Composting Facility, properties originally purchased for the Site 2 Landfill, and properties associated

with the original Matthews Farm. It is intended that the DAFIG will function in an advisory capacity to the County for the life of the facilities at Dickerson.

C. Ad Hoc Committees – From time to time, the County Executive appoints ad hoc committees for the purpose of addressing special problems related to solid waste. Such committees serve at the pleasure of the County Executive. These committees are established to represent special community interests as the need arises.

D. Public Hearings – The County Council holds a public hearing on the proposed Comprehensive Solid Waste Management Plan and any revision thereof. At least ten days of the hearing notice must be provided by publication in a newspaper or newspapers of general circulation in Montgomery County.

E. Public Information Meetings – DEP may conduct public meetings for the purpose of informing the public concerning any aspect of requirements, developments and proposals related to solid waste management and planning.

5.1.3.5 Legal Matters

A. County Code Amendments – The Director of DEP, in coordination with the OCA, prepares and recommends to the County Executive appropriate amendments to Chapter 48 (Solid Wastes) of the Montgomery County Code and other relevant provisions of the County Code.

B. Executive Regulations – The Director of DEP, in coordination with the OCA, prepares Executive Regulations appropriate to implement County solid waste programs and policies.

C. Legislative Cognizance – The Director of DEP maintains cognizance of legislation under consideration by the Legislature of the State of Maryland that is related to solid waste management and provides testimony to legislative committees as may be appropriate.

D. Legal Support – The OCA provides legal advice and assistance in all legal matters related to solid waste management.

E. Regulatory Compliance – DEP and sister agencies work cooperatively to ensure that the County complies with all federal and state regulatory requirements relating to the management of solid waste facilities (see Section 1.4 of this Plan).

5.2 THE SOLID WASTE MANAGEMENT SYSTEM

This section contains a description and plan of action for each major component of the County's Solid Waste Management System. Each plan of action covers the ten-year period from 2012 through 2023. A summary of each plan of action appears as Table 5.1.

5.2.1 County-Run Components of the Solid Waste Management System

The principal components of the County's solid waste management system include: (1) the Shady Grove Processing Facility and Transfer Station; (2) the RRF; (3) the MRF; (4) the Yard Trim Composting Facility; (5) the out-of-County hauling and contract; (6) the Site 2 in-County property purchased for potential future landfill use; (7) the waste transportation system; and, (8) the solid waste reduction, reuse and recycling programs. In addition, the County is responsible for the management of the closed Oaks and Gude Landfills.

**Table 5.1
Solid Waste Management System: Summary Plan of Action**

FACILITY/ PROGRAM	SUMMARY PLAN OF ACTION
Shady Grove Processing Facility and Transfer Station	Maximize materials sold as mulch to minimize tonnage sent for composting. Set yard waste tip fee per Section 5.4.2.1.
Resource Recovery Facility	Set tip fee per Section 5.4.2.1. Aggressively market electricity and ferrous to secure the best prices available. Continue to recover non-ferrous and ferrous metals and to beneficially use ash for alternate daily cover and road base within landfills. Periodically explore more economical recovery of metals and beneficial uses of ash. Extend or replace RRF operating contract before April 1, 2021.
Materials Recovery Facility	Continue to actively monitor market situations and conditions to determine feasibility of expanding County's recycling program to include additional recyclable materials. Continue to aggressively market recovered materials to capture best prices. Encourage increased usage of unused MRF capacity by non-residential generators. Evaluate the alternatives for maximizing revenues from the sale of all paper collected.
Yard Trim Composting Facility	Continue aggressive promotion, education and training for grasscycling and backyard or on-site composting. Maintain back-up contracts for composting yard trim in excess of 77,000 tons. Increase market share of compost products produced by the County. Continue on-going program to periodically replace portions of paved pad and improvements to on-site storm water management. Maintain independent certification of the Composting Facility's Environmental Management System as ISO14001 compliant.
Out-of-County Landfill/ Ash Recycling	Encourage private sector recycling of construction and demolition materials and other nonprocessable solid waste rather than landfilling. Conduct procurement to secure out-of-County landfilling capacity beyond current contract and through planning period. Continue to recycle RRF ash.
Land Reserved for Potential Future In-County Landfill	Retain the Site 2 property, located in Dickerson, MD, through the entire life of Plan for use in the event economic conditions, changes in law or other circumstances render out-of-County waste disposal infeasible.

Waste Transportation System	<p>Monitor the performance of all transportation contractors to ensure reliability. Build contingency capacity to ensure waste transport.</p>
Recycling and Waste Reduction Programs	<p>Aggressively encourage backyard composting including giving away compost bins and offering training sessions.</p> <p>Periodically evaluate the rates at which each type of recyclable is being captured.</p> <p>Increase capture of all recycled materials through existing programs, including outreach, education, technical assistance, and training.</p> <p>Rigorously enforce the recycling bans instituted by ER15-04AM and 18-04 (see Appendix I of this Plan).</p> <p>Continue to require recycling at special events consistent with Section 3.1.1.3.</p> <p>Vary size and styles of replacement recycling bins and carts to fit housing types and maximize usage.</p> <p>Examine the feasibility of targeting additional materials types for recycling including food waste generated at restaurants, schools and institutions.</p> <p>Work with MDE to clarify regulations governing the permitting and operation of food residual composting so as to remove impediments to the development of new food residual composting facilities in our region.</p> <p>Within six months of adoption by MDE of new and comprehensive regulations governing the siting, permitting, construction and operation of food composting facilities in Maryland, DEP will develop a strategy to contractually obtain access to or promote the development and use of food waste composting capacity to service Montgomery County waste generators.</p> <p>Continue to conduct pilot projects and establish best management practices for food residuals collection, transportation and processing.</p> <p>Continue to evaluate innovative collection techniques to increase cost-effective recycling of all kinds.</p> <p>Continue to promote cooperative collection contracting among non-residential generators.</p> <p>Oversee compliance with the requirements of "The Maryland Recycling Rates and Waste Diversion -Statewide Goal Act (20 12)." This Act revised the 1988 Maryland Recycling Act (MRA) and requires the Montgomery County Plan to address a reduction through recycling of at least 35 percent of the County's solid waste stream by July 1, 2014. The Plan must be fully implemented by December 31, 2015.</p> <p>Continue Multi-Family Recycling Program and ensure compliance with the requirements of "Recycling - Apartment Buildings and Condominiums Act (20 12)." This Act requires the Montgomery County Recycling Plan to address the collection and recycling of recyclable materials from residents of apartment buildings and condominiums that contain 10 or more dwelling units by property owners or managers of apartment buildings and councils of unit owners of condominiums. Further, if applicable, include a method for implementing a reporting requirement for recyclable materials generated at apartment buildings and condominiums that contain 10 or more dwelling</p>

	units."
Oaks and Gude Landfills	<p>Operate an oil-grit separator at Oaks for nonprocessable solid waste collected from County storm water receptors.</p> <p>Operate gas-to-energy projects at both landfills or otherwise provide landfill gas management. Perform other post-closure care in accordance with applicable federal and state regulations.</p> <p>Improve gas capture and minimize migration.</p> <p>Continue with site investigations and assess and implement corrective measures, if appropriate, to prevent off-site migration of contaminants.</p> <p>Comply with the existing consent order, with MDE, for the Gude Landfill.</p>
System Financing	<p>Maintain transparency in fiscal management.</p> <p>Monitor revenue generation methods to assure fair and equitable rates.</p> <p>Track current market conditions to maintain competitive tip fees.</p> <p>Monitor commodity markets to assure County receives most favorable revenues and credits possible from the sale of all recovered resources.</p>
Greenhouse Gasses and Ozone-Related Emissions	<p>Complete solid waste system-wide inventory of GHG and ozone-related emissions. Include net emissions effects in the consideration of future changes in solid waste management system, including but not limited to any addition of new materials targeted for recycling, and changes to the collection and transportation systems.</p> <p>Work with the private sector (subscription) collectors to quantify and reduce emissions.</p>
Collection	<p>Use creative techniques to encourage contracted haulers to implement environmentally friendly options.</p>

5.2.1.1 Shady Grove Processing Facility and Transfer Station

A. **Facility Description** – Refuse collected by approved waste haulers is delivered to the Shady Grove Processing Facility and Transfer Station. The Transfer Station is located on a 40-acre site adjacent to the 5-acre MRF site in Derwood. The Transfer Station processed an average of 2,000 tons per operating day in CY 2012. Temporary increases in the daily tonnage processed occur following inclement weather, holidays, and weekends, during summer months and during periods when competing regional waste facilities shut down or limit the amount of Montgomery County waste

they will accept. The current operating permit of 821,500 tons per year does not restrict the daily tonnage processed, provided all other conditions of the permit with respect to the proper management of waste are met.

B. Transfer Function – From 1982 through 1995, refuse received at the Transfer Station facility was transferred from collection vehicles into trailers for transport and disposal at the County's Oaks Landfill. In 1995, modifications were completed at the Transfer Station as part of the development of the Transportation System to facilitate rail haul of processible waste to the RRF. Three solid waste compactors were installed to compress up to 30-ton loads of solid waste into "logs" that are mechanically discharged into 40-foot containers. A fourth compactor was added in 2006. Containers of compacted waste are driven to the rail yard for shipment via rail to the RRF. From 1995 through 1997, ash was delivered by rail from the RRF and nonprocessible waste was transported by truck to the Oaks Landfill for disposal. Since October 1997, in conjunction with the closing of the Oaks Landfill, nonprocessible waste received at the Transfer Station was initially transported by truck and tractor trailer to a private landfill in Brunswick County, Virginia. Since September, 2010, all nonprocessible received by the County waste has been sent (via the out-of-County hauling contract) to the Honeygo Run Reclamation and Rubble Landfill in Perry Hall, Maryland where some components such as metal, cardboard and dimensioned lumber are picked from C&D loads to be recycled. Previously, only concrete, asphalt, brick, block, rocks and soil were being sent to this facility for recycling. All of these materials are recycled. Under the same "out-of-County hauling" contract, all ash residue from the RRF is transported and recycled. (Please see Section 5.2.1.2(h) for description of how all solids emanating from the RRF are recycled via that contract.) An area of the Shady Grove Processing Facility and Transfer Station has been made available for the tipping and reloading of nonprocessible construction and demolition debris, which allows for recycling of some of this solid waste.

C. **Public Unloading Area** – An area of the Shady Grove Processing Facility and Transfer Station is reserved for unloading refuse and recyclable materials delivered in passenger vehicles. This area receives all of the materials accepted in the County's residential curbside collection program. It also promotes reuse and recycling by accepting other materials including computers, televisions, automotive fluids and batteries, scrap metal, rechargeable batteries, building materials, propane tanks, textiles, vegetable oil, books, bicycles and tires.

D. **Weighing and Recordation** – All refuse delivered to the Transfer Station in loads over 500 pounds is weighed and weights are recorded. All refuse leaving the Transfer Station is weighed and weights are recorded.

E. **Yard Trim Handling** – The Transfer Station includes areas for receipt, handling (including grinding) and load out of yard trim (grass, leaves, brush, and Christmas trees) collected through the curbside recycling program and self-hauled to the site by residents and commercial businesses. Leaves and grass are ground and transferred to the County Yard Trim Composting Facility. Brush, some leaves and all Christmas trees are ground into mulch that is either sold to commercial mulch vendors or provided free of charge to County residents. The disposal of yard trim mixed with disposable waste facility is banned.

F. **Plan of Action: Transfer Station** – Within the ten-year time frame of this Plan, the County expects that the average annual tonnage of MSW received at the Transfer Station will not exceed its permit capacity of 821,500 tons. During peak days, the Transfer Station receives over 3,000 tons of waste per day. Recent improvements including the addition of two more truck scales and an addition to the tipping floor have improved operating flexibility for these peak days. A "regular" HHW collection site at the Transfer Station has been operating since FY05.

However, as noted above, the facility is increasingly being used to support recycling programs and other solid waste processing functions. Capital improvements to the Shady Grove Processing Facility and Transfer Station have been undertaken to enhance both facility safety and customer service. Improvements include the development of an adjoining recycling drop off area to the public unloading facility, which separates refuse and recycling drop-off traffic. These facility improvements were completed during Year 2001. Additional capital improvements were constructed at the Transfer Station in 2007 to safely maintain fundamental waste management services, minimize large collection vehicles from conflicting with smaller vehicles, increase the efficiency of the weighing and dumping of incoming vehicles and the compaction and loading of containers for shipment from the site, and improve the throughput of vehicles through the scaling operation. The planned remediation of and future land use plan for the entire Gude Landfill site, is subject to future County Council appropriation, approval by MDE after applicable environmental and engineering assessments have been performed.

5.2.1.2 Resource Recovery Facility

A. **Facility Description** – The RRF consists of three 600 tons per day mass-burning, refuse-fired boiler units that produce high pressure, high temperature steam used for electrical power generation. The RRF is located on 34 acres of land adjacent to the GenOn electric generation station near Dickerson, Maryland. The RRF property is owned by Montgomery County and leased to the NMWDA.

B. **Project Management** – The County is one of seven members of NMWDA. On behalf of the County, NMWDA financed the cost of designing and constructing the RRF and related transportation improvements necessary for the project. For the duration of the outstanding bonds on the RRF, NMWDA owns the facility. Upon repayment of the bonds, scheduled to be complete in 2016, the County may purchase

the facility for one dollar. NMWDA contracted for the design, construction, and operation of the RRF through a Service Agreement with Covanta Montgomery, Inc., a subsidiary of Covanta Energy Corporation. The County, in turn, has entered into a Waste Disposal Agreement with NMWDA for the disposal of non-recycled waste and payment of service fees.

C. Changes to the Waste Disposal and Service Agreements – The County must not approve, or allow to take effect, under either the Waste Disposal or Service Agreement, any material change in the capacity or operation, or any material reduction in performance or environmental standards, of the facility or the transportation system unless the Director of DEP has submitted the change to the County Council. The County Council must approve or disapprove the proposed change within 30 days or two regular County Council work sessions, whichever is longer. If the County Council does not act within this time frame, the change will stand approved, unless the County Council approves a resolution extending the time allowed for Council action.

D. Electricity Sales Agreement – An Electricity Sales Agreement provides that NMWDA delivers and competitively sells to the electrical energy market, all electricity net of in-plant usage by the RRF.

E. Monitoring Program – DEP monitors RRF stack emissions during all operating hours by means of a data telemetry link to the Continuous Emissions Monitoring System (CEMS) provided under the facility's Title V air permit. The CEMS measures the opacity of the plume as well as the emission levels of sulphur dioxide and sulphur dioxide reduction efficiency, nitrogen oxides, hydrogen chloride and hydrogen chloride reduction efficiencies, and carbon monoxide, plus certain operating parameters, including temperatures at specific locations and activated carbon feed rates designed to assure proper continuous operation of the facility's air pollution control (APC) system. In accordance with its air permit, emissions are also periodically

monitored for trace emissions metals and organics that cannot be monitored by the CEMS.

In addition, and not required by any rule, DEP periodically monitors levels in the ambient air at ground level, and in non-air environmental media, of certain pollutants which are emitted from the combustion of MSW and are of concern to the public including dioxins and furans trace metals (including arsenic, beryllium, chromium, cadmium, nickel, lead and mercury).

Under a County capital improvement project completed in 2009, the County voluntary upgraded the air pollution control (APC) system of the RRF to substantially reduce (by about 50 percent) emissions of NO_x, and at the same time eliminated the storage and use on site of a hazardous chemical (anhydrous ammonia).

Covanta Montgomery had attained membership status in the USEPA National Environmental Performance Track (NEPT) Program which required program membership requires continuous environmental improvements beyond regulatory standards. Subsequently, the USEPA discontinued its NEPT program. However, Covanta is maintaining an in house Environmental Management System following the same guidelines to assure continuous environmental improvement.

DEP, in cooperation with NMWDA and Covanta Montgomery, will require appropriate changes to the engineering and air pollution control systems of the Facility or its operations through change orders or Service Agreement enforcement if the stack and ambient monitoring data disclose levels of pollutants in air or other media that are attributable to the operation of the Facility and unacceptably affect the environment or public health.

F. **Annual Capacity** – The RRF was sized, and is operated, so as not to compete with waste reduction, reuse and recycling activities.

1. To ensure a complimentary balance between each of these components of the County MSW processing system, the RRF was sized at a nominal design point of 1,800 tons per day and without expansion capabilities, or 657,000 tons per year based on waste with design heating value 5,500 BTU/lb. During CY 2012, a total of 541,662 tons of processible waste was sent to the RRF. This includes 71,480 tons of C&D burned, and 470,182 of MSW.

2. The County maintains a competitive tip fee to control the amount of processible waste delivered to the facility while progress toward achieving the 70 percent recycling goal also helps moderate the amount of incoming processible waste. The annual target for processible waste to the facility is in the range of 85 percent to 95 percent of permit capacity—558,450 to 624,150 tons per year (assuming 5,500 Btu/lb waste heating value). Realizing tonnage deliveries in line with this goal is pursued by adjustments in the tip fee as described in Section 5.4.2.1. The County has demonstrated its ability to throttle private sector MSW export, and thus moderate annual deliveries to the County, subject to a lag or response time, to maintain achievement of this policy. Limited bypass of processible waste may be required until the tip fee actions produce desired results. Also, while the RRF is designed, and the annual permit limit is based on, the nominal 1800 TPD throughput capacity noted above, it is physically capable, and it is the County's practice, to process at a higher rate during peak periods of delivery. There is strong seasonality to waste deliveries. Annually, the peak month is typically June. In wintertime, the peak month is typically December. If bypass were to occur, it would most likely be in the peak period month of June. However, during such peak delivery months, the County's first strategy for avoiding bypass would be to run the RRF at its physical limit (e.g., about 58,000 tons per month, as opposed to 54,000 or 1,800 x 30).

In any event, the County Executive must notify the County Council within thirty days of the close of any calendar quarter during which processible waste is shipped by the County for disposal at its out-of-County landfill. Along with this notification, the Executive must identify what actions – including tip fee adjustments and expanded recycling efforts -- will be taken or are recommended to reduce demand on the RRF. Such notice is not required with respect to private sector MSW export, as that tonnage is tracked by the County on a semi-annual basis. As part of his annual Recommended Operating Budget, the County Executive must notify the County Council of its anticipated RRF throughput and private sector MSW export tonnages for the upcoming fiscal year, as well as the actual RRF throughput and private sector MSW export tonnages that occurred during the most recently completed fiscal year, and the actual RRF throughput tonnage which occurred during the first half of the current fiscal year.

G. Contingencies – In the event of any failure or cessation of operation of the RRF or need to bypass waste, waste materials normally processed by the RRF shall be processed in a permitted alternative facility. The Service Agreement for Long Term Waste Transportation and Disposal provides for receipt of bypass and non-processible waste and of all waste if the RRF is unavailable for any reason. Additionally, if RRF ash ever fails a toxicity test, the ash will be transported to a properly permitted facility (see Section 3.1.8.1 of this Plan). Controlled bypass of processible waste may also accompany changes in tip fees (see tip fee in section 5.4.2.1).

H. RRF Ash Recycling – In September 2010, DEP through its out-of-County waste transportation and disposal contract began the recycling and beneficial reuse of all ash from the RRF. The ash is shipped via rail to CSX's Fulton Rail Yard, near Richmond, Virginia and trucked, about three miles, to Old Dominion Landfill. There, the RRF ash is screened into three fractions; alternative daily cover (ADC), road base aggregate, and additional recovered metals. The ADC and road base aggregate

products are used within the confines of modern lined landfill cells at facilities owned by Republic Services. The additional recovered metals include both ferrous and non-ferrous types of metal. Thus, all ash (residue and metals) emanating from the RRF are recycled.

I. Plan of Action: Resource Recovery Facility – DEP will continuously monitor the performance of all contractors related to the operations of the RRF. DEP will aggressively market electricity and recovered ferrous scrap to secure the best price available. DEP will also continue the recycling and beneficial reuse of ash as alternate daily cover, road base construction material and other specialized products. Efforts to recover additional metals from ash will also continue

The County Council sets solid waste tip fees. DEP analysis shows that the County's tipping fee, in comparison to fees that must be paid by private collectors at alternative disposal sites, influences the extent of solid waste export from the County. Together with increasing recycling, periodic tipping fee adjustments have been found to be a satisfactory means to modulate waste flow to the RRF. Unless the need for an alternative means is demonstrated by DEP, the tipping fee will continue to be set at a level such that processible waste delivered to the Transfer Station for disposal matches, as nearly as possible, 85 percent to 95 percent of the RRF permitted annual throughput capacity, as described above. DEP will continually pursue feasible efficiencies in RRF operation and environmental performance. DEP will continually strive to increase revenues from the sale of electricity and recovered metals.

5.2.1.3 Materials Recovery Facility

A. **Facility Description** – The MRF is located on a nine-acre parcel of land in Derwood contiguous to the Transfer Station. Recyclable materials collected at the curb from single-family residences are transported to the MRF. The MRF also receives recyclables from the Transfer Station drop-off facility, and minor amounts from other sources.

B. **Project Management** – MES operates the MRF under terms of an intergovernmental agreement with the County.

C. **Mixed Paper Transfer** – During Fiscal Year 1999, the MRF was modified to accommodate the implementation of the residential mixed paper recycling (RMP) program. In order to assure that the RMP is recycled, the County entered into a fifteen-year contract with a private recycling firm, OPS. OPS transfers mixed paper received at the MRF to the OPS paper recycling facility, located nearby, where it sorts the paper by grade to meet market conditions and remove any unacceptable materials, and then markets the materials. That contract expires in April, 2016, and contains one renewal provision (which renewal the County does not intend to utilize). Regional markets for RMP are now more robust than in 2001 and multiple buyers for the County's RMP can be expected.

D. **Commingled Container Processing** – Commingled containers, including glass and plastic bottles, aluminum, ferrous and bi-metal cans and aluminum foil, are sorted and baled or stored in a bunker at the MRF through a combination of mechanical and hand separation. Sorted recyclables are sold to various markets for remanufacture and/or reuse. The MRF has a sorting capability of approximately 110 to 120 tons of mixed containers per day. The MRF operates four or five days a week depending upon the amount of incoming materials. Extra shifts can be added in the future if quantities of

incoming materials continue to increase. During FY02, the tipping floor of the MRF was expanded to allow for increased flexibility in processing of materials. Operations efficiency was further increased at the MRF in FY03 when most of the processing equipment was replaced.

E. Plan of Action: Materials Recovery Facility –The County must not approve, or allow taking effect any material change to the mixed paper recycling contract with OPS, unless the Director of DEP has submitted the change to the County Council. The Council must approve or disapprove the proposed change within 30 days or two regular Council work sessions, whichever is longer. If the County Council does not act within this time frame, the change will stand approved, unless the Council approves a resolution extending the time for Council action.

Meanwhile, DEP will strive to increase material revenues and encourage increased usage by non-residential County generators to fill unused MRF capacity. The Department will also continue to encourage non-residential generators to take advantage of available MRF capacity to recycle aluminum, bi-metal, steel, plastic and glass containers.

After the County's contract with OPS expires, the County will market its RMP directly from the MRF.

5.2.1.4 Yard Trim Composting Facility

A. Facility Description – In 1983, a 118-acre WSSC sewage sludge composting facility on the former "Matthews Farm" near Dickerson, Maryland was converted into a County-managed yard trim composting facility. Leaves and grass are composted at the facility in an open-air windrow operation using mobile turning and

shredding equipment. The facility produces compost that is dried and screened for commercial bulk and bagged material markets. Facility operations occur on a 48-acre bituminous pavement pad and are limited to 77,000 tons per fiscal year (see item D, below).

B. Project Management – MES operates the Yard Trim Composting Facility under an intergovernmental agreement with the County.

C. Community Agreements – In 1981, the County and the Sugarloaf Citizens Association entered into a Stipulation Agreement relating to the Yard Trim Composting Facility. The stipulation agreement governed certain substantive and procedural matters relating to operation of the facility and disposition of portions of the former Matthews Farm. In 1996, the County and the Sugarloaf Citizens Association entered into a supplemental Agreement of Settlement and Compromise. The Agreement of Settlement and Compromise serves as a full and final settlement between the parties with regard to all earlier disputes. The agreement establishes limitations upon the operation of the Compost Facility and contains certain host community benefits and considerations. In August 2000, an amendment to the Agreement of Settlement and Compromise was signed by the County and the Sugarloaf Citizens Association to allow bagging of up to 500,000 bags annually at the facility and to provide for physical improvements to some structures on the Matthews Farm community center. The Stipulation Agreement and the Agreement of Settlement and Compromise, including Amendment 1 are included in Appendix D.

D. Facility Capacity – The Agreement of Settlement and Compromise limits the amount of yard trim processed at the facility to 77,000 tons per fiscal year. Per the agreement, the County may exceed the 77,000 ton limitation only if the excessive tonnage is attributable solely to a pilot program and the prior written consent of the Sugarloaf Citizens Association is obtained subject to the provisions of the agreement.

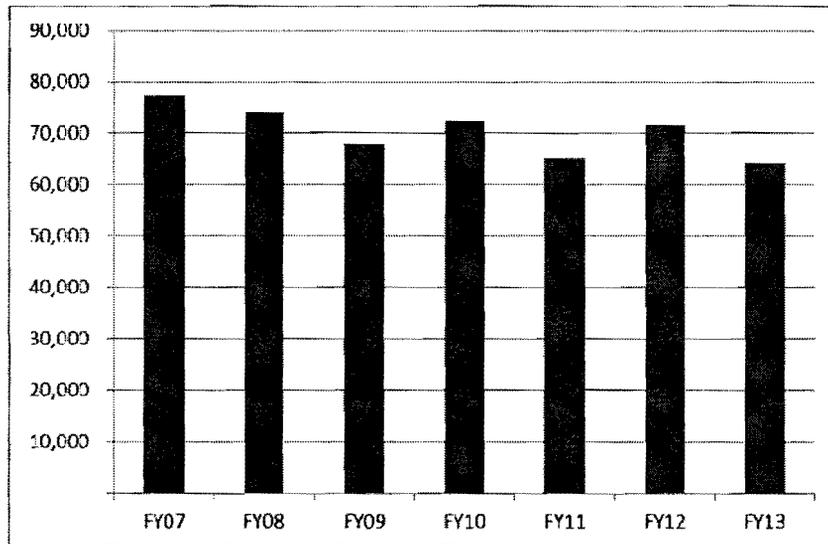
During CY 2012, a total of 60,231 tons of leaves and grass were delivered to the County for composting. The SCA agreement limits annual tonnage received to 77,000 tons, on a fiscal year accounting basis (July 1 through June 30). During FY13, the facility received 64,241 tons of leaves and grass—substantially less than the seven-year average (FY07 through FY12) of 70,395 TPY (and substantially less than the above mentioned CY 2012 total), as well as substantially less than the SCA limit of 77,000 tons.

It should be noted that over the past several years, the County has:

1. Aggressively expanded its promotion of grasscycling and backyard composting, and
2. Raised its yard waste tipping fee to dissuade deliveries from outside the County.

Figure 5.I, below, illustrates the resulting slightly downward trend. Based on these data and, and before accounting for County growth, it could be stated with 97.5 percent confidence that incoming tonnage would not be expected to exceed 73,906 TYP. Allowing for growth, in proportion to County single-family households, yields a projection with 97.5 percent confidence that leaves and grass tonnage requiring composting CY 2023 will not exceed 76,862 TPY—just slightly less than the SCA limit. Still, historical tonnages, suggests that weather and other factors can influence capacity needs in any year, more than might be expected. Therefore, as a good management practice, the County should continue to maintain back-up contract composting capacity.

**Figure 5.1
Tonnes of Leaves and Grass Received by the County and Requiring
Composting, Seven-Year History**



E. Plan of Action: Yard Trim Composting Facility – In addition to promoting additional grasscycling and backyard composting, the County will maintain contingency backup composting contracts, and at the same time work toward developing additional yard trim processing capacity of its own. For the immediate future DEP will continue to: monitor annual tonnages of yard trim processed at the Composting Facility and sources of that tonnage; aggressively promote grasscycling and back yard composting; and, to assure that there is no delivery exceeding 77,000 TPY to its Yard Trim Composting Facility in Dickerson, MD, will maintain one or more contingency/back-up contracts for composting services at alternate locations.

Contingency contracts may be renewed or replaced from time to time to assure that there is no lapse in contingency coverage. Contingency contract tonnage provided for any fiscal year should provide for no less than a seven percent surge as compared to the most recently completed fiscal year.

Finally, over the next five years, DEP will either develop long-term contractual capacity, or select a site and apply for permitting of at least 10,000 tons of additional yard waste composting capacity for County use. In this connection, and pending promulgation of governing state regulations, the County will explore the feasibility of including limited types of food waste in such composting capacity procurement which could increase the target capacity secured by 20,000 to 30,000 TPY.

An on-going structural maintenance program will continue at the current Yard Trim Composting Facility including scheduled replacement of portions of the paved pad and regular inspections and preventative maintenance to its on-site storm water management system. To assure ongoing ability of the County to recycle its end products at the lowest net cost to the County, DEP will strive to increase the market share of finished compost products produced at the facility.

The production of compost from yard waste is, in and of itself, a recognized environmental benefit relative to disposal, and the facility itself, is high performing relative to all regulatory requirements. However, as with any complex operation, the various environmental aspects of the composting operation itself could be further explored for added environmental benefit. Montgomery County has developed a formal Environmental Management System (EMS) under the internationally recognized ISO14001 program, and effective June 20, 2013, the "Montgomery County Compost Facility, Dickerson Maryland" has been independently certified as in compliance with the ISO14001:2004 rules. The Action Plan for the facility includes maintaining compliance, including required periodic third party audits.

5.2.1.5 Out-of-County Landfill Contract

A. **Contractual Arrangement** – In 1997, the County entered into a contractual agreement to transport RRF ash, nonprocessable waste, and bypass waste for disposal at a private landfill in Brunswick County, Virginia. The contract was amended in 2010 to allow the recycling and beneficial reuse of ash residue as alternate daily cover and road base at Old Dominion Landfill in Henrico County, Virginia and other landfills owned by Republic Services. The County subsequently extended that contract five years through June 30, 2017.

Nonprocessable waste is waste that that is not burnable in the RRF. Nonprocessable waste that is recyclable is transported to various recycling facilities. “Bypass waste”, as noted earlier, is waste received by the County which is processible at the RRF, but which is not processed at the RRF. The quantity of waste bypassed will generally depend on projections concerning the annual amount of waste received and the extent of seasonal and other fluctuations in the daily amount of waste (see Section 5.2.1.2(f)). Any bypass waste would be shipped to the landfill in Brunswick County or other County approved alternate facilities by over the road trailers from the Transfer Station. The landfill in Brunswick County, Virginia is owned by BWMF, a wholly owned subsidiary of Allied Waste Industries of North America, Inc. which was recently purchased by Republic Services, Inc. Subject to certain limitations, the contract also requires that BWMF dispose of Montgomery County’s waste in an isolated landfill cell dedicated to Montgomery County waste. In the absence of notice from the County, this requirement is subject to a total tonnage limitation equal to 110 percent of the immediately preceding 12-month total tonnage delivered to BWMF. With notice, the County can increase tonnages required to be so disposed by 20 percent over any immediately preceding twelve month period. The County is reassessing these provisions in light of the current ash and C&D recycling operations and associated amendments to the contract. In the event that the County delivers tonnages exceeding

these limitations BWMF is still required to accept transport and dispose of the County's waste. The contract prohibits the storage, handling or disposal of any waste delivered by the County at any site or facility other than those explicitly approved by the County. The backup plan for the Brunswick landfill includes a contract provision that makes available landfill space at a facility in Georgia or other County-approved alternative facilities owned by the contractor if the Brunswick facility is not available to the County for any reason during the term of the contract.

B. Facility Description – The private landfill in Brunswick County, Virginia, is a permitted Subtitle D facility that opened in March 1997 and all other permits needed for this site are current and valid. The County's initial contract, see above, provides for disposal of County waste (RRF ash, nonprocessable waste and bypass waste) in a dedicated landfill cell reserved exclusively for County waste. The contract has since been amended to enable the beneficial recycling and reuse of ash at Old Dominion Landfill and other landfills owned by Republic Services. C&D recycling has also been expanded through contract amendments and associated operational changes. An aerial survey conducted on January 16, 2008 indicated that dedicated cell at the BWMF Landfill had the potential to develop additional capacity of 6.9 million cubic yards of airspace (or until at least the year 2025 at current utilization rates assuming 2,500 pounds per cubic yard in-place density for ash and 1,000 pounds per cubic yard for other waste).

C. Changes to the Out-of-County Waste Disposal Contract – The County must not approve, or allow taking effect, any material change to the waste disposal contract with BWMF unless the Director of DEP has submitted the change to the County Council. The Council must approve or disapprove the proposed change within 30 days or two regular Council work sessions, whichever is longer. If the County Council does not act within this time frame, the change will stand approved, unless the Council approves a resolution extending the time allowed for Council action.

The waste disposal contract with BWMF contains discretionary rights to mitigate damages to the County under certain circumstances. These include the right to allow waste from other sources to be placed in the County's dedicated cell and the right to allow County solid waste to be placed in a non-dedicated cell. The County Executive must not allow or direct the commingling of out-of-County waste with County solid waste in the County's dedicated cell without first obtaining approval from the County Council. Should the County Executive propose the commingling of solid waste from non-County sources in the County's dedicated cell, the County Council must approve or disapprove the proposed change within two regularly scheduled Council meeting. If the County Council does not act within this time frame, the change will stand approved, unless the Council approves a resolution extending the time allowed for Council action.

D. Plan of Action: Out-of-County Landfill – The County has exercised its option to extend its contract with BWMF through June of 2017. Under the contract, County reserved the option to recycle any portion of the waste stream currently being landfilled. DEP will continue the beneficial recycling and reuse of ash and enhanced C&D recycling as described in previous sections. For the period beyond June 30, 2017, and for at least the balance of the planning period, the County intends to conduct a procurement to secure projected capacity for like out-of-County hauling, recycling and disposal services.

5.2.1.6 Land Reserved for Potential Future In-County Landfill

The County's central principal disposal facility for RRF ash, nonprocessable waste and bypass waste is a contracted out-of-County landfill. The out-of-County waste transportation and disposal contract also guarantees the provision of an out-of-County back-up facility in the event the primary facility becomes unavailable. In the event economic conditions, changes in law or other circumstances render out-of-County

waste disposal infeasible, the County retains the option to develop a landfill at Site 2 near Dickerson on land owned by the County.

A. **Site Description** – The County has acquired approximately 820 acres along Wasche Road near Dickerson, Maryland to be held in reserve for use in the event economic conditions, changes in law or other circumstances render out-of-County waste disposal infeasible. The location of the land reserved for possible future landfill use is known as "Site 2." Site 2 was selected as a result of a 1990 study that evaluated 16 in-County candidate landfill sites using 26 criteria adopted by the County Council Resolution 11-787. The landfill site selection criteria are incorporated in this Plan by reference and are included in Appendix C. Should a waste disposal facility be constructed at this site, the footprint of the landfill would consist of approximately 125 acres.

B. **Site Improvements** – The County intends to maintain the current agricultural use of the Site 2 location. With the exception of activity to preserve select historic structures on the former "Chiswell Farm," restoration of the barn on the former Draper property and maintenance of existing residences as needed to assure economic viability as residential rental units in keeping with the agricultural nature of the neighborhood, and as needed to assure compliance with applicable law and regulation, the County will not make any improvements to the site as long as the out-of-County landfill option remains viable. Pending a final determination on the ultimate need to construct a landfill at Site 2, the property will remain in agricultural use.

C. **Plan of Action: Land Reserved for Potential Future In-County Landfill** – The County intends to retain the Site 2 property through the ten-year planning period and beyond for use in the event economic conditions, changes in law or other circumstances render out-of-County waste disposal infeasible. MDE issued a refuse disposal permit for this site. The County has postponed indefinitely the construction of the landfill. The

County may likewise suspend other permit and governmental approval processes at convenient points in the processes to minimize repeating completed work and phases in the event the processes need to be resumed. After a group of citizens filed an appeal regarding the issuance of the permit, the County agreed to join the citizens group to dismiss the appeal until the County decides to proceed with construction of the landfill (see Stipulated Order of Dismissal in Appendix D). The County may commence construction of the landfill at any point in time as it determines that such action to be in the interest of public health, safety and welfare, in accordance with the terms and conditions of this landfill's Refuse Disposal Permit, and any applicable court orders or consent orders.

5.2.1.7 Solid Waste Transportation System

The solid waste transportation system primarily consists of moving solid waste from the Transfer Station to the RRF, from the RRF to the out-of-County landfill, and from the Transfer Station to the out-of-County landfill, or to recycling facilities.

A. Transfer Station to RRF: Processible Waste and Yard Trim –

Processible waste received at the Transfer Station is hauled 18 miles by rail to the RRF. Processible waste is rail hauled in enclosed forty-foot long intermodal containers. Containers are stacked two high on lightweight, special purpose rail cars and travel via an existing railroad right-of-way between a railroad yard adjacent to the existing Transfer Station and a 1.2 mile access track and rail yard adjacent to the RRF. Rail service is provided by CSX Transportation, Inc.

In addition, a portion of the yard trim sent to the Yard Trim Composting Facility is transported from the Transfer Station via rail.

B. RRF to Out-of-County Landfill: RRF Ash – BWMF transports ash from the RRF via rail over existing commercial rail lines to a depot in Fulton, Virginia. From the rail depot, the ash is transferred to trailers for roadway transport to the Old Dominion Landfill in Henrico County, Virginia, near Richmond, for recycling and beneficial reuse as alternate daily cover and road base as described in Section 5.2.1.2(h). Should problems ever arise with this ash recycling operation, the ash can still be taken to a privately owned landfill in Brunswick County, Virginia from this location.

C. Transfer Station to Oudfill: Other Wastes – Brunswick Waste Management transports nonprocessable waste, and if necessary bypass waste. Nonprocessable waste is waste that is not suitable for burning. Nonprocessable waste that can be recycled is sent to various regional reclamation facilities. The remaining nonprocessable waste that cannot be recycled is generally loaded into containers at the Transfer Station and shipped via over-the-road trailers to the privately owned landfill in Brunswick County, Virginia. A small amount of nonprocessable waste is loaded into containers at the RRF and shipped by rail to the landfill. Waste will be bypassed if the daily amount of burnable waste received exceeds the capacity of County facilities or projections predict that future waste receipts will cumulatively exceed the physical or permitted capacity of County facilities. The bypass waste is loaded into containers at the Transfer Station and shipped via over-the-road trailers to the privately owned landfill in Brunswick County, Virginia.

D. Plan of Action: Waste Transportation System – DEP will monitor performance of all transportation contractors. DEP will enforce all contractual service standard requirements to ensure reliable and uninterrupted movement of wastes and build contingency capacity to ensure waste transport.

5.2.1.8 Recycling and Waste Reduction Programs

A. **Recycling** – Recycling Goal –The State “Recycling Rates and Waste Diversion Statewide Goal Act (2012)” requires County Plans to address a reduction through recycling of at least 35 percent of the County’s solid waste stream by July 1, 2014. The Plan must be fully implemented by December 31, 2015. Further, the Act sets a voluntary statewide diversion rate of 60 percent after adding source reduction credits by 2020. Montgomery County’s goal is to achieve, maintain or exceed 70 percent recycling of MSW by the end of Calendar Year 2020. In selecting initiatives to meet this goal, DEP will focus its efforts where the greatest opportunities exist. DEP will conduct cost avoidance studies to establish what further recycling is economically feasible to exceed this goal. The program will continuously identify potential recycling sources, programs and markets, and will provide a system to match recycling sources with recycling programs and recycling markets. Each calendar year, Montgomery County utilizes the State of Maryland methodology as stipulated in the MDE guidelines that meet the requirements of the Maryland Recycling Act for measuring its recycling rate, and includes the Source Reduction Credit used to calculate the Waste Diversion Rate by the State of Maryland.

As demonstrated in Section 3.1.10 of this Plan, current County recycling efforts exceed the MRA goal of 40 percent diversion rate¹.

¹ In 2000, Maryland established a voluntary statewide waste diversion goal of 40 percent.

B. Waste Reduction – The County Executive will evaluate the opportunities for waste reduction and conduct education and outreach programs to explain the need and opportunities for waste reduction. The County Executive will work with regional agencies, notably the County Council of Governments and the State of Maryland, and with the Federal Government to promote state, regional, and national waste reduction efforts, including promoting packaging legislation with the goal of reducing the volume and increasing the recyclability of packaging. The County Executive will evaluate and report on the amount of waste reduction or increase that has taken place to date.

C. Single-Family Residential Recycling – County Regulation 15-04AM establishes the entire County as a recycling service area. All single-family residences in the County, with the exception of those in certain incorporated municipalities, receive curbside collection of mixed paper, glass containers, aluminum cans and foil products, steel and bi-metal cans, certain plastic containers, grass, brush, leaves, Christmas trees and large household appliances (“white goods”) and select other scrap metals. Chapter 48 of the County Code mandates participation in the curbside recycling program for all residents of buildings comprised of six or fewer dwelling units. The curbside recycling program includes a public outreach campaign to maximize recycling participation and reduce contamination. Specifically, outreach activities include media advertisements, the DEP website, delivery of service notices (on recycled paper) to each resident as new or additional recycling services are introduced, and other promotional activities such as participation in fairs and public appearances.

In the cases of townhouses, multi-family properties with six or fewer dwellings, and properties with unusual configuration, it may be necessary to provide recycling collection by other than current means. Space constraints as well as the absences of driveways and garages in some townhouse communities offer particular challenges to successful recycling. An opportunity may exist to improve recycling participation and set out in townhouse communities through use of alternative bins of sizes and types that

are more manageable in a townhouse environment. DEP will evaluate other alternate means and levels of service to promote recycling at such properties.

D. Yard Trim – The County Executive conducts a vigorous outreach and education program to encourage residents to leave grass clippings on lawns (“grasscycling”) and to engage in backyard or on-site composting of grass and leaves. Yard trim, including leaves, brush, and grass clippings have been banned from being delivered to, or processed at, the RRF or any landfill which is part of the County’s waste management system. DEP will continue to give away compost bins to promote backyard composting, and will continue to aggressively promote both backyard composting and grasscycling. DEP will develop additional specific strategies to minimize the growth of yard trim brought to the Yard Trim Composting Facility, will maintain back-up contract composting capacity, and explore the feasibility of developing additional County composting capacity. Finally, the County Executive may recommend further adjustments in the yard waste tip fee to control the amount of yard trim delivered to the County system.

E. Multi-Family Residential Recycling – The State “Recycling- Apartment Buildings and Condominiums (2012) Act” requires County Recycling Plans to address the collection and recycling of recyclable materials from residents of apartment buildings and condominiums that contain ten or more dwelling units by property owners or managers of apartment buildings and councils of units owners of condominiums. To comply with this Act, Montgomery County intends to continue its current multi-family recycling program as described in Section 3.2.3 of this Plan.

Specifically, Montgomery County already mandates through County Executive Regulation 15-04AM (See Appendix I) the recycling of mixed paper, commingled containers, yard trim, Christmas trees, and scrap metal items at all apartment and condominium properties with greater than six dwelling units. All multi-family properties

with 7 or more units must submit to the County an annual waste reduction and recycling report including information on the tonnages of materials collected for recycling and for disposal for that property.

The County assists multi-family residential property owners in complying with recycling and reporting requirements. The County has established technical and peer assistance programs to provide technical expertise to multi-family property owners and managers in beginning, maintaining, or expanding recycling programs, and to residents in encouraging and promoting recycling.

F. Commercial, Institutional and Government Recycling – County Executive Regulation 15-04AM mandates recycling of mixed paper or sorted paper, commingled containers, yard trim, Christmas trees, and scrap material items at all businesses, institutions and government agencies (federal, state and local) located in the County. As detailed in County Executive Regulation, businesses with 100 or more employees, as well as certain select other businesses, must also prepare a waste reduction and recycling plan demonstrating how the business will recycle or reduce its solid waste. These same businesses also are required to submit to the County an annual waste reduction and recycling report including information on the tonnages of materials collected for recycling and for disposal for that property.

The County assists non-residential property owners in complying with recycling and reporting requirements. The County has established technical and peer assistance programs to provide technical expertise to businesses in beginning, maintaining or expanding recycling programs and to solicit the cooperative support of employers in encouraging and promoting recycling.

The County will involve private industry in a planning partnership to increase the infrastructure needed to collect, transport, sort, and process recyclable business waste.

Issues that this partnership should address include waste auditing of businesses to establish recycling feasibility; the role of public collection contracts and the County recycling center in business recycling; and the possibility of the County acting as the market of last resort for recyclable materials.

The County Executive should identify potential sources of grants, credits or loans to provide funding for recycling programs.

G. Waste Stream Detoxification -- Some household and business wastes in MSW may have hazardous characteristics (toxicity, ignitability, corrosivity, or reactivity). Hazardous materials frequently found in homes and businesses include: pesticides, oil-based paints, paint thinners and solvents, batteries, fuels, used motor oil, brake fluid, antifreeze and photographic chemicals. To prevent this material from entering the MSW stream, the County sponsors up to four HHW collection events annually at up to four sites around the County. A "regular" drop-off collection site has been established at the Transfer Station. The County also sponsors the "Ecowise" program featuring monthly collection events at which eligible small quantity hazardous waste generator businesses may dispose of up to 100 kilograms of hazardous materials. All materials received through both the HHW and the Ecowise programs are collected and transported to permitted TSD facilities by County contractors in accordance with all federal and state regulations governing hazardous waste.

A "regular" HHW drop-off collection site at the Transfer Station was opened in 2004. In order to increase program participation, the County has increased HHW operating hours to 9 a.m. to 5 p.m., seven days a week. DEP will seek to expand participation in the small quantity hazardous waste generator program for County businesses.

H. Incorporated Municipalities – Both the City of Rockville and the Town of Gaithersburg have now adopted the single-family components of the County’s recycling regulation ER15-04AM. The County will encourage each of the remaining incorporated municipalities in the County to establish efforts similar to its recycling program. The County has provided access to the MRF to all County municipalities providing curbside recycling collection services including commingled containers and source separated residential mixed paper. Some County recycling program resources, particularly in support of multi-family and non-residential recycling, have been made available to the municipalities.

I. Purchase of Goods Containing Recycled Materials – Section 11B-56 of the Montgomery County Code establishes that recycled paper and paper products should constitute at least 50 percent of the total dollar value of paper and paper products purchased by or for the County government. The same section of the County Code also mandates that County agencies either require the use of goods containing recycled materials or use of a percentage price preference (up to 10 percent) for recycled materials when purchasing goods. The Office of Procurement reviews all purchasing agreements to ensure compliance with the requirements of the County Code. DEP distributes information on the availability of products containing recycled materials to County businesses and municipalities to encourage them to use these materials.

J. Plan of Action: Recycling and Waste Reduction Programs – As of the end of 2012, the residents and businesses of Montgomery County had achieved a recycling rate of approximately 54.8 percent.

To reach its 70 percent recycling goal, the County maintains an ongoing recycling planning and implementation process. Formally punctuating that process, the County annually publishes its “Recycling Plan Update”. That Plan reports on specific

program achievements, lays out how the recycling 70 percent goal is being pursued under approved programs, and identifies potential additional initiatives that can be introduced in a subsequent budget year, if needed. DEP, on an annual basis, will update this document as the program is revised or amended introducing additional programs and initiatives if needed. Copies of that document are available from DEP. Highlights of the strategies that DEP will pursue to improve recycling performance over the next three years include the following:

1. Continue providing education, outreach, training, technical assistance, and guidance across all sectors to single-family and multi-family residents, multi-family property owners, managers, condominium and common ownership community boards, and businesses including business owners, managers, commercial property owners, property management companies, employees, commercial service providers, and refuse and recycling collection companies to further increase participation in recycling, waste reduction and buying recycled programs.

2. Continue to provide a comprehensive level of outreach, education, training, technical assistance and site-specific recommendations to businesses and multi-family properties to implement, improve or expand on-site recycling programs through the use of on-site visits by staff.

3. Continue dedicated enforcement of the County's recycling regulation, County Executive Regulation 15-04AM as it pertains to businesses and multi-family properties by thoroughly investigating cases of non-compliance and judicious use of progressively stronger enforcement techniques.

4. Continue dedicated enforcement of the County's companion recycling regulation, Executive Regulation 18-04 pertaining to haulers and collectors of solid

waste, which regulation, together with ER 15-04AM, implements the County's ban on disposal of targeted recyclables.

5. Expand efforts to further implement cooperative recycling and refuse collection programs among businesses in the Central Business Districts. Data has shown that when businesses that generate similar types of waste contract their recycling and refuse collection services together with one collection service provider and share a common set of recycling and refuse collection containers, the businesses increased the amount of materials they recycle and the majority of participating businesses have seen a decrease in their monthly recycling and refuse collection service costs due to collection efficiencies.

Target Additional Materials for Reuse: As opportunities arise, the County will target additional types of materials for reuse programs. The County will refine waste generation and waste reduction measurement techniques, document results of waste reduction activities, and develop cost/benefit assessments for new waste reduction initiatives. The County will continue to work cooperatively with regional organizations to promote waste reduction, including support of legislative initiatives pertaining to waste reduction.

Target Additional Materials for Recycling: The Department will continue to explore any practical opportunity to expand the range of material types that can be recycled, whether by curbside collection, drop-off or special events. In particular, DEP will monitor potential technological advances in food waste composting to determine if this activity may one day be suitable for implementation in the County. This can include programs that target specific types of food waste generators (e.g., institutions, grocery stores, and restaurants). Tonnage magnitude need not be the only measure of focus in seeking new venues for recycling. The Department may look for opportunities to develop new cost effective programs for materials that are currently recyclable but are relatively small components of the waste stream.

In June 2012, the County again expanded the types of plastics included in its recycling programs. Now, almost all types of plastics other than toys and film plastics are now included. Markets for film plastics continue to require purities beyond the practicable capability of the County's curbside collection program. However, film markets have demonstrated tolerance for the grocery store type bags returned to some of those stores. Virtually all grocery stores in the County take bags for recycling. The County will continue to work with retailers to promote film plastic recycling via this route.

New Education Methods: DEP will appraise the effectiveness of alternative education and outreach strategies and will focus its efforts on initiatives quantifiably demonstrated to have measurable positive effect on recycling performance. The Executive's annual operating budget submission must include summary findings of participation studies, focus groups, surveys and other research used to evaluate the effectiveness of alternative techniques and must describe how these findings justify the specific outreach, education, and technical assistance proposed for funding in the upcoming fiscal year.

5.2.1.9 Closed Landfills

A. Gude Landfill – The closed Gude Landfill is located on an approximately 120-acre tract in the central part of the County just north of Rockville. It also checks for the presence of landfill gas in gas monitoring wells along the perimeter of the site. Closed since 1982, the County currently monitors the ground water quality at the site. The County has retained a contractor to maintain an active methane gas collection system at the Gude Landfill. Methane extracted from the closed Landfill will be used to generate electricity at a small on-site power plant. A power plant was at the site from 1985 to 2006. A new facility was completed in mid-2009.

B. Oaks Landfill – The Oaks Landfill is located on a 545 acre tract near Laytonsville, Maryland. From 1982 through 1995, the County transported all of its MSW collected at its facilities to the Oaks Landfill. From 1995 through 1997, the County transported RRF ash and nonprocessable waste to the 180-acre Landfill. The County closed the Oaks Landfill in October 1997 concurrent with the commencement of the contract to dispose of RRF ash, bypass and nonprocessable waste at a private landfill in Brunswick County, Virginia. Capping of the Oaks Landfill was completed in 2001. The Oaks Landfill has a leachate pretreatment facility and a gas management facility that will continue to be operated throughout the 30-year post-closure maintenance period. A landfill gas-to-energy facility started operation in mid-2009.

Leachate is collected from the Landfill and stored in lined lagoons. The leachate is then pumped to an on-site pre-treatment plant, and treated before being transported by truck for discharge into the permitted sanitary sewerage system. Landfill gas blower/flare systems and leachate management systems are checked daily by the site leachate pretreatment plant contractor and other contracted security and operations personnel. Routine site inspections are performed to check for litter, illegal dumping along the site perimeter, erosion, fence damage, and other general maintenance issues.

The County regularly samples ground water monitoring wells at the Oaks Landfill site. In 1992, low levels of volatile organic compound contamination were detected from seven of the 22 monitoring wells and four nearby residential drinking water wells. To mitigate concern regarding water safety, the County initially provided point-of-entry activated carbon water treatment systems to residences with well contamination. The County also provided bottled water to all other potentially affected households. Since then, the County, in conjunction with WSSC, constructed a potable water distribution system to all potentially affected households around the perimeter of the landfill from the WSSC water supply system in the area.

C. **Plan of Action: Closed Landfills** – DEP performs all actions necessary for post-closure care of the Oaks and Gude Landfills. Post-closure care and maintenance is performed by contractors on an on-going basis in accordance with state and federal requirements². Ground water quality monitoring will continue under the currently approved monitoring plan until such time as reductions in frequency and range are mutually agreed to by the County and MDE.

Methane and leachate extraction practices will continue at the County's closed landfills. The County constructed a landfill gas recovery and flaring facility at the Oaks. Both landfills have active flare systems for gas control. Gas-to-energy facilities for each site completed in 2009 are operating.

Based on recommendations from the community concerning the long-term use of the landfill property, the County, in conjunction with M-NCPPC, developed hiker, biker and equestrian trails in the 350-acre buffer area around the Oaks Landfill. The capped landfill will be maintained as an open space meadow wildlife habitat.

5.2.1.10 Beauty Spots: Satellite Drop-off Centers

A. **Operations** – The County operates two satellite drop-offs facilities (also referred to as convenience centers or "Beauty Spots") for the purpose of citizen disposal of bulky residential solid waste. These convenience centers are located in Poolesville, at 19200 Jerusalem Road, and in Damascus, at 26149 Ridge Road. Operating hours for citizens' waste disposal are limited to weekends, from 9:00 a.m. to 5:00 p.m. on Saturday; and from 9:00 a.m. to 1:00 p.m. on Sunday. Typical materials received at the centers are large, bulky items such as home remodeling debris, and furniture.

² Landfill closure and post-closure requirements as described in the Code of Federal Regulations 40 CFR, Part 258.

B. **Plan of Action** – The County only accepts non-recyclable bulky waste from County residents at the Poolesville and Damascus satellite drop-offs facilities. The Department will enforce this policy to restrict disposal of waste from non-residential and out-of-County generators. The Department will periodically re-evaluate the manner of providing this service, including facility operating hours, to best accommodate community needs.

5.2.1.11 Waste Collection

A. **Operations** – The County plays a large role in the collection of waste, as described in Section 3.2, contracting for with the private sector for curbside collection of disposable refuse and separate collection of recyclables and licensing private sector collection.

B. **Plan of Action** – The County will continue to play its current role in waste collection services as described in Section 3.2. However, with increased interest in greenhouse gas (GHG) and ozone-related emissions, the County should use creative techniques to encourage contracted haulers to implement environmentally friendly options.

5.2.1.12 Greenhouse Gas and Ozone- Related Emissions

A. **Operations** – As described in Section 4.6, the County is taking a leadership interest in the management of greenhouse gas (GHG) and ozone-related emissions, and recognizes that all aspect of its solid waste management system can play a part.

B. **Plan of Action** – The County will develop a complete, solid waste system-wide, inventory of GHG and ozone-related emissions, and will include net emissions effects in the consideration of future changes in solid waste management system.

5.2.2 Biosolids from Water Supply and Wastewater Plants

A fuller description of the County's wastewater and biosolids management plan is detailed in the *Comprehensive Water and Sewer Plan for Montgomery County*.

A. Description of Facilities – There are four wastewater treatment plants (WWTP) and one Water Filtration Plant (WFP) that generate biosolids in Montgomery County.

The WWTP are the Damascus, Hyattstown, Poolesville and the Seneca—Seneca being the major one. The biosolids generated at these plants are beneficially land applied to agricultural cropland in the region by private contractors. Combined, the four wastewater treatment plants generate approximately 6,000 dry tons of biosolids per year.

The Potomac WFP is located on River Road two miles upstream from Great Falls, serves both Montgomery and Prince George's Counties. The plant draws water from the Potomac River. Solids removed from the intake water are hauled from the plant. For 2005 to 2007, about 14,000 wet tons per year were hauled, at about 28 percent total solids. The solids were hauled by a contractor and used in blended topsoil and mulch products.

B. Plan of Action: Seneca Wastewater Treatment Plant – The Seneca Wastewater Treatment Plant already has been expanded from a 5 MGD facility to a 20 MGD facility and expansion from 20 MGD to 26 MGD is currently under construction. The original Seneca Wastewater Treatment Plant (WWTP) was built in 1978. In 2003 the new Seneca BNR (biological nutrient removal) plant was expanded to a capacity of 20 MGD. In CY 2012, the Seneca WWTP produced 442 tons of biosolids per month on a dry weight basis with an average effluent flow that year of 14.85 MGD.

Currently an increase in capacity to 26 MGD, together with treatment improvement to enhanced nutrient removal (ENR), is under construction at the Seneca WWTP and that construction is slated for completion in mid-to-late 2015. The service area is expected to grow to include new homes in the Clarksburg area around RT 121 and RT 355 and some areas north of RT 27 (Ridge Road) west of Damascus and east of RT 355. However, WSSC expects that the 26 MGD plant capacity will remain well ahead of the capacity demand caused by new home construction over the next decade.

Future biosolids can be expected to increase proportionally with combined flow increases to the plants. So, if the average flow increases 33 percent over the next decade, it could be expected that biosolids production would increase proportionally to as much as approximately 8,000 dry tons per year.

WSSC is in the design phase of its Anaerobic Digestion/Combined Heat & Power (AD/CHP) project which will be located at the Piscataway WWTP. This project represents a major change in how biosolids will be dealt with in Montgomery County and Prince George's County. WSSC's planning work to date presumes the facility would be located at the Piscataway WWTP. The project is included in the "Bi-County Sewer" section of WSSC's Approved FY15-20 CIP, since the project would receive biosolids from WSSC's other wastewater treatment plants (including the Seneca and Damascus wastewater treatment plants in Montgomery County). Fats, oils, and grease collected by WSSC would also be sent through this process.

5.2.3 Private Facilities

5.2.3.1 Private Municipal Solid Waste Facilities

A. Permit Requirements – Private persons who wish to operate solid waste disposal facilities in Montgomery County may not do so without a state solid waste disposal permit. The State will not issue a permit unless the site is consistent with the Comprehensive Solid Waste Management Plan. With respect to private sites:

1. The County will review and comment on state solid waste disposal permit applications; the site and any facility on the site must comply with all County laws and with relevant parts of this Plan.

2. The County, as part of its review of permit applications, will designate materials that private facilities are permitted to process. These designations will be made at the time of application according to public solid waste flow control needs and may change from application to application.

3. At the time that a property owner applies for a state solid waste refuse disposal permit, the County will review the permit application in accordance with Section 9-210 of the Environment Article of the Annotated Code of Maryland to determine conformity of the proposed private facility with County land use, zoning and solid waste laws, regulations and plans.

B. Zoning Requirements – The County Zoning Ordinance limits privately owned transfer stations, landfills and incinerators to the I-2 heavy industrial zone. Moreover, these facilities are permitted in the I-2 zone only if the County Board of Appeals grants a special exception determining that the specific I-2 parcel is suitable for a transfer station, landfill or incinerator in accordance with the standards set forth in the Zoning Ordinance. The Zoning Ordinance allows a construction recycling facility in a

Rural Service Zone provided that the facility meets special development standards set forth in Section 59-C-9.83 of the County Zoning Ordinance. These requirements set minimum standards for lot size, road frontage, distance to an interstate interchange, building set back, and on-site screening and landscaping. The facility also requires a construction debris recycling permit that satisfies the materials handling and reporting requirements of Section 59-C-9.84 of the County Zoning Ordinance. The Zoning Ordinance allows private recycling facilities in select industrial zones.

5.2.3.2 Other Private Waste Facilities

Private facilities handle 42 percent of the rubble, land clearing and C&D generated in the County. One privately-owned facility located in Clarksburg has sufficient permit capacity to handle all of the C&D generated within the County. In addition, as detailed in Chapter 4, there are many other options located outside the County where collectors chose to take C&D. Other privately-owned facilities, almost exclusively located outside of Montgomery County accept land clearing, hazardous wastes, medical wastes, dead animals, automobiles and tires.

5.2.3.3 Plan of Action: Private Facilities

The lack of nearby acceptance facilities for yard trim, food and other special recyclable wastes limits the feasibility of additional private sector recycling. DEP will explore interest and roadblocks to the private sector development of nearby recycling facilities for such special wastes as yardwaste and food waste. The permitted private C&D facility in Clarksburg, is accepting far less than its permit allows and recycling less than 40 percent of the material it does accept. DEP will explore means of promoting private sector recycling of this type of waste as well. While limited opportunity exists to site new special waste facilities in the County, DEP will continue to review, and possibly

modify, existing regulations to promote the expansion of private recycling infrastructure within the County.

5.2.4 Data Management and Reporting

5.2.4.1 Solid Waste Data Management

The County gathers solid waste data from a variety of sources that are used to determine disposal rates, recycling rates, waste reduction activity, and other key measures. Certain solid waste data are readily attainable from in-County sources. Tonnages from County facilities are available for input into a data management system. For example, the tonnages of MSW processed at the Transfer Station and the tonnages of recyclables handled at the MRF are recorded on-site.

Other data points must be determined by less direct means. County Executive Regulation 5-13 requires haulers and collectors to report, semiannually, on the amount and disposition of waste collected (i.e. tonnage, by type, and where they took it, including non-County facilities). Reporting required under ER15-04AM complements this data and is used to reconcile sector-relative recycling and disposal tonnages. Specialized studies are used to monitor some minor waste streams not reported by the foregoing means. Periodically (e.g., every four years) the County conducts an analysis of the composition of the disposed waste stream (“Tip and Sort”) involving statistical sampling of the waste delivered for disposal at the Transfer Station. In addition to providing thorough support for tracking its progress toward achieving its recycling goal and guiding future efforts on that front (such as enabling the analysis reflected in Table 4-1), these studies also ensure that system benefit charges are properly allocated (see Section 5.4.2.2).

5.2.4.2 Quarterly Reports

DEP prepares quarterly reports that summarize current County solid waste activities. These reports include monthly tonnage throughout for major County solid waste facilities, a summary of citizen advisory group and volunteer activities as well as updates on each program of the County's solid waste management system. Quarterly reports are distributed to the County Council and to interested citizens.

5.2.4.3 Department Reports to the County Council

DEP will report annually to the County Council, typically via the budget process, regarding the status of the County's solid waste management system. Annual reporting will include:

- A. The overall County recycling rate calculated on a calendar year basis once approved by MDE, will be posted on the DEP website;
- B. A Progress reports on implementation of recycling programs including description of major initiatives planned for the upcoming year necessary to implement the policies included in this plan, which report may be included in the annual update of the Recycling Plan Update referred to in section 5.2.1.8(j).

In addition to annual reports, DEP will brief the County Council, as requested, regarding the implementation of this Plan and the operation of the County's solid waste management system.

5.2.4.4 Plan of Action: Data Management and Reporting

DEP will continue to maintain its detailed solid waste databases including data pertaining to disposal tons at County facilities and elsewhere, recycling tons at County

facilities and elsewhere, per capita and per employee waste generation rates, recycling and composting rates, source reduction trends, waste stream composition and per ton waste processing costs. In addition, the County will seek to improve data gathering from external sources, particularly related to refuse and recyclables processed at non-County facilities.

In reporting on the County's Recycling Rate, DEP will make every effort to calculate its recycling rate consistent with the State MRA methodology and guidelines. Specifically, per County Council Resolution 17-566, each calendar year, Montgomery County utilizes the State of Maryland methodology as stipulated in the MDE guidelines that meet the requirements of the Maryland Recycling Act for measuring its recycling rate, and includes the Source Reduction Credit used to calculate the Waste Diversion Rate by the State of Maryland.

In cooperation with SWAC, DAFIG and other interested parties, DEP will continue to develop and implement a series of annual performance measurements which will track the efficiency and effectiveness of County solid waste programs and services in the form of both internal benchmarking (measuring continuous improvement over time) and external benchmarking (comparing with other high-performing jurisdictions) for selected programs.

5.3 ADEQUACY OF EXISTING SYSTEM TO HANDLE WASTE STREAMS

5.3.1 Municipal Solid Waste

The existing and projected MSW stream is detailed in Chapter 3. Table 3.1 consists of domestic wastes generated by the residential, commercial, industrial, and institutional sectors. County solid waste facilities, including the Shady Grove

Processing Facility and Transfer Station, the RRF, the MRF, the Yard Trim Composting Facility, the out-of-County landfill, are available to handle this MSW.

5.3.1.1 Adequacy of MSW System and Facilities

In CY 2023, the combined total MSW generation from all sectors is projected to be 1,260,829 tons. Of these, 834,064 tons are projected to be recycled in CY 2023.

A. Recycling System and Facilities -- Recyclables collected by means of the County's single-family residential curbside collection program are processed at the County MRF, the Yard Trim Composting Facility. Private sector recyclables, for the most part, including those from the multi-family sector and non-residential sectors (including commercial, industrial and institutional generators), are processed at private facilities.

1. **Commingled Containers Facility** -- The County MRF can process the materials at a rate of approximately 115 tons of incoming material per shift. The MRF receives commingled materials primarily from the single-family sector, including municipal accounts, but is also available to, and receives a small amount of materials from, the multi-family and non-residential sectors. For the CY 2023, a total of 22,229 tons are projected to be shipped. A routine second shift may become called for. During the most recent twelve months, a second shift was found to be needed on occasion. The MRF could be operated on the basis of two full shifts per day on a routine basis if necessary. On this basis, the County MRF is believed to have sufficient capacity to process all anticipated incoming tonnage of commingled glass, plastic, aluminum and ferrous containers throughout the planning period. The County reserves the option, however, of using alternate contracted MRF capacity for any fraction of its comingled materials processing needs.

2. Residential Mixed Paper -- The County has a contractual agreement with OPS, Inc. to process residential mixed paper (RMP) received at the MRF. A portion of the County MRF serves an Acceptance Facility for this contract, and provides for receiving and transferring Residential Mixed Paper (RMP) to the OPS facility. For this purpose, the County's MRF has the capacity to receive and transfer at least 346 tons of RMP per shift (90,300 tons/year on a five shift per week basis). The County's contract with OPS is designed to accommodate 90,000 tons of RMP but is virtually uncapped should added RMP be received. For CY 2023, the County projects recycling 65,510 tons of mixed paper through the MRF, or about 252 tons per day. Thus, the County's contract with OPS expires in April 2016. However, the regional capacity for paper processing (e.g., local markets for RMP) is now more robust than it was in 2001. There are now two private facilities, located near the County MRF, which can be expected to compete for RMP received at the County MRF when the OPS contract expires. Thus, the County has adequate RMP recycling capacity for the planning period.

3. Yard Trim -- Under the terms of agreements between the County and the Sugarloaf Citizens Association (see Section 5.2.1.4 (d) of this Chapter), the Yard Trim Composting Facility may process no more than 77,000 tons of yard trim per fiscal year. Also as discussed in Section 5.2.1.4, during the CY 2012, demand on the Yard Trim Composting Facility was 60,231 tons. Projecting that figure to increase in proportion with single-family housing growth suggests that the 77,000 TPY limit in that Sugarloaf agreement will not be reached by CY 2023. However, yard waste deliveries are known to be influenced by weather. Therefore, in addition to promoting additional diversion to grasscycling and backyard composting, the County will maintain contingency backup composting contracts, and carryout the action plan described in Section 5.2.1.4(e).

4. **Private Sector Recycling Facilities** – Recyclables from the multi-family residential sector, as well as those from commercial, industrial and institutional generators, tend to be processed at private facilities. Paper generated in the multi-family sector is considered residential and is welcomed at the County MRF, as are commingled containers from any sector. The OPS facility, centrally located in the County, is more than adequate to handle paper generated by the non-residential sector. In addition, several large recycling facilities operated in the region counties which adequately serve in-County multi-family residential, commercial, industrial and institutional generators. These private facilities, in conjunction with the County MRF, are expected to continue to meet the needs of the multi-family residential, commercial, industrial and institutional sectors for at least the next decade.

B. Refuse Disposal System and Facilities – To assess the adequacy of the disposal capacity of the Montgomery County solid waste management system, one must consider the throughput capacity of the County's transfer station, and those of the Resource Recovery Facility (RRF) and Out-of-County haul contracts. With respect to the RRF and Out-of-County haul contract, it must also be recognized that some of the RRF throughput capacity represents a means of recycling, not disposal; as a practical matter, approximately 30.6 percent of the RRF incoming tons become recycled as ash and recovered metals.

For CY 2023, this Plan projects a total MSW generation of 1,260,829 tons with recycling of 834,064 tons. Of this total amount of recycling in CY 2023, 664,086 tons will be via recycling means that do not depend on processing at the RRF. Adding this projected pre-RRF recycling, to the 657,000 ton permitted throughput capacity of the RRF, yields 1,321,086 tons—which exceeds the total MSW generation projection of 1,260,829 tons by 60,257 tons. This more than demonstrates sufficient MSW disposal system capacity. Furthermore, the CY 2013 projections in this plan presume less than full RRF capacity utilization (e.g., only 539,644 tons of MSW to the RRF in CY 2023)

together with about 57,098 tons of MSW exported by the private sector to alternate regional disposal facilities. Thus, even under a hypothetical scenario of zero private sector MSW export, the RRF has sufficient capacity for County MSW needs.

These scenarios are well within the capability of the Transfer Station's physical and permitted (821,500 TPY) capacity and the capacity of the County's Out-of-County hauling contract described in Section 5.2.1.5. As the latter expires June 30, 2017, there will be a need to secure additional landfill contract capacity near the end of the planning horizon. In order to assure system capacity for the entire ten year planning period, the County will issue no later than in the first half of FY16 a procurement to extend or secure additional out-of-County landfill capacity, giving the County 18-24 months before the current contract expires to secure a replacement contract.

With respect to the RRF operating contract, the County has already extended its operating contract until April 1, 2021, and the existing contract affords the County an option to extend for another five (5) year term. County plans to extend or replace the RRF operating contract well in advance of that 2021 termination.

In line with policies articulated in Sections 5.2.1.2(f)(2) and 5.4.1.2, designed to avoid the circumstance of "bypass" waste, the County prefers not to receive amounts of processible waste in excess of 95 percent of RRF permit capacity. This policy, designed to avoid the circumstance of bypass waste (the County sending RRF-processible waste to landfill. As a practical matter, the actual amount of MSW needing to be bypassed would be influenced by the *seasonal variations* in the amount of waste received and the schedule of preventative maintenance required by County facilities. See also Section 5.4.2.1.

In summary, then, the County has more than adequate disposal system capacity to meet planned needs, provided that it extends or replaces RRF operating and Out-of-

County hauling contracts as described in this Plan. As a practical matter, however, the County recognizes and participates in a regional competitive market for MSW disposal capacity, expects private sector MSW export to continue, and will moderate its tipping fee accordingly, consistent with the policy expressed in Section 5.4.2.1.

5.3.2 Land Clearing and Construction and Demolition Debris

Land clearing and construction and demolition debris, referred to collectively here as “C&D”, is solid waste from construction, demolition and renovation projects that produce debris including wood, wood products such as fiberboard and particleboard, cardboard, sheetrock and other drywall, plaster, fiberglass, plastic and other polymers, composite materials, glass, stone, steel and other metals, rubber, geotextile, asphalt, concrete, brick and mortar, rock, dirt, rubble, tree stumps, logs and large tree limbs. (See definition in Appendix A for a list of exclusions.)

As indicated in Table 4.4, C&D type materials generated in the County was found to be 240,137 tons in CY 2012. Of this amount, 133,755 were delivered to various private sector C&D acceptance facilities in the region, and 106,382 tons were delivered to the County’s Transfer Station. The County owns limited C&D processing equipment. However, burnable components of C&D materials that are delivered to the County and deemed “processable” at the RRF (e.g., burnable and readily separated from non-burnable on the tipping floor of the transfer station) are sent to the RRF for renewable energy recovery, but only to the extent that RRF capacity is available. The County will evaluate opportunities for enhanced C&D recycling, and will continue to set a separate tipping fee for accepting C&D per Section 5.4.2.1.

Changes in the annual generation of C&D land clearing and demolition debris are thought to be influenced by weather and economic cycles, but otherwise related in a proportional way to population growth and the resulting need for land clearing and new

construction. This includes tons generated by County government road maintenance activities. A relative dearth of undeveloped land may result in a shift in the C&D composition of privately-generated C&D from land clearing type materials (e.g., stumps and dirt) to building demolition type materials. A total of 246,699 tons of land clearing and construction and demolition debris are projected to be generated in 2023.

The Clarksburg C&D recycling facility, alone, has sufficient permitted capacity to handle all non-governmentally generated C&D projected to be generated in the County in Year 2023. In addition several regional C&D processing and/or disposal facilities are expected to remain available for the planning period. However, continued preference by the private sector to use of the County's Transfer Station for disposal of C&D will exacerbate the County's ability to assure adequate disposal capacity for MSW. The County will continue to use differential (higher) tipping fee for C&D than MSW so as to dissuade over-reliance on the County for C&D capacity, and at the same time the County, through its Out-of-County haul contract, will continue to maximally find recycling dispositions for the C&D that is delivered.

5.3.3 Asbestos Containing Materials

The County no longer manages Regulated Asbestos Containing Material (RACM) and does not use the landfill in Brunswick County, Virginia, for its disposal. Haulers must be licensed by the State to transport RACM and must use disposal facilities permitted by the State to accept RACM.

5.3.4 Controlled Hazardous Substances

The term, "controlled hazardous substances (CHS)," refers to hazardous waste and special medical waste that is generated in sufficient quantities (as established by

the State of Maryland) to require special handling and disposal practices to protect public health and the environment.

5.3.4.1 Hazardous Waste

Hazardous wastes include specific wastes that are listed in federal and state regulations, or which are characterized by at least one of the following properties: ignitability, corrosivity, reactivity or toxicity. Hazardous waste generated in Montgomery County was only 381 tons for CY 2012.

MDE issues permits for hazardous TSD facilities. Permitted TSD facilities located in Montgomery County include the National Institutes of Health and the National Naval Medical Command in Bethesda. Hazardous waste is managed at the National Institutes of Health by private contractors and at the National Naval Medical Command by the Defense Reutilization and Marketing Office System. Hazardous waste generated in the County is shipped to privately own and operated permitted TSD facilities located in nearby counties. In most cases, this hazardous waste is transported for ultimate disposition at out-of-state TSD facilities.

Hazardous waste generation is projected to increase consistent with employment trends resulting in a projected generation of 447 tons in 2023. Existing permitted private contractors serving the region are anticipated to adequately serve County needs.

5.3.4.2 Special Medical Waste

Special medical waste is generated by hospitals, doctors' offices and medical testing and research laboratories. Special medical waste includes utensils, bandages, containers or any other material issuing from all human patient care, diagnosis and surgical areas; animal bedding and feces; disposable laboratory equipment, and their

contents; materials resulting from and/or exposed to infectious animal care and laboratory procedures; all disposable needles and syringes; all other disposable materials from out-patient care for human and animal patients, where presence of pathogenic organisms are diagnosed or suspected. See Section 3.1.3.2 for a discussion.

Special medical waste reported by licensed haulers was 3,089 tons for CY 2012. Since controlled medical waste is projected to increase at the same rate as County employment growth, the projected County generation for the Year 2023 is 3,628 tons. The County has not received reports of insufficient special medical waste disposal capacity at private facilities serving County generators.

5.3.5 Animal Carcass Waste

Animal carcass waste generation was 246 tons for CY 2012, according to County Police Department data.

The Montgomery County Police Department, Division of Animal Services, contracts with a private renderer to dispose of the dead animals found on County grounds or highways. The County collects approximately 15 tons of animal carcasses, primarily domestic pets and deer, per year. In addition, the Montgomery County Animal Shelter estimates that it generates 10 to 12 tons of animal carcasses per year.

No animal waste rendering facilities operate in Montgomery County. Private renderers in Virginia and Pennsylvania serve the County's needs.

No pet crematorium operates in Montgomery County.

Animal waste is projected to increase at the same rate as population growth. Over the next ten years, existing out-of-County pet crematoria and rendering facilities are anticipated to continue to serve County animal carcass waste generators.

5.3.6 Bulky and Special Wastes

5.3.6.1 Bulky Waste

Bulky wastes include large household appliances (white goods), other scrap metals and building materials. A total of 20,195 tons of bulky wastes were generated and collected in Montgomery County during CY 2012, and this is projected to increase to 22,385 tons in CY 2023.

Once received at the County Transfer Station, bulky items typically are diverted away from the RRF. White goods and other scrap metals are sent for recycling. Reusable building materials are sent to a non-profit organization in Baltimore for use in housing projects throughout Maryland. Other bulky items that are not suitable for disposal at the RRF are included with other nonprocessable waste sent for disposal at a private landfill in Brunswick County, Virginia.

. Existing facilities and programs have proven sufficient to process these materials for the next decade.

5.3.6.2 Automobiles

Two automobile parts salvage companies operate in Montgomery County. However, no full scale automobile recycling facilities exist within the County. Retired automobiles are hauled to auto recyclers located outside of the County. No further County involvement in automobile waste management is anticipated in the next decade.

5.3.6.3 Scrap Tires

Based on population, approximately 10,116 tons of scrap tires were estimated to be generated in CY 2012, and this amount is projected to grow to approximately 16,918 tons in Year 2023.

The State of Maryland has developed a scrap tire program for the management of scrap tires in Maryland. Many auto service centers in the County arrange for private recycling of their customers' tires at facilities outside of the County. County residents may drop off five or fewer scrap tires per year at the County's Transfer Station for recycling. In CY 2012, the County received and recycled approximately 180 tons of scrap tires at its Transfer Station.

Illegal dumping of tires in the County usually occurs in relatively small quantities (usually less than 50-100 tires) at roadsides and in wooded areas. No large illegal tire dumps are known to exist in the County. The number of scrap tires dumped illegally in the County is not known.

The existing scrap tire system in Maryland should be sufficient to handle County scrap tire generation through the life of this plan.

5.3.7 Wastewater Treatment Biosolids

As stated in Section 5.2.2.1.b above, the Seneca Wastewater Treatment Plant has been expanded to accommodate future demand.

Montgomery County sends approximately 70% of the sewage collected in the public sewerage system to the Blue Plains Wastewater Treatment Facility (Blue Plains), operated by the D.C. Water and Sewer Authority (D.C. Water) in Washington D.C. The

Washington Suburban Sanitary Commission (WSSC) is responsible for land applying approximately 50% of the biosolids generated at Blue Plains at this time. In November 2014, D.C. Water completed the construction of new sludge processing facilities at Blue Plains. These facilities included new thermal hydrolysis and anaerobic digestion systems. These new facilities will reduce the quantity of biosolids to be removed from Blue Plains by about 50% (presently this would be approximately 300 WT/D for WSSC to land apply), and the biosolids will be certified as "Class A" biosolids. Presently, the certification to "Class A" for the biosolids has not been completed and so the digested solids are still being land applied at sites in Maryland and Virginia. Once the "Class A" certifications have been achieved, D.C. Water intends to blend these solids into commercially valuable soil amendments, thereby greatly reducing the practice of land application of these biosolids. These plans are expected to be implemented within the next two years. The advantage of generating the soil amendments from the "Class A" biosolids is that it will reduce the costs associated with land application of the biosolids and is expected to generate revenues that will off-set the costs of operating these systems. The new sludge digestion facilities will also produce sufficient methane to produce approximately 13 MW of electricity to be used at the Blue Plains facility. This further enhances the beneficial use and economic viability of this new sludge processing system at Blue Plains.

The County's biosolids management plan is detailed in the *Comprehensive Water and Sewer Plan for Montgomery County*.

5.3.8 Septage

WSSC has a "Septage Discharge Facility Planning & Implementation" project in the CIP which will result in the construction of three discharge facilities (the abandoned Rock Creek WWTP, Anacostia Wastewater Pumping Station No. 2, and Piscataway WWTP).

5.3.9 Other Wastes

As stated in Chapter 3, Montgomery County generates insignificant quantities of agricultural wastes and mining wastes.

Litter and recreational wastes are considered MSWs and are included in the tonnage estimates in Section 5.3.1 of this Chapter.

Street sweepings are included with the nonprocessable waste transported to a privately operated landfill in Brunswick County, Virginia.

5.4 SYSTEM FINANCING

Basic cost information and fiscal data relating to the implementation of this Plan may be found in the approved Annual Operating Budget and the Approved Capital Improvements Program for DEP. In addition, in conjunction with the annual preparation of the County Executive's Recommended Operating Budget, DEP will prepare a document detailing the current costs and the projected six-year costs of each solid waste management program. Assumptions regarding the costs and workload of the various programs also will be detailed. DEP also will provide long term projections regarding the revenues collected for solid waste programs and the fees that will be necessary to support the program. Either in budget documents or in supplemental documents, DEP also will calculate the marginal cost of any new recycling or other solid waste programs proposed by the County Executive. These documents will be available at County public libraries and at the offices of DEP.

5.4.1 Budgeting

5.4.1.1 General Budgeting

The County Executive is responsible for the preparation of the annual budget and its amendments for submission to the County Council for appropriate action. The Office of Management and Budget assists County Executive and the Chief Administrative Officer with all budget matters, research, program evaluation and such other related matters as may be assigned.

5.4.1.2 Solid Waste Management Budget Preparation

The Director of DEP prepares and submits to the County Executive a recommended budget for operations and capital improvements and requests for supplemental appropriations, as needed, related to solid waste management.

5.4.1.3 Biosolids Management Budget Preparation

DEP reviews the budget requests of WSSC which are related to the County's activities in solid waste management and makes appropriate recommendations to the County Executive.

5.4.2 Solid Waste Revenue Sources

County law requires that the County at least annually set charges for solid waste services to equal expenses. The County funds its solid waste system primarily by means of four revenue streams: (1) tipping fees, (2) systems benefit charges, (3) refuse collection and leaf vacuuming charges, (4) revenues and credits from the sale of methane, recyclables and compost.

Revenues from these sources provide an adequate and reliable source of funding to finance County solid waste programs, including all recycling services. Revenues raised from the four sources listed above go directly into an independent, legislatively established Solid Waste Enterprise Fund which finances County solid waste programs exclusively.

5.4.2.1 Tip Fees

The County charges separate per-ton fees (\$/ton “tipping fees”) for accepting MSW (known as the “refuse tipping fee”), and for accepting C&D (charged for waste delivered in open top roll-off boxes). A distinct tipping fee is also set for accepting yard waste. All tipping fees are set by the County Council and are calculated so as to assure full recovery of County solid waste system costs, together with all other creditable revenue sources. Within these constraints, the tipping fees can also be set so as to influence behavior by incentive.

The refuse tipping fee is set, and periodically adjusted, relative to the regional market, such that MSW delivered by private haulers to the Transfer Station during the forthcoming year will match, as nearly possible, a target of 85 percent to 95 percent of the RRF permit capacity (e.g., 558,450 to 624,150 tons per year based on waste with the design point heating value of 5,500 BTU/pound).

The C&D tipping fee shall be set, at a minimum, to fully cover the County’s cost of handling this special type of waste but shall be set at a higher rate than the refuse tipping fee so as to reflect the County’s preference to use the RRF for processing MSW. C&D is identified, for the purpose of applying this fee, by virtue of its generally being delivered for disposal in open top roll-off boxes. Finally, the refuse and C&D tipping fees shall be no lower than so as to reasonably assure that combined deliveries to the

County do not exceed the 821,500 TPY annual limitation of the Transfer Station's refuse disposal permit.

Fluctuations in economic activity affecting overall waste generation, relative changes in the use of regional disposal options by private collectors and changes in recycling performance by all sectors will continue to affect the amount of MSW delivered to the County for disposal in any year. Influences beyond the County's direct control include pre-existing private sector disposal contracts at regional facilities and regional pricing pressures. These, in particular can affect response time (i.e. the time it takes for the market to respond to a revised County tip fee). Accordingly, DEP will deploy, develop and maintain contingency plans and operational capacity that can be used in conjunction with refuse and C&D tipping fee adjustment to manage the amounts of incoming MSW and C&D. The contingency plans may include controlled bypass of processible waste while tipping fee adjustments take effect.

Tip fees for refuse from non-municipal, single-family residences and multi-family dwellings in buildings comprised of six or fewer dwelling units are collected on the tax bill as Disposal Fees. All other tip fees are charged as waste is delivered at the Transfer Station.

5.4.2.2 Systems Benefit Charges

Systems benefit charges are imposed on residential and non-residential generators of solid waste and can include both a base charge and an incremental charge. Base systems benefit charges, after offsets from tip and disposal fees, cover all or a portion of the cost of developing and maintaining the basic programs and facilities necessary to fulfill the County's obligation to provide for the management of solid waste generated within the County. Revenues from base systems benefit charges, together with refuse tip fees and disposal fees, provide for all system costs not covered by

another fee. These costs include system administration, waste reduction programs, debt service on existing facilities and the fixed cost of disposal programs and facilities.

The County Council annually establishes system benefit charge rates and tip fees at a level necessary to raise sufficient revenues to fund County Council approved solid waste activities and system expenses. Base system benefits charges are derived by allocating revenue generation requirements among the single-family residential, multi-family residential and non-residential sectors in proportion to each sector's contribution to overall County waste generation. Base system benefit charges are calculated by dividing the total base system benefit charge revenue generation required from each sector, less tip fee offsets from that sector, by the total number of billable units in that sector.

From the non-residential sector, the County may charge and collect the required base and incremental systems benefit charges by a variety of means. Currently, the County establishes, under County Executive Regulation 9-99 (which can be amended without amending this Plan), non-residential system benefit charges which vary from property to property according to (1) the average waste generation rate for different non-residential land use categories; and (2) the property's improved gross floor area (measured by 2,000 square foot units). There are five categories of non-residential generators ranging from low generators to high generators. Non-residential solid waste generators in specific land uses are categorized into a generator category based on waste generation studies. The charge for a generator is then multiplied by the number of 2,000 square foot units attributable to that generator.

Incremental system benefit charges cover all or a portion of incremental services received by some, but not all, generators of solid waste. Incremental system benefit charges are assessed to each generating sector (single-family residential, multi-family residential, and non-residential) for services provided specifically to that sector. For

example, each single-family household (in unincorporated areas of the County) that receives curbside recycling services is charged for its share of curbside recycling program costs. Incremental system benefit charges for the multi-family residential and non-residential sectors cover educational, enforcement and outreach services provided directly for the benefit of each of those two sectors.

5.4.2.3 Refuse Collection and Leaf Vacuuming Charges

The County has separate revenue streams to fund refuse collection and leaf vacuuming services. Single-family residences within the Solid Waste Collection District of the County are assessed charges to cover the costs of refuse collection services. Single-family and multi-family residences within the Leaf Recycling Service Area of the County are assessed charges to cover the costs of leaf vacuuming services.

5.4.2.4 Revenues and Credits

The County Solid Waste Enterprise Funds receive revenue from the sale of recyclable materials recovered at its MRF in Derwood, Maryland. In addition, the County expects to begin receiving revenue from the sale of electricity generated by methane extracted from closed landfills beginning in mid-2009. In addition, the County receives economic credit, in the form of reduced operating costs paid to contractors, as a result of the revenue from the sale of electricity and ferrous metals from the RRF, and the sales of compost products produced at the Yard Trim Composting Facility and also from mulch produced from grinding brush and natural wood waste at the Shady Grove Processing Facility and Transfer Station. Revenues are also derived from interest earned on any reserves held by on behalf of the Solid Waste Funds. Finally, minor amounts of revenues are derived from miscellaneous sources such as license fees and rent. Annually recommended System Benefit Charges, Refuse Collection and Leaf Vacuuming Fees discussed above are calculated net of all projected revenues and yet

fully fund operating budgets in accordance with the Rate Covenants of the Master Authorization and Chapter 48 of the County Code.

5.4.3 Biosolids Management Revenue Sources

WSSC funds the management of biosolids through waste water treatment and water supply user fees.

5.4.4 Plan of Action: System Financing

The County will continually monitor revenue generation methods to assure that each ratepayer contributes a fair and equitable share while generating sufficient resources to fund all necessary solid waste programs and services. The County will keep abreast of current market conditions to maintain tipping fees that remain competitive. Tip fees affect the amount of waste received in County facilities and these fees will be used as appropriate to manage the demand on County facilities. Annually, system benefit charge rates will be reviewed and calculated in a manner that fairly allocates costs among different categories of ratepayers. Refuse collection and leaf vacuuming charges will be adjusted, as necessary, to reflect actual program costs. Finally, the County will monitor commodity markets to assure the Solid Waste Fund receives the most favorable revenues and credits possible from the sale of recovered energy from closed landfills and recyclables.

Appendix A

Definitions and Acronyms

Definitions

The definition of terms used in this Plan are consistent with definitions contained in Chapter 48 of the Montgomery County Code and COMAR.

Ash -- the solid byproducts of combustion, which are collected from grates or hearths in a furnace where combustion takes place and from filters or separators that process combustion gasses.

Biosolids -- the primarily organic solid or semi-solid by-product of wastewater treatment processes; synonymous with "sludge" as used in COMAR.

Bypass Waste -- waste received by the County which is processible at the RRF, but is not processed at the RRF and instead sent by the County to its out-of-County landfill.

Collection Contractor -- a private company under contract with the County to provide solid waste collection services for dwelling units with less than 7 units within the Solid Waste Collection Districts (See County Code Chapter 48).

Collector -- any person who contracts to collect and provide services for collection and/or transporting the solid waste of others to its disposal site (See County Code Chapter 48).

Compost -- the humus-like by-product of composting.

Composting -- the biological decomposition of organic material by microorganisms under controlled conditions to yield a humus-like product.

Construction and Demolition (C&D) Debris -- Solid waste from construction, demolition and renovation projects that produce debris including wood, wood products such as fiberboard and particleboard, cardboard, sheetrock and other drywall, plaster, fiberglass, plastic and other polymers, composite materials, glass, stone, steel and other metals, rubber, geotextile, asphalt, concrete, brick and mortar, rock, dirt, rubble, tree stumps, logs and large tree limbs. C&D Debris does not include 1) asbestos, 2) hazardous waste, 3) municipal solid waste such as garbage, household goods and refuse, 4) sludge, 5) dredged material (silt and other water pollutants), 6) medical/pathological waste, 7) ash and other residue from combustion, 8) industrial waste, 9) agricultural waste, 10) oil, antifreeze, fuel and other fluids for machinery, 11) liquid waste, 12) dead animals, 13) yard trim, 14) sawdust and slash from sawmill operations, 15) vehicles, machinery and electronics (including separated components), 16) containers, 17) tires, 18) appliances and other "white goods", 19) furniture, 20) recreation equipment, and may exclude additional items not listed.

Controlled Hazardous Substance -- a hazardous waste as defined in COMAR 26.13.01, or a special medical waste as defined in COMAR 26.13.11. Generally, a controlled hazardous substance is a solid waste that requires separate handling from MSW because it may pose a substantial hazard to human health or the environment.

County -- Montgomery County, Maryland.

County Solid Waste Facilities -- all sanitary landfills, refuse transfer facilities, materials recovery facilities, compost production facilities, resource recovery facilities and related facilities wholly operated by, or on behalf, of the County.

Department -- the Department of Environmental Protection.

Director -- the Director of the Department of Environmental Protection, or the Director's designee (See County Code Chapter 48).

Disposal refuse -- all solid waste that is acceptable for disposal, as designated in executive regulations and delivered to a County solid waste acceptance facility (See County Code Chapter 48).

Dwelling unit -- a building or part thereof arranged or designed for occupancy by not more than one family for living purposes and having cooking facilities (See County Code Chapter 48).

Garbage -- all organic waste materials resulting from the preparation, cooking, handling or storage of food (See County Code Chapter 48).

Generator -- the owner or occupant of any dwelling unit where solid waste is generated, and the owner or occupant of any other business, entity or institution at, from, or by which solid waste is generated (See County Code Chapter 48).

Hauler -- any person operating a commercial business or engaged in any enterprise regularly generating solid waste which requires collecting and hauling to an approved point of disposal, when such collecting and hauling is done by the person generating such material in his own vehicles or in vehicles leased for the purpose, in lieu of having a licensed collector perform this service (See County Code Chapter 48).

Hazardous Waste -- as defined in COMAR 26.13.01. Includes listed wastes, and characterized wastes that have one of the following properties: ignitability, corrosivity, reactivity, or toxicity.

Integrated Solid Waste Management System -- the County's system of managing solid waste as that system is revised from time to time in the County's Comprehensive Solid Waste Management Plan. The system may include all aspects of solid waste management and handling, including any waste reduction program, recycling program or facility, disposal program or facility, and any other program related to the collection, management and disposal of solid waste (See County Code Chapter 48).

Land Clearing Debris -- Materials from land clearing operations including: earthen materials such as clays, sands, gravels, and silts; topsoil; tree stumps; root mats; brush and limbs; logs; vegetations; and rock (COMAR 26.04.07.11(B)).

Landfill -- an engineered facility for disposing of solid wastes on land by spreading, compacting and covering the wastes.

Leachate -- liquid that has percolated through a landfill.

Materials Recovery Facility -- a facility for separating recyclables from mixed waste or for separating commingled recyclables.

Municipal Solid Waste -- solid waste generated at residences, commercial establishments and institutions; excludes land clearing, construction and demolition debris.

Non-Processible Waste -- a waste material which cannot be processed at the County's Resource Recovery Facility because of its size, bulkiness, composition or regulatory restrictions as further defined in the Service Agreement between the Northeast Maryland Waste Disposal Authority and Covanta Montgomery, Inc., f/k/a Ogden Martin Systems of Montgomery, Inc.

Recyclables -- materials that can be readily separated from a waste stream and reused in their present form or can be converted into raw materials from which new products can be made.

Regulated Asbestos-Containing Material -- material for which Federal or State regulations require specialized handling and disposal to prevent creation of asbestos dust.

Resource Recovery Facility -- a facility at which solid waste is processed for the purpose of recovering valuable resources (both materials and energy) from solid wastes and utilizing such resources in a beneficial manner.

Septage -- untreated sewage that accumulates in septic and holding tanks, including associated liquids, solids and semi-solids; the product of septic tank cleaning.

Solid Waste -- all waste materials and debris, including any garbage, sludge, medical/pathological waste, debris from building construction, ashes, junk, industrial waste, dead animal, salvable waste, dead or felled tree, uprooted tree stump, slash, tree limb, bush, plant, leaves, grass, garden trimmings, street refuse, abandoned vehicle, machinery, bottle, can, waste paper, cardboard, sawdust and slash from sawmill operations, and any other waste materials. Solid waste also includes any automobile, truck, box, container, tire, appliance, furniture, or recreational equipment that is in a state of disrepair or dysfunction, unless the item is awaiting removal or being repaired or renovated for the personal use of the owner or occupant and the repair, renovation or removal is completed within 30 days. Solid waste also includes any recyclable solid waste (See County Code Chapter 48).

Solid Waste Acceptance Facility -- any state-approved sanitary landfill, central processing facility, transfer station, medical/pathological waste incinerator or any other type of plant the primary purpose of which is for the disposal, treatment or processing of solid waste (See County Code Chapter 48).

Solid Waste Collection Districts -- special service districts established from time to time, consisting of certain areas of the County as defined on maps in the office of the Director, in which solid waste is collected by the County or its contractor (See County Code Chapter 48).

Solid Waste Management -- the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, recycling and disposal of solid waste.

Solid waste management district -- a special service district consisting of all of Montgomery County (See County Code Chapter 48).

Special Medical Waste -- as defined in COMAR 26.13.11. Includes utensils, bandages, containers and other medical or laboratory materials that may harbor pathogens.

Systems Benefit Charge -- an annual service charge reflecting all or a portion of the cost to the County of providing base and incremental solid waste management services (See County Code Chapter 48).

Transfer Station -- a facility designed to reduce collection and/or transportation costs by the consolidation of solid wastes before transport to a site for final disposal.

Yard Trim -- vegetative materials generated through the normal maintenance of yards, lawns, gardens or other landscaped areas including grass, leaves and brush; excludes soils, tree stumps, logs, large tree limbs, rock and other land clearing debris.

Acronyms

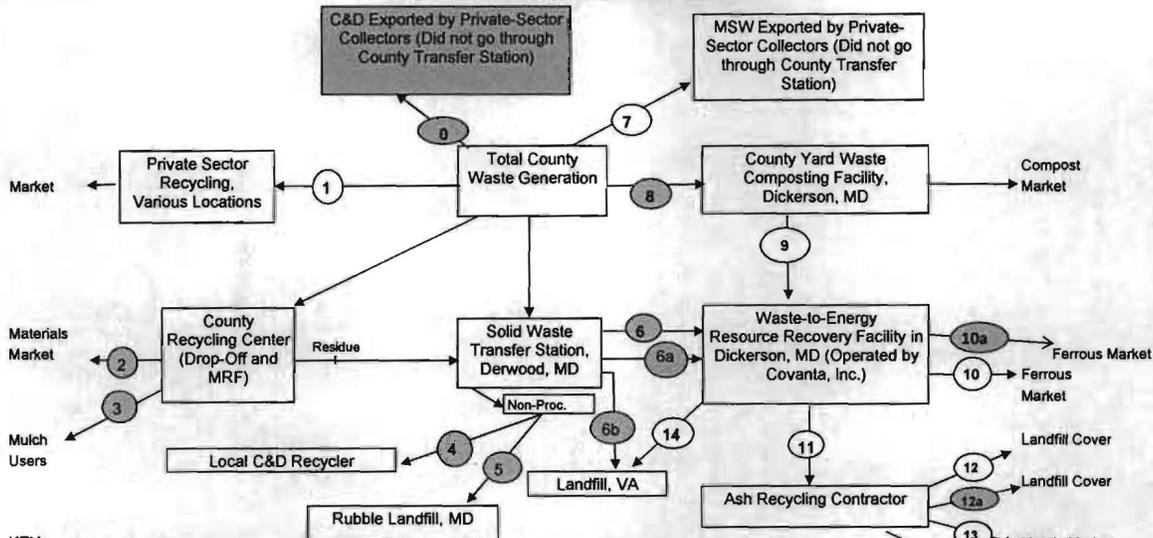
APC	air pollution control
BWMF	Brunswick Waste Management Facility
C&D	construction and demolition
CAA	Clean Air Act
CBD	Central Business District
CEM	continuous emission monitoring
CFC	chlorofluorocarbon
CFL	compact fluorescent light
CFR	Code of Federal Regulations
CHS	controlled hazardous substance
CIP	capital improvement program
COG	Council of Governments
COMAR	Code of Maryland Regulations
CY	calendar year
DAFIG	Dickerson Area Facilities Implementation Group
DC Water	District of Columbia Water and Sewer Authority
DEP	Department of Environmental Protection
DEPC	Division of Environmental Policy and Compliance
DHCA	Department of Housing and Community Affairs
DNR	Maryland Department of Natural Resources
DOT	Department of Transportation
DSWS	Division of Solid Waste Services
EMS	Environmental Management System
EPA	Environmental Protection Agency
FRS	Fire and Rescue Services
FY	fiscal year
GHG	greenhouse gas
HHW	household hazardous waste
ICLEI	International Council for Local Environmental Initiatives
IMA	Inter Municipal Agreement
MAEM	Mirant Americas Energy Marketing
MES	Maryland Environmental Service
MCDOT	Montgomery County Department of Transportation
MCPS	Montgomery County Public Schools
MCRCF	Montgomery County Regional Compost Facility (Site II)
MDA	Maryland Department of Agriculture
MDE	Maryland Department of the Environment
MGD	million gallons per day
M-NCPPC	Maryland-National Capital Park and Planning Commission
MRA	Maryland Recycling Act
MRF	Materials Recovery Facility
MSW	municipal solid waste

NEPT	National Environmental Performance Track
NMWDA	Northeast Maryland Waste Disposal Authority
NOx	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
OCA	Office of the County Attorney
OPS	Office Paper Systems
RACM	regulated asbestos containing material
RMP	residential mixed paper
PCB	polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
RDT	Rural Density Transfer
RRF	Resource Recovery Facility
SORRT	Smart Organizations Reduce and Recycle Tons
SSA	sole source aquifer
SWAC	Solid Waste Advisory Committee
TCLP	toxic characteristics leaching procedure
TDR	Transfer of Development Rights
TPY	Tons per year
TRAAC	Think Reduce and Recycle at Apartments and Condominiums
TSD	Treatment, Storage and Disposal
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
WSSC	Washington Suburban Sanitary Commission
WWTP	Waste Water Treatment Plant

Appendix B

Material Flow Diagram and Recycling Calculations: Calendar Year 2012

MATERIAL FLOW DIAGRAM Calendar Year 2012



KEY:

1, 7	Audited or otherwise documented. Often based on truck scales of others.
2	Data is from State-certified County truck scales Owned by County.
3	Data is from State-certified truck scales, privately operated under contract to County.
4, 5 and 6a	This color indicates C&D waste, which is not MSW, not eligible for recycling and is not to be included in recycling rate calculation.*

Total Waste Generation, including C&D Exported by Private Sector	1,336,422
County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6a + 6b + 7 + 8	1,186,726
MSW Generated (above less streams 4, 5 and 6a)	1,080,344

Stream No.	Material Description	Sources of Data	Total (tons/yr)	Comments
0	Construction & Demo Debris Private Export	Licensed Collector Reports under ER 92-59	149,696	Not County-managed, includes both disposed and recycled C & D
1	Recycled via non-County Facilities	Collector, Processor, Business & Self-Hauler Rpts.	270,161	Filtered to avoid double-counting
2	County Recycling Facility Material Sales	County TS & MRF Scales, Outbound	82,986	Outgoing to market from County Recycling Center
3	Mulch Loaded Out From TS	County Transfer Station (TS) Scale Records	35,069	Scaled out as taken to County Mulch Contractor & Preserve Locations
4	Non-Processibles Recycled**	County TS Scale Out Records	30,077	Not included in MRA recycling calculation
5	Non-Processibles Landfilled**	County Trans. Stat'n. & Covanta Scale Records	4,825	Not included in MRA recycling calculation
6	Loaded on Rail to RRF (MSW burned)	Covanta Scales as Loaded	470,182	Total tons loaded on rail to RRF Net of 6a
6a	Loaded on Rail to RRF (C&D Burned)	County Transfer Station (TS) Scale Records	71,480	In-Bound C&D less Outbound Non-Processibles Landfilled
6b	By-pass (Accepted Processible Landfilled)	County TS Scale Out Records	-	
7	Refuse Disposed Out of County	Audited 6-Mo. Hauler Reports	161,715	Private Sector MSW Collection not delivered to County TS
8	All Incoming Leaves and Grass	Compost Facility & TS Scale Records	60,231	Includes 0 to Backup Composters
9	Composting Residue to RRF	MES Scale Records	-	Reported by Compost Facility Manager
10	Ferrous recovered at RRF	Covanta Scale Records	8,602	Recovered from ash at County Facility
10a	Ferrous recovered at RRF (C&D Residue)	Internal Calculation	1,313	Not included in MRA recycling calculation
11	Ash Loaded to Ash Recycling Contractor	Allied Monthly Report	155,696	Total ash (includes 12, 12a, 13, and 13a)
12	Non-Metal Outgoing from Ash Recycler	Allied Monthly Report	132,134	Included in MRA recycling calculation
12a	Non-Metal Outgoing from Ash Recycler (C&D Residue)	Internal Calculation	20,170	Not included in MRA recycling calculation
13	Metals Outgoing from Ash Recycler	Allied Monthly Report	2,965	Metals from ash recycled; included in MRA rate calculation
13a	Metals Outgoing from Ash Recycler (C&D Residue)	Internal Calculation	453	Not included in MRA recycling calculation
14	All ash not recycled	Covanta Scale Records	-	

Montgomery County Recycling Rate and Waste Diversion Rate Calculations (MRA Method)

		Numerator	Denominator	Rate
Recycling Rate	$(1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (\text{CMW} - 4 - 5 - 6a)$	592,148	1,080,344	54.8%
Waste Diversion Rate	$((1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (\text{CMW} - 4 - 5 - 6a)) + 5.0\%$	592,148	1,080,344	59.8% ***

Notes:

* Construction and Demolition waste (C&D) is waste identified by place of origin - construction or land clearing sites. C&D is reported on licensed hauler reports, but there may be additional C&D tons not reported and therefore not included in stream 0.

** Non-processibles are Construction & Demolition-type materials: not eligible for recycling credit, but are County-managed solid waste.

*** Diversion Rate = Recycle Rate + 5.0% Source Reduction Credit

Nomenclature:

"C&D" means "Construction and Demolition" waste, exclusive of MSW, traditionally managed by the private sector, but much now comes to County TS.

"CMW" means "County Management Waste". It includes all MSW, whether or not exported by private sector collectors, but only C&D delivered to TS.

"MSW" stands for "Municipal Solid Waste", and represents the waste eligible for recycling under the State recycling law, regulations and guidelines.

"TS" stands for the County's "Transfer Station", located in Derwood, Maryland, just south of Gaithersburg.

"MRF" stands for Material Recovery Facility

"RRF" stands for Resource Recovery Facility

Appendix C

Landfill Site Selection Criteria

LANDFILL SITE SELECTION CRITERIA

(as adopted by the Montgomery County Council in Resolution 11-787, April 19, 1988)

Four kinds of search criteria will be considered in evaluating potential sites as follows:

- **Threshold criteria.** These are environmental characteristics which a site must have to be considered for a landfill.
- **Cost criteria.** These are criteria where a certain minimum standard of site characteristics can be identified and, if a particular site is deficient in these characteristics, the deficiency can be overcome by spending more money.
- **Non-cost numerical criteria.** These are site conditions where some numerical site characteristic required for siting landfills can be measured to compare one site with another, but this measurement cannot be converted into dollars.
- **Qualitative criteria.** These are site characteristics where desirable characteristics can be described, but the extent to which a particular site satisfies them cannot be measured numerically.

The Threshold Criteria to be used in the landfill search are as follows:

<i>Intentional Contamination of ground or surface water</i>	No landfill will be located in a site where leachate cannot be separated from ground or surface water.
<i>Floodplain</i>	No landfill working area will be located within an ultimate-use 100-year floodplain.
<i>Landfill exclusion area</i>	No landfill will be located within three miles of the working area of the Oaks or the Gude Landfill.

The Cost Criteria to be used in the landfill search are as follows:

<i>Soil Overburden thickness</i>	A minimum of 4 feet of natural soils will be provided between the base of the landfill and the top of bedrock. Sites lacking this must import soils to meet this requirement and the cost will be calculated.
<i>Soil permeability</i>	State regulation requires a subbase with a minimum thickness of 2 feet and a permeability less than or equal to 1×10^{-5} centimeters per second. Sites with less than this minimum must import soils to meet the requirement and the cost will be calculated.
<i>Depth to seasonal high water table</i>	A minimum of 3 feet between the base of the landfill and seasonal high water table will be provided. Sites lacking this must import soils to meet this requirement and the cost will be calculated.
<i>Groundwater protection</i>	Landfills with a single liner will be located in areas with deep, well drained, fine grained soils between the base of the landfill and either bedrock or seasonal high water

table. Sites lacking these characteristics will provide a second liner or other additional protective features indicated by the State permitting agency and the cost of these will be calculated.

Cover material

Sufficient soil cover for daily, intermediate, and final cover will be provided for a landfill of sufficient size to receive ash, non-processible and bypass waste for the bond life of the mass burner. Landfill sites lacking sufficient on-site cover to provide this amount must import soils for this purpose; the cost of this import will be calculated.

Prevention of Drinking Water Contamination

Landfills will not contaminate drinking water supplies from public or private wells that could be contaminated in the event of landfill leachate escaping containment systems will be calculated as a contingency cost.

Historical Structures and Archaeological Sites

If there is a registered historical structure on a proposed landfill site the cost of moving it will be calculated. A reasonable period for investigations in the event that sites of archaeological interest are uncovered will be estimated and the cost of this delay calculated.

Road or rail access

The cost impacts of access by rail and road will be considered in the context of a total access system. Landfills must have access either to a road of adequate size and projected capacity at the time of opening the landfill to accommodate the trucks proposed by solid waste transportation or to a railroad spur connected to both the solid waste transfer station and the mass-burn resource recovery facility. If sites lack either of these transportation facilities the cost of building them will be calculated. For those sites where the method of transporting ash from the resource recovery facility involves rail transport from the mass burner to the transfer station then truck transport to the ashfill, the additional cost of double handling will be calculated.

Adjacent residences

Landfills should not be sited in such a way that the boundary of the work area is within 1000 feet of a residence. If there are sites where there are existing residences within this distance, the cost of purchasing and demolishing these residences will be calculated. This does not mean that the residences will be purchased if the site in question is selected (this should be the choice of the homeowners) only that this potential additional cost be included in site comparisons.

Site Cost

The cost of purchasing each landfill site will be calculated.

Other

Any other site costs, not already identified, which would be necessary to bring a site into compliance with State regulations will be calculated.

The Numerical Criteria (other than Cost) to be used in the landfill site search are as follows:

<i>Site life</i>	Landfill sites will be of sufficient size to receive the quantity of ash, bypass or non-processable waste estimated for the bond life of the mass burner. Sites larger than this will be preferred.
<i>Buffer area</i>	Landfill sites will provide a minimum buffer area of 50% of the area of the working fill. Buffer areas larger than this will be preferred.
<i>Adjacent population</i>	The number of people living, working or studying within a mile of the boundary of the site work area will be estimated separately; sites with fewer people will be preferred to sites with more.
<i>Site ownership</i>	Sites with few owners will be preferred to sites with many.

The Qualitative Criteria to be used in the landfill site search are as follows:

<i>Criterion</i>	<i>Requirement or Preference</i>
<i>Topography</i>	Gently rolling uplands will be preferred as landfill sites to flat, steeply sloping, or valley bottom areas.
<i>Surface water</i>	Landfill sites which are not in the watersheds of drinking water reservoirs or Class 3 streams will be preferred to those that are.
<i>Sole source aquifer</i>	Landfill sites not within the area of a sole source aquifer will be preferred to those that are.
<i>Vegetation</i>	Landfill sites which are already cleared in the area proposed for the fill and forested in the buffer area will be preferred to those where forest must be cleared in the working area and planted in the buffers.
<i>Screening</i>	Landfill sites which are naturally screened from developed areas and roads by topography will be preferred to those which are visible or those requiring artificial buffers.
<i>Adjacent land use</i>	Landfill sites compatible with existing and future land use will be preferred to those that are not.
<i>Rare species</i>	Sites which do not impact rare species will be preferred to those that do.

Appendix D

Community Agreements

1. Circuit Court Civil Action No 186857 "Stipulated Order of Dismissal IN THE CASE OF Municipal Solid Waste Landfill Montgomery County Site Two.
2. "Agreement of Settlement and Compromise" dated April 19, 1996 by and between the Sugarloaf Citizens Association, Inc. and Montgomery County*.
3. "First Amendment to Agreement of Settlement and Compromise" dated April 19, 1996 by and between the Sugarloaf Citizens Association, Inc and Montgomery County.

* This agreement and its first amendment are cited in this Plan and reproduced here for information only, and do not constitute incorporation in this Plan. Provision for amendment of the agreement is provided for in the agreement and does not require amendment of this Plan.

premises, this Court has issued several prior orders, continuing this case on the Court's docket but staying any further proceedings.

4. The parties now jointly represent to this Court that the County's use of out-of-county landfill capacity, in lieu of constructing the Site 2 facility, has proven so successful that it is unlikely that construction of a sanitary landfill at Site 2 will occur before the 2012 expiration of the County's contract for out-of-county landfill services. Further, the County enjoys renewal rights under the contract, which likely will prolong the County's use of out-of-county capacity in lieu of constructing the Site 2 landfill until 2017.

5. The public interest, as well as this Court's interests in the efficient management of its time and resources, would best be served if prosecution of any appeal of MDE's Permit No. 1995-WSF-0237-0 were put off until such time as the intended landfill construction again becomes a reality. However, continued maintenance of this case on the Court's docket for a period of years extending to and beyond the year 2012 is not in the best interests of the parties, the public, or of this Court.

6. Petitioners, having timely invoked this Court's jurisdiction when the subject permit originally was issued by MDE, or the County, should not have to forego any right of judicial review, as to any and all issues that may have inhered in the original administrative action.

7. This Court, in the interests of justice, protecting the rights of all parties to this case, and providing for efficient management of judicial resources and the Court's docket, has authority to issue an Order appropriate to preserving and advancing all such interests.

WHEREFORE, it is this ¹⁵ day of October, 2002.

ORDERED, that the agreement between Petitioners, MDE and Montgomery County, styled as a "Letter of Understanding" dated April 8, 1998, is incorporated as part of this Order of Dismissal; and it is further

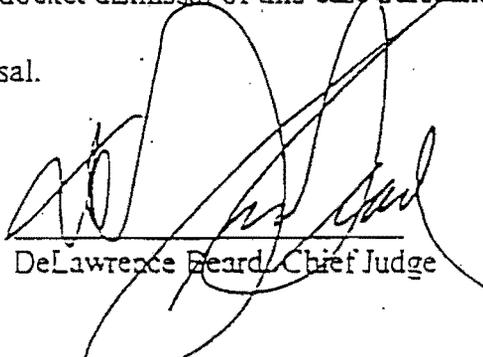
ORDERED, that the parties shall be bound by and shall abide by the terms of the April 8, 1998 Letter of Understanding; and it is further,

ORDERED, that if and when the County provides notice under said agreement of its intent to initiate construction of a sanitary landfill at Site 2, Petitioners shall have 30 days leave (from the date of the County's notice) to file anew an appropriate action for judicial review of MDE Permit No. 1995-WSF-0237-0, and include any issues inhering in MDE's original issuance to the County of said permit and any issues arising in any subsequent renewals of said permit by MDE ; and it is further,

ORDERED, that this Court shall exercise jurisdiction over any such action for judicial review that may be filed by Petitioners, or any one of them, pursuant to the terms of this Stipulated Order of Dismissal; and it is further,

ORDERED, that in any such action subsequently filed by Petitioners, the County may file a subsequent petition, under Maryland Rule 7-203(b), and MDE and the County may raise any issues or defenses that they might have raised in the present case or that subsequently arise; and it is further,

ORDERED, that the clerk shall note on the docket dismissal of this case pursuant to the provisions of this Stipulated Order of Dismissal.


DeLawrence Beard, Chief Judge

LETTER OF UNDERSTANDING

This letter of understanding is executed as of this 8th day of April ~~March~~ 1998.

On August 6, 1997, a meeting was held to discuss the status of the refuse disposal permit for the Site 2 Landfill in Dickerson, Maryland. Represented at that meeting were Sugarloaf Citizens Association, Inc. by its President, Jane Hunter (Sugarloaf, although not a party to the below-described proceedings, was purporting to represent the individual Protestants to the issuance of a refuse disposal permit for Site 2), Montgomery County, Maryland by its County Executive, Douglas M. Duncan, County Councilmembers Nancy Dacek and Isiah Leggett, and the Maryland Department of the Environment by its Secretary, Jane Nishida, along with Richard Collins and Anthony Gorski. Also in attendance were Senator Jean Roesser, Delegate Jean Cryor, Ben Bialek, Director, Office of Intergovernmental Relations and Robert Merryman, Deputy Director, Department of Public Works and Transportation.

BACKGROUND

Each County is required to have a comprehensive ten-year plan that provides and plans for its solid waste needs. Montgomery County's Comprehensive Solid Waste Management Plan provides for an integrated solid waste management system. The system includes, for its disposal component, designation of the Site 2 Landfill in Dickerson, Maryland. Pursuant to the County's Plan, the County has acquired the land for the Site 2 Landfill and was actively pursuing a refuse disposal permit for the proposed landfill. Subsequent to the permit application, the County executed a contract for the disposal of ash residue from the Montgomery County Resource Recovery Facility, bypass waste, nonprocessible waste and asbestos-contaminated material at an out-of-county location. Out-of-county disposal of such material commenced on October 18, 1997.

Even though the County will be sending materials requiring landfilling out-of-county, the County needs to have a backup facility designated in the event out-of-county disposal is no longer available, or cost effective. The County must posture itself to be able to respond quickly to circumstances that may be presented in the future. For that reason, and to protect resources invested to date, the County does not intend to withdraw its application to obtain a refuse disposal permit for the Site 2 Landfill.

The Maryland Department of the Environment (MDE) had tentatively determined that Refuse Disposal Permit No. 1990-WSF-0237-0 would be issued for the Site 2 Landfill. Following that determination, an appeal requesting a contested case hearing was noted to the MDE by Lawrence L. and Susan Quier, Lori M. and Steven E. Nockert, Joyce M. Bagley and Aubrey J. Shauver, Ralph Howell, Samuel Belcher, Martha E. and Wesley M. Yates, John R. Yates, Jr., Wayne and Jane Dodson and Sam and Hisel Beach. To date, the MDE has not issued a determination as to whether a contested case hearing on the refuse disposal permit will be granted.

In the event that the MDE determines that a contested case hearing on the permit would be appropriate, the County desires to minimize the expenditure of funds and to reduce duplication due to future regulatory changes that may occur during the interim between final issuance of the refuse disposal permit and any need in the future to use the Site 2 Landfill. Therefore, the County desires, following a determination by the MDE on whether a contested case proceeding would be appropriate, to stay any such hearing and further action and proceedings related to the issuance of the refuse disposal permit for the Site 2 Landfill. The County understands as represented by Sugarloaf, that the individual Protestants also desire a stay of any such hearing and further action and proceedings related to the issuance of the refuse disposal permit.

AGREEMENT

To determine the current status of the individual Protestants who requested a contested case hearing on the issuance of the refuse disposal permit for the Site 2 Landfill and to establish a specific suspension point in the process of issuance of the permit, the County proposes that the Maryland Department of the Environment respond to the June 28, 1996, request by the above-referenced citizens for a contested case hearing. Depending upon MDE response, the parties would proceed under one of two scenarios.

If MDE grants the hearing request, the County will join the citizens in asking the Office of Administrative Hearings to stay the Hearing until such time that the County notifies MDE that it no longer desires to stay action on the permit and intends to proceed with completion of the refuse disposal permit process for the Site 2 Landfill. At such time as the County indicates that it is proceeding with the permit process, the stay of the contested case hearing would be lifted and scheduled in accordance with Office of Administrative Hearing and MDE procedures.

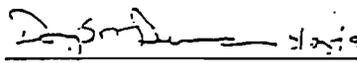
If the Maryland Department of the Environment denies the hearing request, the Refuse Disposal Permit will be issued to the County. The County has postponed, indefinitely, construction and operation of the landfill. If the citizens seek further relief from MDE's decision to deny the hearing request, the County will join the citizens in requesting that the action be stayed until the County determines that it should proceed with construction of the landfill. Once the County determines it desires to proceed with construction of the Site 2 Landfill, it will notify the Maryland Department of the Environment and those citizens who requested a contested case hearing regarding the refuse disposal permit, of this determination.

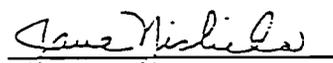
The parties agree that, under either scenario, it would be in everyone's interest to conduct further proceedings in an orderly and timely manner, should they become necessary. Accordingly, the County agrees to notify the Maryland Department of the Environment and the citizens promptly of any change in circumstances that may lead to a determination that construction of the landfill should proceed. Under either scenario, the County agrees to give notice of its desire to proceed at least one year in advance of the anticipated construction start date.

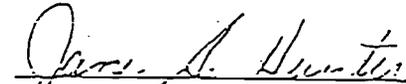
By execution of this agreement, the parties do not concede or waive any legal issues or rights, including the right to seek further relief, or the right to challenge the appropriateness of such relief, from the MDE's decision on the request for a contested case hearing.

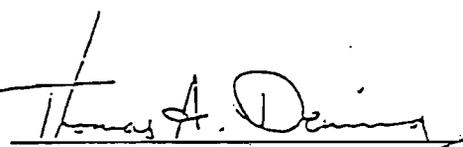
This agreement becomes void on August 1, 1998, unless the Montgomery County Council approves an amendment to the Montgomery County Solid Waste Management Plan making the Plan consistent with this agreement and transmits the amendment to the Maryland Department of the Environment.

The undersigned parties indicate their agreement with the foregoing by executing this Letter of Understanding as indicated below.


Douglas M. Duncan
County Executive
Montgomery County, Md.


Jane T. Nishida, Secretary
Maryland Department of
the Environment


Jane S. Hunter, President
Sugarloaf Citizens
Association, Inc.


Thomas A. Deming
Counsel for the Individual Protestants
in Request for Contested Case Hearing
filed June 28, 1996

3/19/98

AGREEMENT OF SETTLEMENT AND COMPROMISE

THIS AGREEMENT OF SETTLEMENT AND COMPROMISE is made this 19th day of April, 1996, by and between SUGARLOAF CITIZENS ASSOCIATION, INC. and MONTGOMERY COUNTY, MARYLAND.

Explanatory Statement

On or about January, 1981, the parties hereto, as well as others, entered into a written document entitled "Stipulation", governing certain substantive and procedural matters relating to certain real property formerly known as the "Matthews Farm", located near Dickerson, Maryland, and more particularly described below. On or about May 10, 1994, Sugarloaf instituted litigation in the Circuit Court for Montgomery County, Maryland against the County by filing a six count Complaint alleging that certain acts and omissions by the County constituted a breach of the Stipulation. Count VI of Sugarloaf's Complaint was dismissed by the Court. In addition, a motion of the County, regarding a discovery request by Sugarloaf was denied in part by the Court, and an appeal to the Maryland Court of Special Appeals by the County is pending.

During the course of the Litigation intended to enforce the Stipulation for alleged breaches, the County has maintained that the Stipulation is unenforceable as an unlawful restriction upon its exercise of the police powers of the County. This agreement is intended to serve as a full and final settlement between the

parties with regard to all matters of the foregoing disputes, and the property interests to be created and conveyed to Sugarloaf as set forth in this Agreement are intended to insure the enforceability of the promises and covenants of the County notwithstanding any questions surrounding the enforceability of the Stipulation.

Pursuant to Section 20-2 of the Montgomery County Code (1994), as amended, the County Attorney and the County Executive have determined that it is advisable and proper to enter into this agreement to settle the Litigation, such settlement to include the conveyance by the County of approximately 90 acres of farmland located east of Martinsburg Road in fee simple to Sugarloaf by deed, subject to a possibility of reverter and certain covenants, and a lease agreement with Sugarloaf for another portion of the Matthews Farm property containing approximately 68 acres.

The property to be conveyed to Sugarloaf previously was declared surplus to the needs of the County on February 25, 1986 by Executive Order 13-86, in accordance with former Montgomery County Executive Regulation 110-84. Prior to being declared surplus, that same property had been submitted for Preliminary and Secondary Review by appropriate County Agencies and a public hearing had been held on September 26, 1984 concerning whether those properties should be declared surplus to the County's needs.

The remaining procedures for the disposition of the property as set forth in Montgomery County Executive Regulation 67-91AM have been completed. Additionally, the conveyance of these properties

to Sugarloaf has been advertised in accordance with the Section 5 of Article 25A of the Annotated Code of Maryland.

WITNESSETH

FOR AND IN CONSIDERATION of the mutual promises, covenants, obligations and conditions contained herein, the parties hereby agree as follows:

1. DEFINITIONS.

As used herein, the following terms shall have the meanings indicated.

A. The Appeal: That action captioned as Montgomery County, Maryland v. Sugarloaf Citizens Association, Inc.; in the Court of Special Appeals of Maryland, No. 730, September Term, 1995.

B. County: Montgomery County, Maryland.

C. Dairy Barn: The existing Dairy Barn and attached structures located on the Matthews Farm as more particularly shown on Exhibit 3.

D. Eastern Field: That area of the Matthews Farm currently devoted to active agricultural use located east of Martinsburg Road comprising approximately 90 acres, as more particularly shown as Parcel C in Exhibit 5.

E. Existing Methods of Operations: Facility Operations as presently existing more particularly described in Exhibit 6.

F. Existing Methods and Modes of Transportation: Transportation of materials to and from the facility as presently conducted more particularly described in Exhibit 7.

G. Facility: The area of the Matthews Farm devoted to the Montgomery County Compost Facility including immediately adjacent properties contained within the boundaries of the existing chain link fence, which includes Parcel A and part of Parcel 412 as shown on Exhibits 2 and 5.

H. Facility Operations: The receipt, composting, windrowing, turning, drying, screening and shipping of Yard Waste and the bulk Yard Waste compost product.

I. Fiscal Year: July 1 to June 30 of the following year.

J. Impervious Surface: Any man made surface or structure which interrupts the natural percolation of rainwater through the surface of soil, including, by example and not limitation, buildings, mobile structures, roads, and asphaltic or concrete paving.

K. Linden Park: That area of the Matthews Farm more particularly shown on Exhibit 3.

L. The Litigation: That action captioned as Sugarloaf Citizens Association, Inc. v. Montgomery County, Maryland; in the Circuit Court for Montgomery County, Maryland, Civil No. 119356.

M. Matthews Farm: All of that real property and improvements thereon as shown as Parcels A, B, C, D and 412 as shown on Exhibit 5.

N. Pilot Program: An experimental program at the facility, not to exceed one year in duration, designed to increase the efficiency and/or environmental soundness of the processing of Yard Waste at the Facility.

O. Poplar Grove: That area of the Matthews Farm more particularly shown as part of Parcel B on Exhibit 3.

P. Southern Field: That area of the Matthews Farm located northeast of the intersection of Martinsburg and Wasche Roads and immediately south of the Facility, as more particularly shown as part of Parcel B on Exhibit 3.

Q. Stipulation: That written agreement dated January, 1981 between Sugarloaf, the County, the Maryland Environmental Service, the Washington Suburban Sanitary Commission and the Department of Health and Mental Hygiene, attached hereto as Exhibit 1.

R. Stone House: The existing single family residence and area immediately appurtenant thereto located on the Matthews Farm as shown more particularly as the large part of Parcel 412 on Exhibit 5.

S. Sugarloaf: Sugarloaf Citizens Association, Inc.

T. Yard Waste: Leaves, grass and chipped brush generated in Montgomery County, Maryland.

U. Yard Waste System: The system employed by the County in dealing with Yard Waste generated in the County, including source reduction programs, collection, transportation, handling, processing, and distribution of products generated thereby.

2. NON-MERGER.

This agreement shall be considered in furtherance of, and as a supplement to, the Stipulation. The Stipulation shall survive the execution of this document and shall not be merged herein. Further, this agreement and the Stipulation shall survive execution

and delivery of the lease and conveyance of property as set forth herein and shall not be merged therein.

3. THE LITIGATION.

A. Promptly after execution of this document by the parties, counsel for Sugarloaf and counsel for the County shall execute and file in the Litigation a Stipulation of dismissal in the same form and content as set forth in Exhibit 10, dismissing Count III of the Complaint in the Litigation.

B. Promptly after execution of this document by the parties, counsel for Sugarloaf and counsel for the County shall submit a consent order with regard to Counts I, II, IV and V of the Litigation in the form and content as set forth in Exhibit 11 and request that the same be entered in the Litigation.

C. Sugarloaf shall not seek appellate review of the dismissal by the Circuit Court of Count VI of its Complaint.

4. THE APPEAL.

Promptly after execution of this document by the parties, counsel for the County shall dismiss the Appeal.

5. ATTORNEY'S FEES.

The County shall reimburse Sugarloaf for all attorney's fees and expenses incurred in connection with the dispute which is the subject of the Litigation, the Litigation itself, and the negotiation and drafting of this agreement through and including the date of execution this agreement. Sugarloaf shall provide to the County a summary sheet of attorney's fees and expenses incurred for each month as well as a total thereof, and upon receipt and

approval thereof by the County, payment shall be made to Sugarloaf within sixty (60) days.

6. THE FACILITY.

A. The County may continue to operate the Facility as a Yard Waste composting facility in its current configuration as more particularly shown as Parcel A on Exhibit 2.

B. So long as the County abides by the obligations, terms, covenants and conditions of this document, the Stipulation and Exhibit 13 and operates the Facility as a Yard Waste composting Facility in accordance with all applicable laws and regulations, Sugarloaf will not seek to enjoin or curtail operations of the Facility in its current configuration through any administrative or judicial means.

C. The County shall limit the total amount of materials handled and processed at the Facility to a maximum of seventy-seven thousand (77,000) tons per Fiscal Year. Notwithstanding the foregoing, the County may exceed the seventy-seven thousand (77,000) ton limitation aforesaid if excessive tonnage is attributable solely to a Pilot Program and the prior written consent of Sugarloaf for the Pilot Program is first obtained pursuant to Paragraphs 7.A and 7.B. hereof.

D. The County shall not increase the area of Impervious Surfaces of the Facility in the future beyond those existing Impervious Surfaces shown on Exhibit 2.

E. The County shall not construct or place upon the Facility any buildings in addition to those currently existing as shown on

Exhibit 2, nor shall the County enlarge or expand any existing building.

F. Nothing herein contained shall be construed to restrict repairs, maintenance, reconstruction or replacement of existing buildings and Impervious Surfaces by the County.

G. The County shall restrict the operating hours of the Facility, including receipt or disbursement of materials, to 7:00 a.m. to 4:30 p.m. Monday through Friday for the period of December 24 through the following October 31 and, for the period of November 1 through December 23, 7:00 a.m. to 5:00 p.m. Monday through Saturday.

H. The County shall maintain the storm water management ponds of the Facility in accordance with applicable regulatory standards, including periodic testing for contaminants and cleaning as needed.

I. The County shall restrict Facility Operations to the existing asphaltic pad area and buildings as shown in Exhibit 2.

J. The County shall endeavor to improve the method of mixing Yard Waste at the Facility in an effort to continue to reduce odors which may emanate from the Facility.

K. The County shall continue to encourage source reduction of Yard Waste.

L. Any (i) change in the Methods or Modes of Transportation; (ii) change in the Methods of Operations, such as significant changes in the mixing of materials, the addition of new material, the use of new types of machinery, changes in the storm water management system, significant changes in screening procedures, or

any change which is likely to cause noise, odor or traffic impacts to the community or adversely affect ground or surface waters; or (iii) the institution of any Pilot Program, shall be subject to the prior review process as set forth in Section 7 hereof.

7. PRIOR REVIEW.

A. In the event the County desires to implement a change pursuant to Paragraph 6.L. hereof, or institute a Pilot Program, the County will notify Sugarloaf in writing and not less than (15) nor more than thirty (30) days thereafter meet with representatives of Sugarloaf in order to review the proposed changes.

B. In the event Sugarloaf approves of such change or Pilot Program in writing within thirty (30) days following the meeting held pursuant to Paragraph A hereof, the County may thereafter institute said changes or Pilot Program.

C. In the event the prior written approval of Sugarloaf is not received by the County on or before the 30th day following said meeting for any change other than a Pilot Program which would increase the tonnage of materials handled above the maximum imposed by Paragraph 6.C. hereof, and the County still wishes to pursue said change, the County thereafter shall schedule and advertise a public hearing to be held in the locale of the community no less than forty-five (45) nor more than ninety (90) days thereafter.

D. At least thirty (30) days prior to the date of the public hearing, the County shall make available, at no charge to the public, copies of all materials to be relied upon by the County at the hearing.

E. The County shall not institute any such change until after a decision is rendered by the presiding officer of the public hearing.

F. The County shall not institute any Pilot Program which would increase the tonnage of materials handled above the maximum imposed by Paragraph 6.C. hereof without the prior written consent of Sugarloaf.

G. Nothing herein contained shall be construed to prevent the County from holding a public hearing on any proposed changes notwithstanding the receipt of the written approval of Sugarloaf.

8. CONTINUED COMMUNICATIONS.

A. The parties hereto recognize and appreciate the fact that continued communications regarding the Facility and its operations are essential to diminishing the possibility of future misunderstandings or disputes between the parties.

B. At least twice yearly, in March and September, representatives of Sugarloaf and the County shall meet to discuss operations of the Facility and other matters related to the Yard Waste System as appropriate.

C. At the September meeting between the parties, the County shall provide a written report covering the immediately preceding completed Fiscal Year detailing Yard Waste System operations and Facility Operations including tonnages, composition of Yard Waste received, results of any Pilot Program, storm water management pond conditions, any injuries and deaths associated with Facility Operations, status and success of source reduction programs, and

financial data relating to operations of the Yard Waste System, including costs by category for each component of the Yard Waste System and revenues received.

9. TRAFFIC SAFETY.

A. The County shall apply to the Maryland State Highway Administration for permission to construct and operate a traffic control signal at the intersection of Maryland Route 28 and Martinsburg Road.

B. The traffic control signal shall be sensor controlled.

C. The traffic control signal shall be fully operational during times of peak traffic and in a flashing mode during off peak times, to be determined by the County as necessary.

D. Sugarloaf expressly recognizes that installation and operation of the traffic control signal is contingent upon the County securing prior approval therefor from the Maryland State Highway Administration.

E. The County shall exercise its best efforts in an attempt to secure approval from the Maryland State Highway Administration for the installation and operation of the traffic control signal.

F. Sugarloaf will support the County's request to the Maryland State Highway Administration for permission to install and operate the traffic control signal.

10. MATTHEWS FARM STRUCTURES.

A. On or before January 1, 1997, the County shall demolish and/or remove and/or restore all existing buildings and structures

on the Matthews Farm outside of the Facility, with the exception of the Stone House and Dairy Barn.

B. On or before January 1, 1998, the County shall complete restoration of the Stone House and areas immediately appurtenant thereto, such as yard and driveway, in such a fashion as to render the Stone House fit for habitation as a single-family residence in accordance with all applicable housing, health and fire safety standards.

C. On or before January 1, 1998, the County shall repair and restore the Dairy Barn, including the remodeling of the interior of the same for use as offices and meeting rooms in accordance with all applicable housing, health and fire safety standards.

D. The interior remodeling of the Dairy Barn shall include the installation of water and septic services, restrooms, lights, HVAC, electric and not less than (2) phone lines.

E. On or before January 1, 1998, the County shall provide equipment and furnishings for the Dairy Barn for the use of Sugarloaf for at least one office and a conference room, as set forth in Exhibit 8.

F. On or before January 1, 1998, the County shall install a driveway and parking facility sufficient to serve the Dairy Barn as remodeled for the contemplated use, including necessary site work and exterior improvements for handicapped access.

G. In developing the plans for the remodeling of the Dairy Barn, the County shall solicit the input of Sugarloaf.

H. The parties recognize that any modification, change or alteration to the exterior features of the Dairy Barn and the areas immediately appurtenant thereto, as well as any substantial modification, change or alteration of the environmental setting of the Dairy Barn, will require an Historic Work Permit granted by the Historic Preservation Commission of Montgomery County (HPC), and the County's obligations to perform such modifications, changes or alterations to the exterior of the Dairy Barn or its environmental setting as set forth in Paragraphs 10.C. and 10.F. hereof are conditioned upon receiving an Historic Area Work Permit from the HPC. Montgomery County will endeavor to use its best efforts to secure all necessary permits and approvals, and Sugarloaf will support the County's request to the Commission.

11. OTHER SITE IMPROVEMENTS.

A. On or before January 1, 1998, the County shall cause to be installed landscaping in that area between the Dairy Barn and the Facility, as more particularly shown in Exhibit 9, consisting of the planting of mixed deciduous and conifer trees with a minimum caliper size of two inches in accordance with a landscape plan to be prepared by the County in consultation with Sugarloaf. Thereafter, the County shall maintain the landscaped area as necessary. Sugarloaf expressly recognizes that a portion of the aforesaid area may be required to serve as a septic field for the Dairy Barn, depending upon the outcome of water table and percolation tests, which may require future alteration, relocation, or, in the event alteration or relocation is not feasible,

elimination of a portion of the landscaping proposed in the landscape plan.

B. On or before January 1, 1998, the County shall remove dead and diseased trees, thin out existing trees as necessary and plant native plantings to supplement existing growth in Linden Park.

C. On or before January 1, 1998, the County shall remove dead and diseased trees, thin out existing trees as necessary and plant native plantings to supplement existing growth in the Poplar Grove.

D. The County shall continue to maintain and repair, as necessary, the stone fences located on the Matthews Farm as designated as a historic resource by the Montgomery County Historic Preservation Commission.

E. On or before January 1, 1998, the County shall develop and prepare, in consultation with Sugarloaf, a comprehensive management and maintenance plan for all areas of the Matthews Farm other than those areas actively devoted to agricultural use and the Facility.

12. APPROPRIATED FUNDS.

The County Council has appropriated the sum of Nine Hundred Twenty-five Thousand Dollars (\$925,000.00), hereinafter in this paragraph 12. referred to as the "Budgeted Amount", for the purpose of funding those obligations of the County set forth in Paragraphs 5., 9., 10. and 11. of this Agreement, hereinafter in this Paragraph 12. referred to as the "Projects". The parties shall cooperate in the planning of the Projects in order to strive to insure that all of the Projects are completed within the Budgeted Amount. In the event the Projects are not completed at the time

the Budgeted Amount has been exhausted, the County's continuing obligation to complete the Projects is contingent upon the additional appropriation of funds. The parties further agree:

A. The County will exercise due diligence in the selection of materials, methods and contractors so as to strive to complete the Projects within the Budgeted Amount.

B. Sugarloaf shall have the right, in its sole discretion, to prioritize the expenditure of funds among the Projects and among the various phases of the individual Projects.

C. Before each contract is let for goods and/or services related to the Projects and before each expenditure of funds for the Projects by the County, Sugarloaf shall have the right, in its sole discretion, to select substitute materials or methods which would result in a cost savings, so long as all applicable codes and regulations are met, including by way of example and not limitation, health, fire safety, and building standards. The County may reject any substitute materials or methods selected by Sugarloaf and employ the more expensive materials or methods so long as the additional cost attributable to the more expensive methods or materials is not charged against the Budgeted Amount.

D. In the event the Projects are not completed at the time the Budgeted Amount has been exhausted, the Executive Branch of the County shall request additional appropriations from the County Council necessary to complete the projects. Nothing contained herein shall be construed as an agreement by the County that additional funds will be appropriated.

13. LEASE.

A. On or before January 1, 1997, the County shall enter into a lease agreement with Sugarloaf for the entirety of the Matthews Farm with the exception of the Facility, the access road thereto and the Eastern Field, under terms and conditions as more particularly set forth in the lease agreement attached hereto as Exhibit 12.

B. The parties agree that the property to be leased has been declared Surplus Property of the County in accordance with Montgomery County Executive Regulation 110-84 and, therefore, an additional administrative determination pursuant to Montgomery County Executive Regulation 67-91AM of May 28, 1992 of the surplus nature of the property is not required.

C. Sugarloaf expressly recognizes that all of the Matthews Farm located to the west of Martinsburg Road serves as a noise attenuation area for the County's Resource Recovery Facility (RRF) located west of the Matthews Farm. While Sugarloaf does not believe that the use of the Matthews Farm as a noise attenuation area as described above is proper, appropriate or legal under the applicable noise ordinance standards, it nevertheless expressly agrees that it shall not challenge or oppose the use of that portion of the Matthews Farm to the west of Martinsburg Road as a noise attenuation for the RRF based upon Sugarloaf's use or possession of the leased premises. The parties do not believe that the existence of the leasehold interest to be created in the property has any bearing on the County's continued utilization of

portions of the Matthews Farm as a noise attenuation area for the RRF. However, in the event of a challenge to its continued use as a noise attenuation area because of the existence of the leasehold interest, the County will not oppose the intervention by Sugarloaf in any such administrative or judicial proceedings. In the event of a final judicial determination that, as a result of the leasehold interest to be created in the property, that portion of the Matthews Farm to the west of Martinsburg Road may not be utilized as a noise attenuation area for the RRF, the leasehold interest to be created shall automatically terminate sixty (60) days following said final judicial determination.

14. CONVEYANCE OF EASTERN FIELD.

A. On or before January 1, 1997, the County shall convey the Eastern Field in fee simple to Sugarloaf by deed as set forth in Exhibit 13 attached hereto, subject to a possibility of reverter and certain covenants, and simultaneously imposing certain covenants on the remainder of the Matthews Farm in favor of Sugarloaf, all as more particularly set forth in said deed.

B. The parties agree that the property to be conveyed has been declared Surplus Property of the County in accordance with Montgomery County Executive Regulation 110-84 and, therefore, an additional administrative determination pursuant to Montgomery County Executive Regulation 67-91AM of May 28, 1992 of the surplus nature of the property is not required.

15. WAIVER OF PROPERTY INTEREST TO ESTABLISH STANDING.

Sugarloaf hereby agrees that it will not rely on its interests in real property created by this Agreement, including but not limited to its leasehold interest as set forth in Paragraph 12 hereof nor its fee simple interest as set forth in Paragraph 13 hereof, to establish its standing to pursue either administrative or judicial remedies with regard to any solid waste facility of the County, either existing, proposed, or proposed in the future, other than judicial enforcement of this Agreement and the restrictive covenants governing the Facility and running in favor of Sugarloaf as set forth as Exhibit 13.

16. PARTIAL INVALIDITY.

In case any provision or any part of any provision contained in this Agreement of Settlement and Compromise shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision or remaining part of the affected provision of this agreement, but this agreement shall be construed as if such invalid, illegal or unenforceable provision or part thereof had never been contained herein but only to the extent it is invalid, illegal or unenforceable. In the event that any such provision may be construed so as to overcome any such potential invalidity, illegality or unenforceability, then a liberal interpretation shall be applied and the agreement shall be interpreted in such a manner as to reflect favorably on the validity, legality and enforceability of any such provision or any portion of such

provision, it being the express intention of the parties hereto to fully perform and honor the obligations contained herein and achieve the purposes sought hereby. And it is also the intention of both parties that in lieu of each clause or provision that is illegal, invalid or unenforceable, there be added, as a part of this agreement, a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

17. WAIVER.

No mention in this agreement of any specific right or remedy shall preclude either party from exercising any other right or from having any other remedy or from maintaining any action to which it may otherwise be entitled either at law or in equity. The failure of either party to insist on any occasion upon the strict performance of any covenant or agreement hereof shall not constitute a waiver of such covenant or agreement on that occasion or any subsequent occasion. The County specifically does not waive its police power or any authority to enact legislation or administer or enforce its legal rights and obligations.

18. NOTICE AND OPPORTUNITY TO CURE.

In the event that either party is in violation of any of the terms and conditions of this Agreement or neglects any of its respective obligations, the non-breaching party shall send written notice of such violation to the alleged breaching party. Should the alleged breaching party fail to correct any violation to the

reasonable satisfaction of the non-breaching party sixty (60) days from the receipt of such notice, then the non-breaching party shall have the right to immediately pursue all available legal remedies.

19. NOTICE.

Unless otherwise provided herein, whenever notice is to be given under the terms of this agreement, such notice shall be deemed to have been given three (3) United States Postal Service working days after enclosed in an envelope having the proper postage, addressed to the party, and deposited at the United States Post Office or mailbox. Any such notice shall be in the form of Certified Mail, Return Receipt Requested.

IF ADDRESSED TO THE COUNTY:

Montgomery County Executive
101 Monroe Street
Rockville, Maryland 20850

With a copy by First Class Mail to:
County Attorney for Montgomery County
Third Floor, 101 Monroe Street
Rockville, Maryland 20850

And

Montgomery County Department of Public Works & Transportation
Chief, Division of Solid Waste
101 Monroe Street
Rockville, Maryland 20850

IF ADDRESSED TO SUGARLOAF:

Sugarloaf Citizens Association, Inc.
Post Office Box 381
Barnesville, Maryland 20838

With a copy by First Class Mail to:
William J. Roberts, Esquire
Post Office Box 368
20,000 Fisher Avenue
Poolesville, Maryland 20837.

20. EXHIBITS.

The exhibits attached hereto, numbered 1 through 13, are an integral part of this agreement and are hereby incorporated by reference.

21. MISCELLANEOUS.

This agreement and exhibits represent the entire agreement between the parties hereto with respect to the subject matter hereof and shall not be amended, altered or modified except by a writing duly executed by each of the parties hereto. This agreement shall be binding upon the parties hereto and their respective successors and assigns. This agreement shall be governed and construed in accordance with the laws of the State of Maryland without regard to any presumption or other rule of law regarding construction thereof or construing the same against the party causing this agreement to be drafted. The recitals are, and form, a part of this agreement. Each party warrants to the other that it shall execute and deliver to the other such further instruments, documents and agreements in a form satisfactory to each party's counsel, and shall take such other action as may be reasonably necessary to more effectively carry out the terms, provisions and intent of this agreement.

22. FORCE MAJEURE.

Anything in this Agreement to the contrary notwithstanding, providing such cause is not due to the willful act or neglect of either party, neither party shall be deemed in default with respect to the performance of any of the terms, covenants and conditions

of this Agreement if the same shall be due to any strike, lockout, civil commotion, warlike operation, invasion, rebellion, hostilities, military or unsurged power, sabotage, government regulations or controls, inability to obtain any material, service or financing, through an act of God or other cause beyond the control of either party.

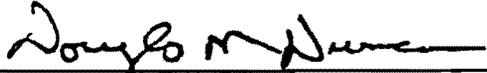
23. RELEASE.

In consideration of the Agreement reached herein, Sugarloaf hereby releases and discharges the County, and its successors, executors, assigns, legal representatives, agents, servants and employees, of and from any and all claims or obligations which in any way arise from the facts, circumstances, claims, allegations and occurrences, including but not limited to all pleadings, discovery and information contained therein, alleged in and/or giving rise to the Litigation.

IN WITNESS WHEREOF, the parties hereto, intending to be fully bound hereby for themselves, successors and assigns, and the undersigned warranting their authority to bind their respective principals, have hereunto set their hands and seals on the day and year first hereinabove written.

(Signatures follow on page 23.)

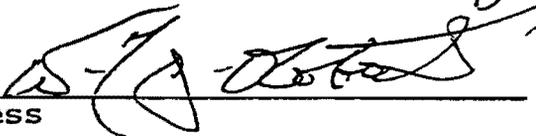
MONTGOMERY COUNTY, MARYLAND

By:  (SEAL)
DOUGLAS M. DUNCAN, County
Executive

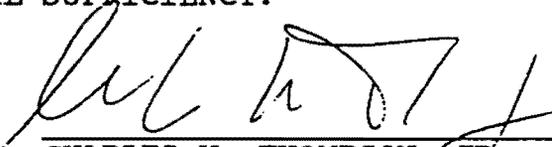

Witness

SUGARLOAF CITIZENS ASSOCIATION, INC.

By:  (SEAL)
JANE S. HUNTER, President


Witness

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:


CHARLES W. THOMPSON, JR.,
COUNTY ATTORNEY

STIPULATION

The undersigned parties agree and stipulate as follows:

I. Montgomery County, Maryland Environmental Service (MES), Washington Suburban Sanitary Commission (WSSC), and the Maryland Department of Health and Mental Hygiene (DHMH), agree that the sludge composting facility to be operated pursuant to DHMH Permit Number ^{5-81-15-549-F} _____ ("the Dickerson Facility") shall be only an interim facility pursuant to the following terms and conditions:

A. The Permit

1. Permit Number ^{5-81-15-549-F} _____ shall expire on January 1, 1984 and all composting activities at the site shall cease on that date except as set forth below.
2. Insofar as sludge composting facilities are expected to be fully operational at Site 2 by September 1, 1982 no sludge composting activities will take place at the Dickerson Facility thereafter unless either of the two following events occurs:
 - a. Unforeseen difficulties at Site 2, beyond the control of the site operator, prevent the composting of Montgomery County's legally mandated sludge receipt quantities at Site 2; or
 - b. Montgomery County's legally mandated sludge receipt quantities exceed the permitted composting capacity at Site 2, but if this occurs, Montgomery County and Washington Suburban Sanitary Commission will immediately develop and implement

a sludge management alternative, and use of Dickerson will last only until this alternative is in place and in no event later than January 1, 1984, except as provided in B below, "The Planning Process."

3. Any renewal, amendment or other permit for sludge management at the Dickerson Facility, PEPCO property or at any other site in the area of the Dickerson Facility, shall be: 1) treated as a newly filed permit by the DHMH subject to all legal requirements; 2) evaluated by DHMH without regard to the existence of the Dickerson Facility and 3) consistent with the planning process set forth below. This provision shall not apply to screening or spray irrigation at the Dickerson Facility which shall be treated as set forth below.

B. The Planning Process

1. As part of the 10 Year Planning Process of Art. 43, Sec. 387C, Montgomery County shall immediately initiate a planning process which is designed to develop alternatives to the Dickerson Facility as the backup or addition to Site 2 for Montgomery County's legally mandated sludge receipt quantities on a permanent basis.
2. The planning process shall, at a minimum, consider the following factors: 1) current and anticipated quantities of sludge; 2) all alternative technologies for management of sludge; and 3) geographical locations both within and without Montgomery County.
3. The following principles, in addition to other factors required by law, shall apply in the consideration and choice of sludge management alternatives in the planning process:

- a. The fact that the Dickerson Facility is in existence, including capital and other investment of government agencies, shall not be considered; however non site-specific operational experience may be utilized in the planning process.
 - b. A legally and practicably implementable alternative shall be deemed superior to the Dickerson Facility when: i.) it is at a site in Montgomery County other than in the Dickerson area, or ii.) it is an alternative which accounts for Montgomery County's share of the Blue Plains sludge at the Blue Plains STP or at some other location outside of Maryland.
 - c. A bias in favor of an alternative shall be established when: i.) travel distance is shorter, or ii.) public sewer and water service are available.
 - d. A bias against an alternative shall be established when it has proximity to and impacts on a recreational use.
4. The planning process shall provide for appropriate public participation, including public hearings.
 5. Quarterly reports regarding the status of the planning process shall be provided to the Secretary of DHMH, with a report due on September 1, 1982 which shall include a plan for implementing alternatives to the Dickerson Facility as the backup or addition to Site 2 no later than January 1, 1984. At least one public hearing shall be held by the County Executive at least 45 days prior to September 1, 1982 on the draft report. Reports shall continue thereafter until a permanent management plan for Montgomery County's share of Blue Plains sludge shall have been implemented. The Secretary of DHMH may request such additional

information or justification regarding the planning process as he deems appropriate. Such reports and additional information shall be available to the public upon filing with the Secretary.

6. The Department of Health and Mental Hygiene shall not accept an application for a new or renewed permit for a sludge management facility at the Matthews Farm or elsewhere in the Dickerson area unless the proposed site has been chosen consistent with the procedures and principles set out in this agreement.
7. Montgomery County agrees not to complete the ongoing study of the use of the Dickerson Facility as a back-up to Site 2 and not to conduct any other sludge management studies other than in the context of and subject to the planning principles stated above.

C. Termination of the Dickerson Facility and Future Use of Site

1. All sludge delivery at the Dickerson Facility shall cease 30 days after the first day of operation of Site 2, subject to the provisions of A.2. The first day of operation is defined as the date when one hundred tons of raw sludge in the aggregate have been delivered to Site 2.
2. On or before March 1, 1983 MES shall submit through WSSC to the Maryland Department of Health and Mental Hygiene for approval a plan for reclamation of the Dickerson Facility which shall be consistent with post-reclamation land uses as set forth by Montgomery County; and provide for 1) removal of all paved pad areas and access roads, and all ditches, dams, or other water impoundments, including all of the holding ponds, except to the extent they are appropriate to the future use of the property;

- 2) removal of the soil under ditches and the liners of Pond 3 and the bentonite-soil liners of Ponds 1 and 2, if contaminated; 3) complete revegetation; and 4) a completion date within six months of approval, including removal of all stored compost. Prior to its approval or disapproval of the reclamation plan, the DHMH shall hold a public hearing thereon.
3. Montgomery County agrees that after removal of the composting facility, it will restrict the future use of the Matthews Farm to uses that are consistent with county land use plans and policies, including policies favoring the wedges and corridors concept and the protection and preservation of agricultural uses. The fact that a proposed use would be a public facility would not, by itself, render it consistent with such policies under this provision. The character of the proposed use, not the ownership or purpose, would be determinative. Prior to submittal of the reclamation plan provided for in C.2. above, the County shall prepare a plan for future use and ownership of the Matthews Farm and hold a public hearing thereon. Any change in the plan will require a similar public hearing by the County.
4. After termination of the Dickerson Facility, the site shall be monitored as may be required by DHMH regulations, the DHMH permit or the regulations of Montgomery County.
5. After termination and site restoration, in no event shall the Matthews Farm be used for any form of incineration of off-site trash as a public waste management technique, sanitary landfill, hazardous waste disposal, sludge entrenchment or sludge processing. Montgomery County shall record restrictive covenants on the property to that effect among the land records of Montgomery County, Maryland.

D. Other Facilities

1. All steps shall be taken to ensure that Site 2 is operational at the earliest possible date, which shall in no event be later than September 1, 1982. The September 1, 1982 deadline for operation of Site 2 may be exceeded only in the following circumstances:
 - a. The occurrence of a natural or man-made disaster or event that is wholly beyond the control of the parties to this agreement and that destroys all or part of the Site 2 facility or otherwise prevents the use of the facility.
 - b. The issuance of a judicial or administrative decision that delays or prevents the use of the Site 2 facility, which decision Montgomery County agrees to vigorously oppose. Montgomery County, WSSC, and DHMH agree to take every possible action to bring Site 2 into operation as soon as possible.
2. The County Executive will recommend against rail haul of sludge and will request a resolution that would prohibit same for the life of the Dickerson Facility.

II. Operational Conditions, Spray and Screening, and Claims

- A. Montgomery County, MES, WSSC, and DHMH agree to accept the following conditions on the design and operation of the interim facility and that where appropriate they shall become conditions of DHMH Permit Number _____:

1. MES shall operate the Dickerson composting facility in accordance with the USDA/EPA Manual for composting by the Beltsville Aerated Pile Method, the MES Operations and Maintenance Manual, and as testified to by representatives of the Service at adjudicatory hearings held on issuance of the Article 43, Sec. 394(b) permit.

2. Except as may be authorized by a State Discharge Permit, none of the contents of any of the ponds will be spray irrigated or otherwise applied to land in the area of the interim facility. The fact that the Dickerson Facility is in existence and utilizes haul-back of waters in ponds 1 and 2 shall not be considered by DHMH in connection with DHMH review of an application for a State Discharge Permit for the facility; however, non site-specific operational experience may be considered.
3. Except as may be authorized by amendment to its Article 43, Sec. 394(b) permit and an Article 43, Sec. 706 permit, MES shall not screen the wood chips from the finished compost.
4. When drying or otherwise conditioning compost at the interim facility, MES shall make every effort to minimize the generation of dust. Such efforts shall include, but not be limited to, the daily (as weather permits) sweeping and wetting of paved areas. Respirators shall be kept on site for workers to be used as needed.
5. The operators shall be required to follow a written checklist quality control program that addresses the following:
 - a. Verification that a minimum water level is maintained over the surface of the ponds when temperatures are at 0° C or below.
 - b. A standard procedure for pond maintenance when cleaning and pumping activities occur which, among other things, requires use of non-abrasive boots by workers and the placement of padding under all pump intakes, and which provides for daily inspections of all such areas where pump intakes have been located.

- c. The status of the Pond 3 monitoring manhole shall be checked and recorded each day.
-
6. Maryland Environmental Service agrees to comply with all provisions of the proposed Executive Regulations of Montgomery County governing the operation and monitoring of operations of sludge composting facilities and with any enforcement actions or orders taken by the County.
 7. The facility and its operations shall be thoroughly inspected at least once each week day by a County inspector.
 8. All monitoring or inspection activities required under this agreement, the Executive Regulations, the facility permit, or the Operating Manual to be performed by MES on a daily basis shall be performed on weekends and holidays as well as during the work week. The only exceptions are monitoring or inspection of actual operations that occur only during the work week.
 9. All equipment used on the site, including particularly the front-end loaders, shall be regularly washed and shall be maintained in a clean and neat manner in order to avoid movement of raw sludge off the composting pad.
 10. The facility will not begin operation until Maryland Environmental Service has a plan for and a firm contract to obtain whatever trucking services are necessary to empty all three of the holding ponds, and while in operation ensure that all three ponds are emptied, quickly enough to prevent any overflow.
-
- B. Montgomery County, MES, WSSC, and DHMH agree to initiate the following procedures to assure effective contingency review and, which may, in the discretion of DHMH, require modification or cessation of operation:

1. Upon any indication of leakage in Pond 3, through visual or other inspection of the liner, or through the appearance of water in the monitoring manhole, MES shall notify DHMH of such event and shall inform DHMH of its anticipated course of action, including the diversion of process wastewaters from the pond, repair time, etc. Prior to the placing of Pond No. 3 in operation, DHMH shall inspect the repaired liner and shall be satisfied of its structural integrity.
 2. Upon any indication of seepage from Ponds 1 and 2, the notification, inspection and approval provisions of subparagraph (1) shall apply.
 3. Any permitted trenching capacity which may exist at the time of the commencement of operation of the Dickerson Facility and the Western Branch Facility shall be reserved by WSSC for emergency use if operational problems arise at either facility requiring that they cease to accept sludge for composting.
- C. MES shall develop a standard procedure whereby it can ascertain the length of time compost remains at the Dickerson Facility. All finished compost shall be removed from the facility within six months of the date it is placed on the storage pad.
- D. MES shall, upon filing, notify the Sugarloaf Citizens Association of any application for a State Discharge Permit, amendment to the Section 394(b) permit, Section 706 permit, or any other application for a permit, permit renewal or permit amendment related to a facility at the Matthews Farm. The adjudicatory hearing on the Section 394(b) permit shall be held open for a period of four months from the date of this Agreement on issues related to the screening of woodchips from finished compost. The Sugarloaf Citizens Association shall be afforded thirty calendar days notice before this date of the first reconvened session and shall respond to DHMH

within fourteen days concerning its intent to participate in said reconvened hearing. The Department of Health and Mental Hygiene may, in its discretion, consolidate the hearings required for any permit associated with operation of the Dickerson Facility.

- E. WSSC will be the official operator of the Dickerson Facility. MES operation of the Dickerson Facility will be as WSSC's contractual agent. WSSC agrees and affirms that the Dickerson Facility will be operated in accordance with the Montgomery County regulations for the Dickerson Facility. WSSC is the responsible agency to insure compliance with the Montgomery County regulations. Complaints regarding the operation of the Dickerson Facility will be handled by WSSC's General Manager (699-4187), Assistant General Manager (699-4188), or Special Assistant for Sludge Management (441-4164).
- F. WSSC agrees that no experiments, including changes in bulking agents, will be conducted at the Dickerson Facility and that the permitted process for composting sludge will not be altered without consultation with and concurrence by the Sugarloaf Citizens Association and Montgomery County.
- G. WSSC agrees to test the private wells on the attached list (Enc. 1) by February 15, 1981 and provide the owners the test results. Should any of the listed wells that initially meet Montgomery County standards fail (i.e., not meet Montgomery County standards) prior to January 1, 1985, WSSC, upon receipt of notice of failure by the owner, will provide potable water regardless of the source of contamination until the following determination is made. If it is determined by the Montgomery County Health Department that the failure of any listed or unlisted well occurred because of the operation of the Dickerson Facility, WSSC will provide the owner a permanent source of potable water equal in quantity to the capacity of the failed well.
- H. As the responsible agency for the operation of the Dickerson Facility, WSSC will accept and process claims for damages in accordance with WSSC's standard claims procedures.

III. Miscellaneous

- A. Montgomery County and WSSC will continue to actively explore other sludge management alternatives, including out-of-state disposal and processing at Blue Plains, such as suggested in the November 28, 1980, letter to the County Executive by the Fuel Recovery Corporation. At a minimum, WSSC will advertise for bids for hauling sludge out of the State one year from the date of this agreement and will, at that time, prepare a comparison of potential hauling costs and costs of operation at the Dickerson Facility.

IV. Sugarloaf Citizens Association and individual intervenors agree to the following:

- A. To withdraw opposition to the permit application of MES for the operation of a composting facility at Dickerson, dated August 19, 1980, as modified by letter of counsel for MES addressed to Mr. Ronald Nelson, DHMH, dated December 18, 1980.
- B. To withdraw with prejudice all pending litigation related to the Dickerson Facility.
- C. To not appeal or seek any judicial or administrative review of the permit issued pursuant to the application of MES described above in paragraph IV. A, or initiate any other judicial or administrative action challenging the operation of the facility under the permit. This shall not affect the ability to enforce this stipulation agreement or permit conditions, as permitted by law.
- D. To not oppose issuance of truck transportation permits related to the Dickerson Facility. However, the Sugarloaf Citizens Association reserves the right to participate as provided by law in the development of conditions to be contained in the permit, which conditions shall

be included in the permit at the close of any DHMH public participation proceedings. DHMH agrees to rule on the availability of any such proceedings and to institute such proceedings, if any, no later than January 31, 1981, and to assure they are completed expeditiously. Sugarloaf Citizens Association may appeal on issues of conditions to the permit or procedures followed in issuing of the permit, but may not appeal or oppose issuance of the permit itself. Sugarloaf Citizens Association further agrees that it will not seek to enjoin truck transportation in the context of any appeals on procedural matters or permit conditions related to the transportation permits.

- E. This stipulation shall be contingent upon execution of this agreement or withdrawal from the adjudicatory proceedings and all pending judicial proceedings of all intervenors in the adjudicatory proceedings. The following constitutes a complete list of the individual intervenors: Steven Quarles; Mr. & Mrs. A. L. Dilonardo; Anna J. Robbins; David Owens Scott; George J. Ersek; Charles R. Jones; Joseph R. Harrill; Steven D. Wells; Thomas Dowd.

- F. Sugarloaf Citizens Association will not support financially or otherwise any administrative or judicial action by any person or entity attempting to challenge the operation of the facility pursuant to the application of MES described above in paragraph IV. A., except that it may so support any petition filed under paragraph VI. A. or any other action to enforce the stipulations or permit conditions under IV. C.

- V. All parties agree and stipulate to the following:
 - A. Withdrawal of all issues raised thus far in the adjudicatory hearing in connection with the application of MES described in IV.A. above.

 - B. Issuance of the Hearing Examiner's recommendations to the Secretary of Health and Mental Hygiene in connection with issuance of the permit requested, consistent with this stipulation and requirements of law.

- C. Filing of this stipulation in the record of the adjudicatory hearing and this stipulation becoming a condition of the permit to the extent deemed appropriate by DHMH and otherwise being enforceable by DHMH pursuant to VI. A.

VI. Enforceability of the Stipulation by Intervenors

- A. In the event of alleged noncompliance with the stipulation or the permit, or any allegation that any aspect of the operation of the Facility poses a threat to public health, a representative of the citizens association or any intervenor, successors or assigns, may directly petition the Assistant Secretary for the Office of Environmental Programs, DHMH, for appropriate relief.
- B. The Assistant Secretary will give immediate attention to the petition and initiate response within thirty days, including initial investigation and site inspection if relevant to the petition.
- C. The parties and their successors or assigns may pursue any additional administrative or judicial remedies as provided by law.

VII. All parties agree and acknowledge the following:

- A. By execution of this stipulation, the intervenors are not indicating any support for or approval of the Dickerson Facility.
- B. All parties agree to undertake to uphold this stipulation and to vigorously oppose any challenge to its validity or operation.

The undersigned by their hands and seals, agree, for themselves, their successors and assigns, on the dates below indicated, to the above stipulation and warrant their authority to bind their respective principals.

Montgomery County, Maryland

Sugarloaf Citizens Association, Inc.

By Charles W. Gilchrist SEAL
Charles W. Gilchrist Date
County Executive 1/10/81

By Steven Charles SEAL
Steven Charles Date
President 1/10/81

William S. Jordan III SEAL
William S. Jordan III, Esq. Date
Counsel for Sugarloaf Citizens Association 1/13/81

Maryland Environmental Service

By Thomas D. McKewen SEAL
Thomas D. McKewen Date
Director 1/14/81

John B. Z. Walsh SEAL
John B. Z. Walsh, Esq. Date
Counsel for Sugarloaf Citizens Association 1/13/81

Washington Suburban Sanitary Commission

By Robert S. McGarry SEAL
Robert S. McGarry Date
General Manager 16 Jan 81

Maryland Department of Health and Mental Hygiene

By William M. Eichbaum SEAL
William M. Eichbaum Date
Assistant Secretary for Environmental Programs

INDIVIDUAL INTERVENORS

Steven Quarles
 Steven Quarles 1/10/81 SEAL
 Date

David Owens Scott
 David Owens Scott 1/11/81 SEAL
 Date

George J. Ersek
 George J. Ersek 1/11/81 SEAL
 Date

Joseph R. Harrill
 Joseph R. Harrill Date SEAL

Steven D. Wells
 Steven D. Wells Date SEAL
 1/11/81
 Steven D. Wells

FIRST AMENDMENT TO AGREEMENT OF SETTLEMENT AND COMPROMISE

THIS FIRST AMENDMENT to an Agreement of Settlement and Compromise dated April 19, 1996, by and between SUGARLOAF CITIZENS ASSOCIATION, INC., hereinafter referred to as "Sugarloaf," and MONTGOMERY COUNTY, MARYLAND, hereinafter referred to as the "County," is made this 1st day of August, 2000.

WHEREAS, by document dated April 19, 1996, the parties entered into an Agreement of Settlement and Compromise, hereinafter referred to as the "Agreement," resolving certain disputes regarding the Montgomery County Compost Facility, hereinafter the "Facility," and settling certain litigation between the parties docketed in the Circuit Court for Montgomery County, Maryland as Civil No. 119356; and

WHEREAS, the County is desirous of implementing baggage operations at the Facility for the Yard Waste finished compost product; and

WHEREAS, the implementation of bagging operations for the Yard Waste finished compost product at the Facility is not presently permitted under the Agreement; and

WHEREAS, the parties are desirous of amending the Agreement to allow the said bagging operations at the Facility and to amend certain other provisions of the Agreement;

NOW, THEREFORE, on the basis of the foregoing, and for and in consideration of the mutual covenants and conditions contained herein, and other good and valuable consideration, the receipt of which hereby is acknowledged, the parties hereby agree that the Agreement, as of the date hereof, is amended as follows:

1. Definitions: The following definitions of terms are added to Section 1. of the Agreement:

V. Bank Barn: The large barn structure located on the Matthews Farm to the south of the Dairy Barn.

W. Feed Barn: The structure appurtenant to, and immediately south, of the Bank Barn.

X. Corn Crib: The structure immediately to the south of the Dairy Barn.

Y. Tenant House & Hog House: Those remaining structures on the Matthews Farm not otherwise expressly defined herein.

2. Methods of Operations: Section 1.E of the Agreement is deleted in its entirety and, in lieu thereof, the following is substituted therefor:

E. Methods of Operations: Facility Operations as more particularly described in Amended Exhibit 6.

3. Methods and Modes of Transportation: Section 1.F. of the Agreement is deleted in its entirety and, in lieu thereof, the following is substituted therefor:

F. Methods and Modes of Transportation: Transportation of materials to and from the Facility as more particularly described in Amended Exhibit 7.

4. Facility Operations: Section 1.H. of the Agreement is deleted in its entirety and, in lieu thereof, the following is substituted therefor:

H. Facility Operations: The receipt, composting, windrowing, turning, drying, screening, bagging, and shipping of Yard Waste and the bulk Yard Waste compost product.

5. Yard Waste System: Section 1.U. of the Agreement is deleted in its entirety and, in lieu thereof, the following is substituted therefor:

U. Yard Waste System: The system employed by the County in dealing with Yard Waste generated in the County, including source reduction programs, collection, transportation, handling, processing, bagging, and distribution of products generated thereby.

6. The Facility:

(i) Existing Section 6.L. of the Agreement shall be renumbered as 6.N.

(ii) A new Section 6.L. is added as follows:

L. A maximum of two (2) mechanical bagging lines will be permitted at the Facility, both of which must be located entirely under the roof of the existing Pavilion as set forth in Exhibit 2 to the Agreement. The maximum number of bagged compost (at a maximum size of three (3) cubic feet per bag) allowed to be stored at the Facility at any given time will be three hundred thousand (300,000) bags, all of which must be limited to the existing area covered by the asphaltic pad as required by Section 6.I. of the Agreement.

(iii) A new Section 6.M. is added as follows:

M. The County shall endeavor to limit truck traffic to and from the facility as much as reasonably practicable, and shall encourage, when practicable, the back haul of finished Yard Waste compost product.

7. Continued Communications. A new Section 8.D. is added as follows:

D. At each September meeting of Sugarloaf and the County, the Division of Highway Services of the County Department of Public Works and Transportation will provide to Sugarloaf an annual up-date on any proposed changes to the rural character of Martinsburg Road between the entrance to the property presently owned by PEPCO and Wasche Road, including, but not necessarily limited to, any proposal to widen or resurface the road or shoulders, or undertake extensive tree pruning.

8. Exhibit 6. Exhibit 6, "Existing Facility Operations" is deleted in its entirety and, in lieu thereof, the Amended Exhibit 6 attached hereto and incorporated herein by reference is substituted therefor.

9. Exhibit 7. Exhibit 7, "Existing Methods & Modes of Transportation," is deleted in its entirety and, in lieu thereof, Amended Exhibit 7 attached hereto and incorporated herein by reference is substituted therefor.

10. Matthews Farm Structures. Section 10.A. of the Agreement is stricken in its entirety and, in lieu thereof, the following is substituted therefor:

A. The County and Sugarloaf are desirous of accomplishing the restoration and continued maintenance of the Feed Barn, Bank Barn, Corn Crib, Tenant House, and Hog House on the Matthews Farm.

(i) On or before June 30, 2001, the County shall renovate and restore the Feed Barn, at an estimated total cost of \$61,000.00. From and after the completion of the restoration of the Feed Barn, and for a period of five (5) years thereafter, the County shall have the right to utilize that structure for the storage of consumable supplies of the Facility Operations, such as shipping lumber, pallets, bags, shrink wrap, pallet covers, hand tools and a forklift, but not including any Yard Waste nor finished Yard Waste Product, either in bags or bulk, pursuant to a lease-back agreement from the Association to the County in accordance with Exhibit A, attached hereto and incorporated herein by reference. The County shall remain responsible for the maintenance of the Feed Barn as necessary so long as the Lease Agreement between the parties remains in effect.

(ii) The County shall undertake renovation and restoration of the Bank Barn, the total estimated cost of which is \$94,000.00. The County anticipates that the restoration of the Bank Barn shall be funded as follows:

- a. \$18,000.00 from the remaining balance of monies originally appropriated for the Agreement of Settlement and Compromise.
- b. \$25,000.00 from fiscal year 2000 operating budget -- Master Plan Funds.
- c. \$25,000.00 from fiscal year 2001 operating budget -- Master Plan Funds.
- d. \$26,000.00 from fiscal year 2001 operating budget -- Compost Facility, as a result of haulage savings.

The aforesaid renovation and restoration of the Bank Barn shall be completed by the County on or before June 30, 2001. The County shall remain responsible for the maintenance of the Bank Barn as necessary so long as the Lease Agreement between the parties remains in effect.

(iii) The Corn Crib has been restored and renovated by Montgomery County. The County shall remain responsible for the maintenance of the Corn Crib as necessary so long as the Lease Agreement between the parties remains in effect.

(iv) Although there is currently no funding available for the restoration of the Tenant House and Hog House, those structures shall remain standing, and the parties hereto, together with the cooperation of the Maryland Environmental Service, shall work in a cooperative manner in the future to accomplish the restoration of those remaining structures.

11. Other Site Improvements. Section 11.A. of the Agreement is stricken in its entirety and, in lieu thereof, the following substituted therefor:

A. On or before October 31, 2001, the County shall cause to be installed landscaping in that area between the Dairy Barn and the Facility, as more particularly shown in Exhibit 9 to the Agreement, consisting of the planting of mixed deciduous and conifer trees with a minimum caliper size of two inches in accordance with the landscape plan to be prepared by the County in consultation with Sugarloaf. Thereafter, the County shall maintain the landscaped area as necessary. Notwithstanding anything in the Agreement or this Amendment to the contrary, until such time as the landscaping as set forth herein has been completed by the County, the maximum allowed storage of bagged finished Yard Waste compost product

on the Facility or within the Feed Barn shall be two hundred thousand (200,000) bags total.

12. Amended Lease Agreement. The Lease Agreement referred to in Paragraph 13 of the Agreement, and set forth in Exhibit 12 to the Agreement, shall be amended, simultaneous with the execution of this Agreement, in accordance with the attached Exhibit "B", "Second Amendment to Lease Agreement," incorporated herein by reference. The County represents that it has advertised the Amendment to Lease Agreement pursuant to the requirements of Section 5 of Article 25A of the Annotated Code of Maryland and Montgomery County Executive Regulation 67-91AM.

13. Affirmation of Agreement. In all other respects, the Agreement shall remain in full force and effect, and the provisions thereof and Exhibits thereto, except as expressly amended herein, shall continue in full force and effect, and the parties hereby expressly ratify and confirm the same.

14. Attorney's Fees. The County hereby agrees to reimburse Sugarloaf for its reasonable costs, expenses and attorney's fees in drafting and negotiating this Amendment to the Agreement and associated documents within thirty (30) days of the presentation of an invoice therefor to the County, as previously appropriated by the County Executive and approved by the County Council.

IN WITNESS WHEREOF, the parties hereto, intending to be fully bound hereby for themselves, successors and assigns, and the undersigned warranting their authority to bind their respective principals, have hereunto set their hands and seals on the day and first hereinabove written.

MONTGOMERY COUNTY, MARYLAND

Patricia C. Sisk
Witness

By: Douglas M. Duncan (SEAL)
DOUGLAS M. DUNCAN,
County Executive

SUGARLOAF CITIZENS ASSOCIATION, INC.

B. J. Roberts
Witness

By: James S. Hunter (SEAL)
JAMES S. HUNTER,
Treasurer

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY:

Charles W. Thompson, Jr.
CHARLES W. THOMPSON, JR.,
County Attorney

AMENDED EXHIBIT 6
FACILITY OPERATIONS AT THE DICKERSON COMPOST FACILITY

The following is a brief description of the operations to be performed on a daily basis at the Dickerson Compost Facility. These activities are broken down into four sections: materials receiving, materials processing, curing and screening, and bagging.

Materials Receiving

Materials arrive at the Facility from down-County sites by various modes (see Exhibit 7). Materials arriving in trucks will be in no less than forty (40), nor more than one hundred (100) cubic yard trucks. Upon arrival at the Facility, vehicles carrying feed stock material are guided to the scale area for weighing and then to the pad for unloading.

All incoming materials are inspected for contamination. Loads which are determined to be unacceptable shall be rejected. The vehicle, upon completion of the inspection, is unloaded and then returned to the scale for weighing before exiting the facility.

Materials Processing

Upon acceptance at deposition of the materials on the composting pad, windrow construction is begun. Space is left between the edge of the pad and the end of each windrow in order to accommodate turning of the composting equipment.

Grass loads are incorporated into existing leaf windrows at a ratio designed to facilitate the composting process and minimize odors. The composting equipment is then used to process the windrow and ensure that a complete mixing has occurred.

After the initial mixing has taken place, each windrow is placed on a maintenance schedule. Processing of the windrow with the composting equipment on a regular basis provides shredding, aeration, and uniform decomposition of the compost. Maintenance schedules are based on industry standards. During the course of the composting process regular monitoring takes place.

Analysis of the finished product shall be conducted on a quarterly basis. The results shall be documented and a copy furnished to the Maryland Department of Agriculture, where the compost shall be graded according to the results of the analysis. The compost produced at the Dickerson Facility has always met Class A Standards (meaning the product is safe for any application).

Water quality monitoring shall be performed on the Facility's three storm water management ponds on a monthly basis. The results of the analyses shall be submitted to MDE on a quarterly basis in

The site shall be regularly policed in order to keep litter and sediment runoff to a minimum. This shall minimize onsite and offsite impacts.

Curing and Screening

At the end of each composting cycle, the compost material shall be consolidated and stored until it can be screened. After screening the materials shall be stockpiled before loading into incoming trucks or bagging, as the case may be.

There are a number of additional administrative activities which are performed on a daily basis at the Facility: These include procurement of supplies and materials, maintenance procedures, recordkeeping, etc. In addition, there is a constant flow of information between the Facility and offsite facilities to include technical and administrative support, as well as managerial support and guidance.

Bagging Operations

Bagging of the finished compost material shall be limited to a maximum of two mechanical bagging lines, both of which shall be located under the roof of the existing pavilion at the Facility. The bagging line may be sheltered and heated to allow bagging in the winter months, thereby requiring side and end screening on the pavilion as may be necessary. Maximum production of the bagging operation shall be 500,000 bags per fiscal year. The maximum allowed storage on the Facility site shall be no more than 300,000 bags (of not more than 3 cubic feet each), all of which shall be limited to the existing asphaltic pad, and none of which shall be stacked more than one pallet-load high at any time. No additional structures to accommodate storage of the bags shall be constructed or placed on the Facility. In connection with the bagging operation, consumables may be stored on the asphaltic pad, including shipping lumber, pallets, bags, shrink wrap and pallet covers, hand tools and two (2) forklifts.

AMENDED EXHIBIT 7
METHODS AND MODES OF TRANSPORTATION

The finished compost product produced at the Dickerson Facility may be composed of three main feed stock materials: leaves, grass, and chipped brush, all of which shall be collected as part of the County's recycling program. All material coming to the Facility via the transfer station shall be pre-processed (ground) before being transported to the facility.

Material shall be transported to the Facility via down-County transfer station locations, including the Brookeville Transfer Station and the County Solid Waste Transfer Station and Recycling Center in Gaithersburg. All materials delivered from Brookeville is done so via trucks. All materials received at the transfer station shall be transported either via truck or rail. The rail containers shall be internodal containers that can be moved via truck chassis or rail car.

Yard trim material shall be loaded so that there is at least one foot of free board (space between the top of the load and the top of the truck/rail container wall), and the load shall be tarped to prevent spillage en route.

Materials transported via rail shall be placed on the train at the transfer station railyard, which then shall move to the County's Resource Recovery Facility (RRF). Once at the RRF railyard, the yard trim containers shall be unloaded and then loaded on to a truck chassis for transport to the Facility via truck. Off loading procedures are described in Exhibit 6, "Operations."

Bulk finished products shall be transported from the Facility in not less than forty (40) cubic yard, and not more than one hundred (100) cubic yard, trucks. Bagged finished product shall be transported from the Facility in not less than ten (10) ton (20,000 pound) minimums. There shall be no onsite advertising, promotions or cash sales, either wholesale or resale, from the Facility with regard to the finished compost product, whether in bulk or in bags.

EXHIBIT A

LEASE-BACK AGREEMENT

THIS LEASE-BACK AGREEMENT, by and between MONTGOMERY COUNTY, MARYLAND, hereinafter referred to as the "County", and SUGARLOAF CITIZENS ASSOCIATION, INC., hereinafter referred to as the "Sugarloaf", is made this 1st day of August, 2000.

WHEREAS, the parties entered into a Lease Agreement from the County to Sugarloaf for certain real property located immediately adjacent to the County's Yard Waste Compost Facility, the "Facility," dated December 27, 1996, the "Lease,"; and

WHEREAS, the Lease was in connection with, and as a result of, a written agreement between the parties of settlement and compromise dated April 19, 1996, hereinafter referred to as the "Agreement"; and

WHEREAS, the parties have been engaged in negotiations for a modification of the Agreement and the Lease.

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereby agree to lease-back a portion of the premises under the following terms and conditions:

1. Lease-back of a portion of the premises to the County: Sugarloaf hereby agrees to lease-back to the County for its sole and exclusive use the Feed Barn, as defined in the Agreement, for the storage of consumable supplies of the Facility Operations, such as shipping lumber, pallets, bags, shrink wrap, pallet covers, hand tools and one (1) forklift, but not including any Yard Waste nor finished Yard Waste Product, either in bags or bulk. Sugarloaf also grants to the County reasonable means of ingress and egress to the Feed Barn for the purpose of placing or removing the aforesaid supplies, the same to be accessed by the existing driveway serving the premises and/or the existing gate in the existing fence between the Facility the Leased Premises under the Lease.

2. Term. The term created hereby for the use of the Feed Barn by the County shall be for a period of five (5) years from the date hereof, and may renewed for an additional term or terms thereafter upon such conditions as determined in Sugarloaf's sole discretion, upon written request by the County.

3. Subleasing and assignment. The County may not sublease or assign any portion of the Feed Barn leased by this Amendment without the prior written consent of Sugarloaf, which will not be unreasonably withheld. Notwithstanding any sublease or assignment,

assigns or contractors for the purposes stated herein in connection with the bagging operations of the Facility.

4. Maintenance. During the original term and any extension term of this Lease-Back Agreement, the County shall be responsible for all maintenance of the Feed Barn and shall keep the same in a good and presentable condition, and not commit waste with regard thereto.

5. Insurance. The County shall exercise its right to self-insure. The County is a member of the Montgomery County Self-Insurance Program; Article 20-37 of the Montgomery County Code restricts the legal defense fund to members of the Fund and does not allow for outside entities. The certificate of insurance evidences limits of insurability for general liability coverage in the amounts of \$500,000.00 aggregate and \$200,000.00 each occurrence and \$20,000.00 per person, \$40,000.00 per accident for bodily injury and \$15,000.00 for property damage for automobile liability and State of Maryland statutory limits for worker's compensation. Currently, the limits for Worker's Compensation/Employers' Liability are as follows:

Bodily injury by accident	--	\$100,000 each accident
Bodily injury by disease	--	\$500,000 policy limits
Bodily injury by disease	--	\$100,000 each employee.

These are the maximum limits of liability for which the Montgomery County Self-Insurance Program is responsible, as determined by the Local Government Tort Claims Act, 1986. This insurance policy must be maintained continuously by the County during the full term and any extension terms of this Lease-Back Agreement.

6. Default. In the event that the County is in violation of any of the terms and conditions of this lease-back agreement, Sugarloaf shall send written notice of such violation to tenant by Registered Mail. Should the County fail to correct any violation to the reasonable satisfaction of Sugarloaf within ninety (90) days from the receipt of such notice, then Sugarloaf shall have the right to immediately terminate this Lease-Back Agreement. Upon such termination, Sugarloaf shall be entitled to immediate possession of the leased premises.

7. Sugarloaf Not a Partner. It is expressly understood that Sugarloaf shall not be construed or held to be a partner or associate of the County in the conduct of County's business; it being expressly understood that the relationship between the parties hereto is and shall remain at all times that of landlord and tenant.

8. Solicitation. Sugarloaf represents that it has not retained anyone to solicit or secure this agreement from Montgomery County, Maryland, upon an agreement or understanding for a

commission, percentage, brokerage or contingent fee, excepting for an attorney rendering professional legal services consistent with applicable canons of ethics.

9. Public Employment. Sugarloaf understands that unless authorized under Section 11B-52 and Chapter 19A of the Montgomery County Code, 1984, it is unlawful for any person transacting business with Montgomery County, Maryland to employ a public employee for employment contemporaneous with his or her public employment.

10. Surrender Upon Termination. At the expiration of this Lease-Back Agreement, the County shall surrender the Leased Property in as good condition as it was at the beginning of the term, ordinary wear and tear excepted. Prior to the expiration of this Lease-Back Agreement, the County shall remove all of its equipment, trade fixtures and personal property and repair all damage caused by such removal.

11. Right of Entry. The Premises is and shall remain an open structure. Sugarloaf and its agents or representatives may inspect the same from outside of the premises from time to time, but not enter the premises unless accompanied by a representative of the County.

12. Force Majeure. Anything in this agreement to the contrary notwithstanding, providing such cause is not due to the willful act or a neglect of either party, neither party shall be deemed in default with respect to the performance of any of the terms, covenants and conditions of this lease-back agreement if the same shall be due to any strike, lockout, civil commotion, warlike operation, invasion, rebellion, hostilities, military or unsurged power, sabotage, governmental regulations or controls, inability to obtain any material, service or financing, through an act of God or other cause beyond the control of either party.

13. Waiver of Jury Trial. Should any controversy arise by and between the parties concerning any of the terms and conditions contained in this lease, each of the parties hereby waives its right to a jury trial and freely elects to be tried by any court of competent jurisdiction without a jury.

14. Notices. Unless otherwise provided herein, whenever notice is to be given under the terms of this lease, such notice shall be deemed to have been given three (3) United States Postal Service working days after enclosed in an envelope having the proper postage, addressed to the party, and deposited at the United States Post Office or mailbox. Any such notice shall be in the form of Certified Mail, Return Receipt Requested.

IF ADDRESSED TO THE COUNTY:
Montgomery County Executive
101 Monroe Street
Rockville, Maryland 20850

With a copy by First Class Mail to:
County Attorney for Montgomery County
Third Floor
101 Monroe Street
Rockville, Maryland 20850

IF ADDRESSED TO SUGARLOAF:

Sugarloaf Citizens Association, Inc.
Post Office Box 381
Barnesville, Maryland 20838

With a copy by First Class Mail to:
William J. Roberts, Esquire
Post Office Box 368
20,000 Fisher Avenue
Poolesville, Maryland 20837.

15. Quiet Enjoyment. Sugarloaf covenants and agrees with the County that upon the County's faithful performance of the obligations set forth herein, the County may and shall peaceably and quietly have, hold and enjoy the premises for the term and period aforesaid, subject to all of the provisions of this lease, and subject to the County's covenant of quiet enjoyment to Sugarloaf as set forth in the Lease.

16. Partial Invalidify. In case any provision or any part of any provision contained in this lease shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision or remaining part of the affected provision of this lease, but this lease shall be construed as if such invalid, illegal or unenforceable provision or part thereof had never been contained herein but only to the extent it is invalid, illegal or unenforceable. In the event that any such provision may be construed so as to overcome any such potential invalidity, illegality or unenforceability, then a liberal interpretation shall be applied and the lease shall be interpreted in such a manner favorably to its validity, legality and enforceability, it being the express intention of the parties hereto to fully perform the obligations contained herein and the purposes sought hereby. And it is also the intention of both parties that in lieu of each clause or provision that is illegal, invalid or unenforceable, there be added, as a part of this agreement, a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

17. General Provisions. This document represents the entirety of the Lease-Back agreement between the parties hereto with respect to the subject matter hereof and shall not be amended, altered or modified except by writing duly executed by each of the parties hereto. This agreement shall be binding upon the parties and their respective successors and assigns. This Lease-Back Agreement shall be governed and construed in accordance with the laws of the State of Maryland without regard to any presumption or other rule of law regarding construction thereof or construing the same against the party causing this lease-back agreement to be drafted. The recitals are, and form, a part of this lease-back agreement. Each party shall execute and deliver to the other in a form satisfactory to each party's counsel such documents and agreements and shall take such other action as may be reasonably necessary to more effectively carry out the terms and provisions of this agreement as needed.

IN WITNESS WHEREOF, the parties hereto, intending to be fully bound hereby for themselves, successors and assigns, and the undersigned warranting their authority to bind their respective principals, have hereunto set their hands and seals on the day and first hereinabove written.

MONTGOMERY COUNTY, MARYLAND

Patricia C. Cook
Witness

By: Douglas M. Duncan (SEAL)
DOUGLAS M. DUNCAN,
County Executive

SUGARLOAF CITIZENS ASSOCIATION, INC.

[Signature]
Witness

By: Jane S. Hunter (SEAL)
JANE S. HUNTER,
President

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

Charles W. Thompson, Jr.
CHARLES W. THOMPSON, JR.,
County Attorney

EXHIBIT B

SECOND AMENDMENT TO LEASE AGREEMENT

THIS SECOND AMENDMENT TO LEASE AGREEMENT dated December 27, 1996, by and between MONTGOMERY COUNTY, MARYLAND, hereinafter referred to as the "Landlord", and SUGARLOAF CITIZENS ASSOCIATION, INC., hereinafter referred to as the "Tenant", is made this 1st day of August, 2000.

WHEREAS, the parties entered into a Lease Agreement from the County to Sugarloaf for certain real property located immediately adjacent to the County's Yard Waste Compost Facility, the "Facility," dated December 27, 1996, the "Lease,"; and

WHEREAS, the Lease was in connection with, and as a result of, a written agreement between the parties of settlement and compromise dated April 19, 1996, hereinafter referred to as the "Agreement"; and

WHEREAS, the Lease was amended by a First Amendment to Lease Agreement dated June 5, 1997; and

WHEREAS, the parties have been engaged in negotiations for additional modifications of the Agreement and the Lease.

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereby agree to further amend the Lease as follows:

1. Renewal. Paragraph 3. of the Lease is hereby deleted in its entirety and, in lieu thereof, the following substituted therefor:

3. RENEWAL. Assuming the Tenant has faithfully performed its duties and obligations under this Lease and is not in default thereunder, the Tenant may, at the Tenant's option and sole discretion, renew this Lease for two (2) additional and consecutive terms of five (5) years each following the expiration of the initial term hereof, and thereafter continue to renew for additional five (5) years terms each, so long as at the time of renewal the Landlord shall not have terminated its operations of the Montgomery County Yard Waste Compost Facility and declared the Premises as surplus property for disposition at public sale. Said renewal terms shall be deemed automatic absent prior written notice by the Tenant to the Landlord of an intent not to renew provided to the Landlord at least six (6) months prior to expiration of an existing term.

2. Subleasing and Licensing. The introductory portion of Paragraph 6. of the Lease and subparagraphs A.1. and A.2 thereof are hereby deleted in their entirety (subparagraph B. of Paragraph 6 remains unchanged) and, in lieu thereof, the following substituted therefor:

6. SUBLEASING AND LICENSING: The Tenant may sublet or grant a license for use of portions of the dairy barn for charitable or educational purposes or for matters or functions of concern or interest to the community generally. All subtenants and licensees must conform with existing zoning laws and to the Use provision in Paragraph 8 of this Lease.

A. FINANCIAL RESTRICTIONS.

1. The County and the Tenant agree that the subleasing or licensing of all or any portion of the dairy barn located on the Leased Premises by the Tenant shall have as its primary goal the use of the building by the community for charitable or educational purposes or for matters or functions of concern or interest to the community generally. The County and the Tenant further agree that the subleasing or licensing of all or any portion of the dairy barn shall have as a secondary goal the recovery of reasonable operating and leasing expenses incurred by the Tenant in the operation, maintenance, improvement, and administration of the Leased Premises. The Tenant may, but shall not be obligated to, charge a rent for use of the dairy barn. The Tenant agrees that rental amounts, if any, charged to a subtenant or licensee for the use of the dairy barn shall be limited to the subtenant's or licensee's prorated share of actual operation, maintenance and administrative expenses incurred by Tenant, which expenses may include any costs for improvements made to the dairy barn or its immediate surroundings or to any furnishings or equipment purchased for use in the dairy barn.

2. Tenant acknowledges and agrees that all funds received by Tenant as the result of any sublease or license of any portion of the dairy barn or its immediate surroundings shall be used by the Tenant exclusively for the operation, maintenance, improvement, and administration of the Leased Premises, and shall not result in any profit or financial gain in excess of that permitted under Paragraph A.1. hereof. Pursuant to the provisions of this Paragraph, the County may require the Tenant to provide written evidence of compliance hereunder.

3. Use. Paragraph 8. of the Lease is hereby deleted in its entirety and, in lieu thereof, the following substituted therefor:

8. USE: A portion of the dairy barn may be used by the Tenant for its office space. The remaining portions of the dairy barn and surrounding leased areas, including adjacent yards and parking areas, shall be used only for charitable or educational purposes or for matters of concern or interest to

the community generally and which are lawful. The single-family residence may only be used for residential purposes. The Southern Field, located northeast of the intersection of Martinsburg and Wasche Roads and immediately south of the Compost Facility, as more particularly shown as part of Parcel B on Exhibit 1, may only be used for agricultural purposes, defined as those uses categorized as "Agricultural" and permitted by right in Section 59-C-9.3 of the Montgomery County Code (1994) as now existing or hereafter amended. All of the aforesaid features are more particularly shown in Exhibit 1 and Exhibit 2, attached hereto and incorporated herein by reference. Tenant agrees that all uses of the Leased Premises, including those of any subtenants and licensees, shall conform with all applicable zoning ordinances.

4. Insurance. Paragraph 14 of the Lease, "INSURANCE", is hereby amended by adding a new Paragraph 14.H. as follows:

H. In the event any portion of the Premises should be leased back to the Landlord by the Tenant, the requirements for insurance coverage to be maintained by the Tenant as set forth in this Paragraph 14, specifically and only with regard to that portion of the Premises leased back to the Landlord, shall be waived and the Tenant shall not be required to provide such insurance for that portion of the Premises during any period of such a lease-back, and the Landlord shall self-insure for any damages or injuries occurring thereon.

4. Access. Paragraph 20 of the Lease, "ACCESS", is hereby amended by adding the following sentence at the end thereof:

Notwithstanding the foregoing, absent an immediate emergency which threatens life or property, the County, its contractors, agents or employees may only enter that area of the Dairy Barn devoted to the Tenant's office when accompanied by a representative of the Tenant.

5. Affirmation of Lease. In all other respects, the Lease shall remain in full force and effect, and the provisions thereof and Exhibits thereto, except as expressly amended herein, shall continue in full force and effect, and the parties hereby expressly ratify and confirm the same.

IN WITNESS WHEREOF, the parties hereto, intending to be fully bound hereby for themselves, successors and assigns, and the undersigned warranting their authority to bind their respective principals, have hereunto set their hands and seals on the day and first hereinabove written.

MONTGOMERY COUNTY, MARYLAND

Patricia C. Cook
Witness

By: Douglas M. Duncan (SEAL)
DOUGLAS M. DUNCAN,
County Executive

SUGARLOAF CITIZENS ASSOCIATION, INC.

W. J. [Signature]
Witness

By: Jane S. Hunter (SEAL)
JANE S. HUNTER,
Treasurer

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

David A. Robinson for
CHARLES W. THOMPSON, JR.,
County Attorney

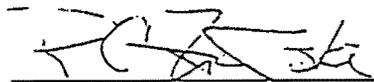
SUGARLOAF CITIZENS ASSOCIATION, INC.

THIS IS TO CERTIFY that, at a regular meeting of the Board of Directors of Sugarloaf Citizens Association, Inc., the "Association," duly held on the 28th day of June, 2000, the Board of Directors of the Association duly voted by resolution introduced, seconded, and appropriately passed by a majority of said Board of Directors, to authorize Jane S. Hunter, Treasurer and immediate past President of the Association:

1. To conduct negotiations with Montgomery County, Maryland, the "County," as authorized agent and officer of the Association, relating to bagging operations of the finished compost product on the site of the Montgomery County Yard Waste Composting Facility;
2. To negotiate the terms of any documents in connection therewith, including:
 - A. Any amendment to the Agreement of Settlement & Compromise dated April 19, 1996, including exhibits thereto, between the Association the County;
 - B. Any amendment to the Lease Agreement between the County as Landlord and the Association as Tenant dated December 27, 1996;
 - C. Any Lease-Back Agreement between the County as Tenant and the Association as Landlord for the use of the Feed Barn located on the premises which is the subject of the aforesaid Lease Agreement;

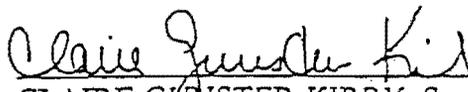
and

3. To execute and acknowledge on behalf of the Association, as a duly authorized agent and Officer of the Association, any and all of the aforesaid documents.



ROBERT ZARNETSKE, President

ATTEST:



CLAIRE GUNSTER-KIRBY, Secretary

Appendix E

Council Resolution 13-1498 Creation of Facilities Implementation Group

Resolution No.: 13-1498

Introduced: November 24, 1998

Adopted: December 1, 1998

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Council President at the Request of the County Executive

Subject: Creation of Facilities Implementation Group

Background

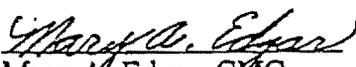
1. The County owns and operates two solid waste facilities in the Dickerson area, the Resource Recovery Facility and the Dickerson Compost Facility.
2. The County owns several properties in the Dickerson area for the Site 2 Landfill. The County has determined it is not necessary to proceed with the construction of this landfill at this time. However, the County will retain and manage the properties. The County also owns property associated with the original Matthews Farm.
3. The County and representatives from the community developed the Facilities Master Plan for the Solid Waste Operations in the Dickerson Area. That plan calls for the creation of an advisory group to provide for comprehensive citizen input concerning land use issues for the life of the solid waste facilities in the area.
4. Creation of the Facilities Implementation Group is referenced in the Comprehensive Solid Waste Management Plan (Section 5.1.3.4.b.). This group is intended to replace the Landfill Working Group, though with a broader scope of activity.

Action

The County Council for Montgomery County, Maryland, approves the following resolution:

Creation of the Facilities Implementation Group is approved, in accordance with the attached, effective December 1, 1998.

This is a correct copy of Council action.


Mary A. Edgar, CMC
Secretary of the Council

Creation of the Facilities Implementation Group

The Department of Public Works and Transportation and the Community of Dickerson would like to establish a citizens advisory group to address community and environmental issues and concerns pertaining to the operations of the County's solid waste facilities located in the Dickerson area. These facilities include the Resource Recovery Facility, the Yard Trim Composting Facility, properties originally purchased for the Site 2 Landfill, and property associated with the original Matthews Farm.

The Facilities Master Plan for the Solid Waste Operations in the Dickerson Area, from here on referred to as *the facilities plan*, issued in August 1997, proposed the creation of such a group to assist the County in implementing the facilities plan. Subsequent discussions with the Landfill Working Group, the President of the Sugarloaf Citizens Association, and the County Council, further verify the value of establishing an ongoing citizen organization with which the County can interact regarding issues of these facility operations.

The following is recommended for establishing this group:

The development of the Site 2 Landfill has been postponed while the County disposes of waste at an out-of-county facility. As part of its comprehensive amendments to the County's Comprehensive Solid Waste Management Plan approved in October 1998, the Council referenced a new citizens advisory committee entitled, "*The Facilities Implementation Group*" (*FIG*). This group is intended to advise the County on solid waste issues of concern to the community in the Dickerson area.

Members to the group will be appointed by the County Executive and approved by the County Council.

Terms of service will be three (3) years, though the first terms when the group is first appointed will be staggered between one (1) and three (3) years to establish a rotation where only four (4) new members will join the organization in any one year.

Any member can be re-appointed for a second term with the approval of the County Executive and the County Council. Any member can reapply for appointment after serving two (2) terms in the appointment period that falls one year after the end of his/her second term.

Rotation members with one (1) vote each include:

- *Representative of Sugarloaf Citizens Association*
- *Representative of For a Rural Montgomery*
- *Representative of Town of Poolesville*
- *Representative of Town of Barnesville*
- *Representative of Solid Waste Advisory Committee*
- *Representative of Upcounty Citizens Advisory Board*
- *Representative of Affected Community*
- *Representative of Affected Community*

- *Representative of Affected Community*
- *Representative of Affected Community*
- *Representative of Affected Community*
- *Representative of Affected Community*

No term limitation, non-voting members:

- *Representative of Operator of Resource Recovery Facility*
- *Representative of Operator of Dickerson Compost Facility*
- *Representative of Operator of PEPCO Facility*
- *Representative of the Montgomery County Department of Public Works & Transportation*

The County will advertise for member applicants; a selection process will include review by representatives of the Department of Public Works and Transportation, the Solid Waste Advisory Committee, and the standing FIG committee. A primary goal in the selection of members to FIG is to establish balanced and broad-based representation of the affected community. Attempts will be made to attract membership from a variety of groups, including the farming community, area residents, those with scientific backgrounds, members of area businesses, and individuals associated with area institutions such as the schools. Recommendations will be submitted to the County Executive for appointment. The County Executive will submit the appointments to the County Council for approval.

Meetings will be held at least quarterly. Meeting minutes will be kept and distributed by the County staff. A quorum (seven voting members) must be present at each meeting for the purpose of voting on actions to be taken; no binding votes may be taken without a quorum present. An annual report will be prepared by the group in September of each year and submitted to the Executive Branch and the County Council no later than October 15 of each year.

The group will advise the County on execution of the policies and strategies set forth in the facilities plan. All meetings of the group will be open public forums and will be advertised in the local newspapers. The group will receive environmental monitoring data in a timely manner, and will review information pertaining to environmental and community impacts with appropriate staff from regulatory agencies and the Department of Public Works and Transportation. The group will coordinate input on concerns from the affected community, and will be considered the primary point of contact for County agencies regarding any issues pertaining to the solid waste facilities located in the Dickerson area. Changes to how the group functions may be established by FIG, subject to the approval of the County Executive and the County Council.

Appendix F

Montgomery County Executive Regulation 6-99AM Expansion of Leaf Vacuuming Collection

Resolution No. 14-701
Introduced: November 28, 2000
Adopted: November 28, 2000

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: County Council

SUBJECT: Approval of Regulation 6-99AM, Expansion of Leaf Vacuuming Collection District

Background

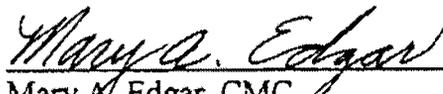
1. On October 31, 2000, the County Council received Regulation 6-99AM, Expansion of Leaf Vacuuming Collection District.
2. The Council must review the regulation under method (1) of Section 2A-15 of the County Code.
3. A regulation proposed under Method (1) is adopted when the County Council approves it by resolution. The regulation takes effect on adoption of the resolution approving it or at a later date specified in the regulation.

Action

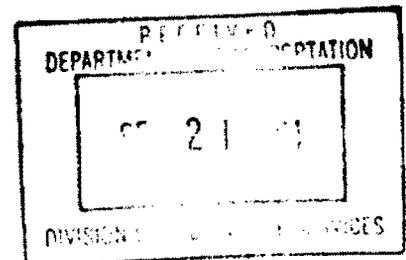
The County Council for Montgomery County, Maryland approves the following resolution:

Regulation 6-99AM, Expansion of Leaf Vacuuming Collection District, is approved.

This is a correct copy of Council action.



Mary A. Edgar, CMC
Clerk of the Council





MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Leaf Vacuuming District	Number 6-99AM
Originating Department Department of Public Works and Transportation	Effective Date November 28, 2000

Montgomery County Regulation on:

LEAF VACUUMING DISTRICT
OFFICE OF THE COUNTY EXECUTIVE

Issued by: County Executive
Regulation No.: 6-99AM
COMCOR, Title _____, Chapter _____

Authority: Montgomery County Code, 1994, Section: 48-47
Council Review: Method (1) under Code Section 2A-15
Register Vol. 16 No. 5

Effective Date: November 28, 2000
Comment Deadline:

Summary: This regulation updates recycling service areas and the recycling service process so as to provide for the curbside collection of leaves by vacuuming and authorized the collection of fees to fund curbside leaf vacuuming services.

Address for comments: Director, Department of Public Works and Transportation
Executive Office Building, 10th Floor
101 Monroe Street
Rockville, Maryland 20850

Staff Contact: John Thompson, Chief
Division of Highway Services
Montgomery County Department of
Public Works and Transportation
(240) 777-7623



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Leaf Vacuuming District	Number 6-99AM
Originating Department Department of Public Works and Transportation	Effective Date November 28, 2000

Background:

Chapter 68 of the Montgomery County Code authorizes the Montgomery County Suburban District. In 1927, the Maryland General Assembly created this special taxing area encompassing the urbanized areas of the lower County. The general purpose of the special taxing area was to provide and fund an enhanced level of services to property owners within the defined geographic area. One of the enhanced services created for the Suburban District was the curbside collection of leaves. The Suburban District was terminated in FY97, but the curbside collection of leaves for certain recycling districts remain. The leaves are collected each year by curbside vacuuming method and are taken to the Dickerson Composting Facility and recycled into compost material. Because this is considered a recycling function of the County's Solid Waste Management Program, the cost of leaf vacuuming services should be recovered through a solid waste service charge to those properties that receive the service.

Information:

Montgomery County Code 1994, Section 48-47(c) (1), provides for the creation of recycling service areas for the collection, processing and marketing of recyclable solid waste. Section 48-47 (c) (2) authorizes the County Council to establish rates or fees for the collection and processing of recyclable solid waste when it sets rates and fees for solid waste management and disposal.

Section 1. Definitions. For the purposes of this regulation, The definitions contained in Montgomery County Code 1994, section 48-1 and the definitions stated below apply:

- (a) "Recycling Service Area" means a geographically designated area for the collection, processing and marketing of recyclable solid waste, the basis for determination of recycling activities may include



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population densities; housing patterns, land use patterns, types of recyclable solid waste generated, and other factors affecting cost-effectiveness.

- (b) "Leaf Vacuuming District" means the geographic area currently identified as a neighborhood/area that consists of 100 or more households (as shown in Exhibit A). Households mean either single or multifamily residences.
- (c) "Leaf Vacuuming Service" means the removal of leaves, by vacuum method, which property owners have placed at the curbside of County rights-of-way.
- (d) "Yard Trim" means all organic solid waste material generated in the yard, including, but not limited to, leaves, grass clippings, plant trimmings, and branches less than 4 inches in diameter.

Section 2. A map showing the Leaf Vacuuming Districts is attached hereto as Exhibit A. Collection of leaves on a twice annual basis will be provided by vacuum method. These recycling service areas are to be known as the Leaf Vacuuming Districts.

- (a) The Leaf Vacuuming Districts may be updated from time to time as areas within the County are included in or excluded from the Leaf Vacuuming Districts.



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Section 3. Leaf Vacuuming Service. Leaf collection in the Leaf Vacuuming Districts will be a vacuuming service at the curb of County or State rights-of-way located within the designated districts. This service is now provided by the Department of Public Works and Transportation, but may be performed by other agents at the discretion of the Department Director, and shall be based on cost-effectiveness of the program.

- (a) Notice of Leaf Vacuuming Service shall be provided twice annually, primarily during the months of November and December.
- (b) All leaves placed at the curb along County or State rights-of-way within the Leaf Service District during the specified period shall be collected by vacuum method.
- (c) Leaves will be the only type of yard trim collected by the leaf vacuuming service.
- (d) A civic association or organized group representing an existing neighborhood/area may petition the County Executive (CE) for participation in the Leaf Vacuuming Service. The petition must be submitted by April 15 of the year prior to desired services to be eligible for services in the following calendar year.
- (e) The organized group or civic association must deliver to the Director of the Department of Public Works and Transportation (DPWT), a written petition signed by owners of at least 80% of



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the households in the neighborhood/area to be included in the program. Single family units and multifamily units are counted equally in the petition process. The petition should be inclusive of a specific description of the boundaries of the affected neighborhood/area and the number of households in the neighborhood/area to be added to the Leaf Vacuuming Service. An information sheet will be provided to the neighborhood/area requesting consideration into the Leaf Vacuuming Service which will outline the particulars of the program. In the information sheet, the Director, DPWT, will notify petitioners that collection will take place in November and December of each year (weather permitting), and will include the approved fees for the prior year for single and multifamily units.

- (f) The neighborhood/area proposed to be included must consist of 100 or more households; or individual streets in neighborhoods with less than 100 households may be added to the program on a block-by-block basis where practical and directly adjacent to an existing collection area. In this instance, criteria (e) will apply.
- (g) After receiving the petition, the Director, DPWT, will determine if the request meets the minimum criteria established in (e) and (f). Upon verification that the request meets the minimum criteria, the Director will hold a hearing to receive public comments on the petition within 120 days of that date. Notice of the hearing must be given to the originator of the petition in the affected neighborhood/area and must be advertised in a newspaper of general circulation in the County at least ten days before the hearing.



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- (h) Based on the comments received from the public testimony, the Director, DPWT, will recommend approval or denial of the request to the CE.
- (i) Within ninety days after the hearing, the CE will approve or disapprove the Director's recommendation. Notice of the CE's decision must be given to the County Council and to each person in the affected neighborhood/area.
- (j) All non-government costs related to entry into the Leaf Vacuuming Service, to include, but not limited to, the postage, printing, etc. must be borne by the civic association or organized group of the requesting neighborhood/area.
- (k) Property owners in the neighborhoods/areas that are added to the collection area will be assessed the current rate for receiving the service.
- (l) Operational requirements of the County will be considered when determining participation in the Leaf Vacuuming Service to include consideration of the expansion of the program in the context of the tonnage limit at the Composting Facility.
- (m) Any neighborhood/area in the Leaf Vacuuming Service can leave the program by mutual agreement of the County and the neighborhood/area. A neighborhood/area desiring to leave the Leaf Vacuuming Service must have the support of not less than 80% of the households in the neighborhood/area before soliciting the agreement of the County.
- (n) The Director, DPWT, or his/her designee may deviate from the minimum criteria for determining a neighborhood's/area's participation in the Leaf Vacuuming



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Service as found herein when it is deemed to be in the best interest of the County. Reasons for deviation from the minimum criteria may include, but are not limited to:

- Inappropriate boundaries for efficient operation of leaf collection services, such as separation by a stream valley or major roadway;
- Operational issues that may delay an area's entry into the Leaf Vacuum Program, such as insufficient resources.

Section 4. Collection of Fee for Leaf Vacuuming Service.
The method for calculation and collection of fees for leaf collection service shall be in accordance with the provisions of sections 48-29 (d) which requires that charges must correspond as closely as practicable to the actual cost to the County to perform the service.


Douglas M. Duncan
County Executive

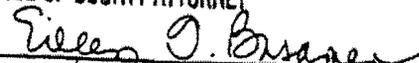
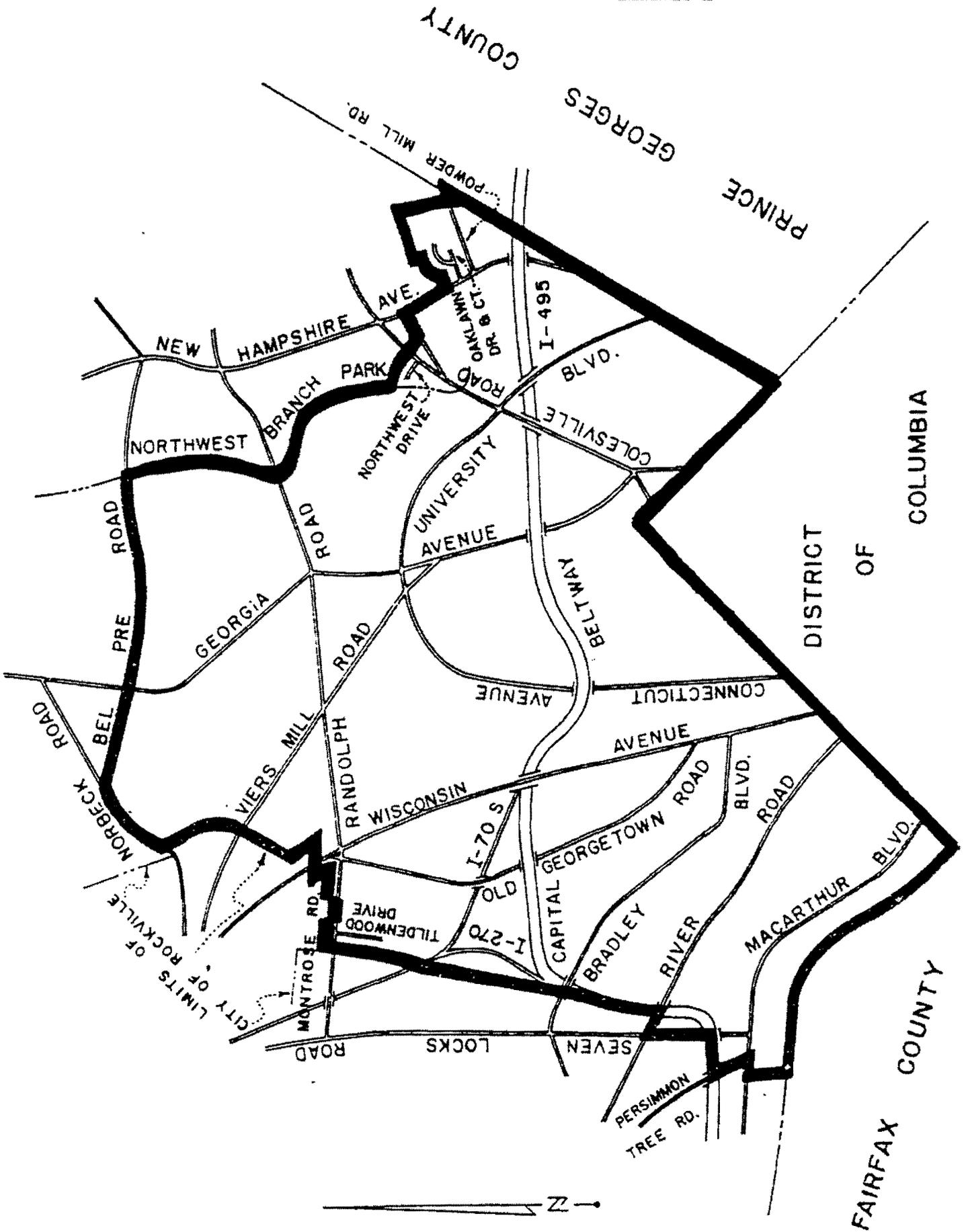
APPROVED AS TO FORM AND LEGALITY
OFFICE OF COUNTY ATTORNEY
BY 
DATE 9/29/2000

EXHIBIT A

MUNICIPALITY COUNTY SUBURBAN DISTRICT



Appendix G

**Recommendations Provided by the Maryland–National
Park and Planning Commission (M-NCPPC) and the
Washington Suburban Sanitary Commission (WSSC)**

Appendix H

County Executive Regulation 7-12

Resolution No.: 17-566
Introduced: October 16, 2012
Adopted: October 16, 2012

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: County Council

SUBJECT: Executive Regulation 7-12, Solid Waste and Recycling

Background

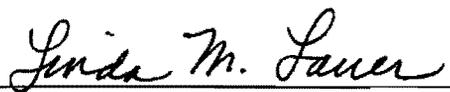
1. Section 48-47 of the County Code provides that the County Executive must develop a recycling program and that the program may be established by Executive Regulation.
2. On September 11, 2012, the Executive transmitted to the County Council Executive Regulation 7-12. Regulation 7-12 establishes a new recycling goal for Montgomery County's recycling program as well as the method by which the level of recycling achieved in the County is measured.

Action

The County Council for Montgomery County, Maryland approves the following resolution:

Executive Regulation 7-12, Solid Waste and Recycling, is approved.

This is a correct copy of Council action.



Linda M. Lauer, Clerk of the Council



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject: SOLID WASTE AND RECYCLING	Number: 7-12
DEPARTMENT OF ENVIRONMENTAL PROTECTION	Effective Date: October 16, 2012

Montgomery County Regulation on:

SOLID WASTE AND RECYCLING

Authority: Montgomery County Code, 2004, Chapter 48, Section: 48-47
Council Review: Method (1) under Code Section 2A-15
Register Vol. 29 Issue 7

Effective Date: October 16, 2012
Comment Deadline: July 31, 2012

Summary: The proposed regulation specifies the standards and methods by which, and the base from which, the goal of the recycling program and the level of recycling that the program achieves are measured.

Address for comments: Department of Environmental Protection
Division of Solid Waste Services
Executive Office Building
101 Monroe Street, 6th Floor
Rockville, Maryland 20850

Staff contact: Eileen Kao
Chief, Waste Reduction and Recycling Section
240-777-6406



MONTGOMERY COUNTY EXECUTIVE REGULATION

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Subject:

SOLID WASTE AND RECYCLING

Number:

7-12

Effective Date:

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Background: Council Resolution 11-733 (adopted March 22, 1988) established a recycling goal of 27 percent by 1992, and 30 percent prior to any expansion of the resource recovery facility. Since that date, the County's recycling goal has been reconsidered, amended, and re-adopted a number of times through the County's Comprehensive Solid Waste Management Plan. These regulations are to establish the County's recycling goal, and to further implement the provisions of Montgomery County Code, Chapter 48, Article V.

Section 1. Definitions. Terms defined herein are for purposes of this Article only. The terms used are as defined in Chapter 48 of the Montgomery County Code and as defined in this section:

- (a) **"Department"** means Montgomery County Department of Environmental Protection.
- (b) **"Director"** means Director of the Montgomery County Department of Environmental Protection.
- (c) **"Recycling"** means any process by which materials are diverted from the solid waste stream and are collected, separated, processed and returned to the economic mainstream in the form of raw materials or product for reuse.
- (d) **"Solid waste stream"** means solid waste as defined in Chapter 48-1 of the Montgomery County Code.

Section 2. Recycling Goal

Montgomery County's goal is to achieve, maintain or exceed recycling 70 percent of the solid waste stream generated in the County by end of Calendar Year 2020.

Section 3. Method of Measurement

Beginning with Calendar Year 2012 and for each subsequent calendar year, Montgomery County will utilize the State of Maryland methodology as stipulated in the Maryland Department of the Environment guidelines that meet the requirements of the Maryland Recycling Act for measuring its recycling rate, and will include the Source Reduction Credit used to calculate the Waste Diversion Rate by the State of Maryland.



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Section 4. Other Indicators of Recycling

The Department will also calculate recycling progress and achievement using additional indicator(s), such as recycling capture rates. The recycling capture rate takes into account the amount of recyclable materials that exist within the solid waste stream that are mandated to be recycled, and estimates how much of these materials are actually recycled.

Section 5. Administration

Responsibilities of the Department.

Confidentiality. Subject to applicable law, the Department must maintain the confidentiality of any information required to be provided in these regulations that identifies markets or customers. The Department must not, unless required by law to do so, disclose this information to third parties other than in nonspecific summary form in general recycling and solid waste analyses. This requirement does not prohibit the Department from using this information in preparing a summary analysis of waste reduction and recycling activities in the County.

Section 6. Enforcement

These regulations may be enforced in accordance with Montgomery County Code 2004, as amended, Section 48-49.

Section 7. Construction

This regulation must be construed liberally to permit the Department to effectuate the purposes of Article V (recycling) of Chapter 48 of the Montgomery County Code (2004), as amended, and the policies of the County's Comprehensive Solid Waste Management Plan.

APPROVED AS TO FORM AND LEGALITY.
OFFICE OF COUNTY ATTORNEY
BY [Signature]
DATE August 31, 2012

[Signature]
Isiah Leggett
County Executive

Appendix I

Executive Regulation 15-04AM, “Residential and Commercial Recycling” and Executive Regulation 18-04, “Collection, Transport, and Disposal of Solid Waste”



MONTGOMERY COUNTY EXECUTIVE REGULATION

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Subject Residential and Commercial Recycling	Number 15-04AM
Originating Department DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	Effective Date February 8, 2005

Montgomery County regulation on:

SOLID WASTE AND RECYCLING

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

REGULATION

Issued by: County Executive

Regulation No. 15-04AM

COMCOR 48.00.03, Solid Waste and Recycling, Chapter 48

Authority: Montgomery County Code, 1994, Sections: 48-6, 48-24 and 48-51

Supersedes: Regulation 109-92AM

Council Review: Method (1) under Code Section 2A-15

Register Vol. 21 No. 9

Effective Date: February 8, 2005

Sunset Date: None

Summary:

The proposed regulation describes the residential recycling requirements for single-family and multi-family dwellings (including reporting requirements for multi-family property owners), nonresidential recycling and reporting requirements, and recycling requirements for collectors of solid waste and recyclable materials.

Comment deadline: September 30, 2004

Effective date:

Address for comments:

Director, Department of Public Works and Transportation
Executive Office Building
Tenth Floor
101 Monroe Street
Rockville, Maryland 20850

Staff contact:

Eileen Kao, Recycling Coordinator
240-777-6400



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Subject Residential and Commercial Recycling	Number 15-04AM
Originating Department DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	Effective Date February 8, 2005

Background Information:

Bill 109-92AM, Solid Waste - Recycling, was enacted on March 23, 1992, with an effective date of January 13, 1994. The County Comprehensive Solid Waste Management Plan for the years 1998 - 2007 was adopted by Council Resolution 13-418, adopted August 4, 1998, and was reconsidered, amended, and re-adopted by Council Resolution 13-1418 dated October 6, 1998, respectively. These regulations are to further update the provisions of Bill 109-92AM and implement the Solid Waste Management Plan.



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Subject Residential and Commercial Recycling	Number 15-04AM
Originating Department DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	Effective Date February 8, 2005

Section 1. Definitions. Terms defined herein are for purposes of this Article only. The terms used are as defined in Chapter 48 of the Montgomery County Code and as defined in this section:

- (a) **"Acceptable"** means items which conform to prevailing and customary standards of existing recycling markets.
- (b) **"Business"** means any enterprise, individual, corporation, partnership (limited or general), sole proprietorship or other entity or person, including institutions, health care facilities, construction sites, the Federal Government and other government agencies, to the extent authorized by law.
- (c) **"Commingled materials"** mean acceptable items such as aluminum cans and foil products, bi-metal cans, glass bottles and jars, and plastic narrow neck bottles, which are not separated by type, but are mixed together in one container.
- (d) **"Department"** means Montgomery County Department of Public Works and Transportation.
- (e) **"Director"** means Director of the Montgomery County Department of Public Works and Transportation.
- (f) **"Disposal facility"** means the Montgomery County Transfer Station or any other location operated by the County where solid waste is taken for disposal.
- (g) **"Employee"** means any person working on-site 20 or more hours per week directly for the business or for an entity affiliated with the business; and any person working on-site for the business or an entity affiliated with the business as an agent or independent contractor for more than six months in any calendar year.
- (h) **"Generator"** means the owner or occupant of any dwelling unit where solid waste is generated, and the owner or occupant of any other business, entity or institution at, from, or by which solid waste is generated.
- (i) **"Market"** means any business that receives processed or unprocessed source separated or commingled recyclable solid waste and utilizes the material as a finished product or as a raw material for a manufacturing process.



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- (j) **"Mixed paper"** means acceptable paper items which are not separated by type, but are mingled and collected together. These items include white paper, colored paper, corrugated cardboard, boxboard, newspapers and inserts, magazines, catalogs, telephone directories, paperback books, unwanted mail, and other clean, dry paper.
- (k) **"Recyclables"** means those materials in the solid waste stream which are collected, separated, processed and returned to the economic mainstream in the form of raw materials or product for reuse.
- (l) **"Recycling"** means any process by which materials are diverted from the solid waste stream and are collected, separated, processed and returned to the economic mainstream in the form of raw materials or product for reuse.
- (m) **"Recycling plan"** means a plan describing a program for source reduction and recycling.
- (n) **"Scrap metal"** means acceptable items consisting of metal and/or predominantly metal materials. These items include washers, dryers, refrigerators, air conditioners, dishwashers, sinks, stoves, freezers, furnaces, hot water heaters, trash compactors, iron furniture, doors, cabinets, humidifiers/dehumidifiers, bikes, swing sets, aluminum lawn chairs, shower stalls, and disassembled metal sheds.
- (o) **"Solid waste stream"** means solid waste as defined in Chapter 48-1 of the Montgomery County Code from the point of generation to disposal.
- (p) **"Sorted"** means a category of recyclable materials which are further separated into sub-categories or groupings in preparation for recycling. For example, generators may separate paper by grade or type.
- (q) **"Source separation"** means the process of separating recyclables from the solid waste stream at the point of generation and placing them into containers or arranging them in a manner specified by the County or by a valid collection contract for reuse or recycling.
- (r) **"Unavailable"** means non-existent.
- (s) **"Unit"** means housing unit.



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- (t) "Waste reduction /source reduction" means reducing the amount of waste generated at the source or point of generation.
- (u) "Yard trim" means leaves, grass, garden trimmings and brush.

Section 2. Waiver from these Regulations, subject to the requirements of 48-3(c) of the Montgomery County Code

- (a) The Director may grant temporary or permanent waivers from participation in the recycling program to individuals who are physically impaired and who are not reasonably able to undertake the activities required by this regulation.
- (b) The Director may also grant a temporary partial waiver for all generator categories for particular materials which would otherwise have to be recycled where markets for these materials are unavailable.
- (c) Persons or entities for whom compliance with Section 3 subsection (b) and subsection (c) herein would be an unreasonable hardship may apply to the Director for a temporary or permanent waiver in a manner prescribed by the Director.
- (d) For entities subject to recycling plan or report requirements, a request for a waiver must be submitted with the recycling plan and/or annual report. If the plan/report has already been filed, the request must accompany an amended plan/report. If the request for a waiver is denied, the plan and/or annual report must be resubmitted within 30 days from the date of denial, to include the materials for which a waiver was sought unless a plan and/or annual report on file already addresses those materials. Those persons or entities requesting a waiver must specify the materials requested to be waived from recycling requirements, the duration of the requested waiver, reason(s) for the request at the time they submit it, and include any documentation necessary to justify a waiver.



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- (1) The Director must consider the following criteria in granting a waiver:
 - (A) The unavailability of markets for the material identified;
 - (B) Extreme financial hardship due to significant disparity between the costs of recycling an identified material and the costs of disposal of that material; or
 - (C) The unavailability of an on-site or proximate off-site location to prepare and store materials for recycling.

Section 3. Solid Waste Reduction and Recycling Program

(a) Single-family residential recycling program, including dwellings having 6 or fewer dwelling units.

- (1) Recycling services areas.
 - (A) The entire County is a recycling service area for the collection of mixed paper; commingled materials; yard trim; Christmas trees; and scrap metals.
 - (B) Recycling service sub areas are designated on a map maintained by the Department and available upon request. All residents provided County recycling service must recycle in accordance with these regulations, Chapter 48 of the Montgomery County Code (1994), as amended, and the schedule for their recycling service sub area maintained and publicized by the Division of Solid Waste Services.
- (2) Preparation of material for recycling collection.
 - (A) Mixed paper. Mixed paper must be separated from other solid waste and placed in wheeled carts provided by the County, in paper bags, in small cardboard boxes or tied with string strong enough to support the weight of the bundle and prevent dispersion. The total weight of each bag, box or bundle must not exceed 45 gallons in volume and 60 pounds in weight. A County supplied wheeled cart does not have a weight limit and can have up to a 100 gallon capacity. Mixed paper contaminated by garbage or other putrescible material must not be included for recycling.



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- (B) Commingled materials. All commingled materials must be separated from other solid waste and placed in a County approved container. Lids, tops, and any loose food or liquid must be removed.
- (C) Yard trim. Grass and leaves must be placed in containers or large paper bags labeled "yard trim". Containers or bags must not exceed 45 gallons in volume and 60 pounds by weight. Brush must not exceed 4 inches in diameter and 6 feet in length, and must be placed in labeled containers or paper bags or tied in bundles no greater than 36 inches in diameter. Plastic bags must not be used to contain any yard trim or Christmas trees. Christmas trees must have all ornaments and metal objects removed.
- (3) Collection requirements.
- (A) Location. Materials to be recycled must be placed within 10 feet of the publicly maintained right-of-way closest to the dwelling. Materials must not be placed in a manner that interferes with parking or vehicular and pedestrian traffic.
- (B) Alternate location. Residents for whom placement in accordance with paragraph (A) would be a hardship may apply to the Director for permission to use an alternate location. The Director may set a time limit on any permission granted. Any recycling container used at an approved alternate location must be identified, as provided by the Director, and must be visible from the publicly maintained right-of-way.
- (C) Time limit. Materials prepared for recycling must be set out for collection no earlier than 5:00 p.m. before the designated day of collection, and no later than 7:00 a.m. on the designated day of collection. Recycling containers must be removed from the collection location no later than 5:00 p.m. the day after that designated for collection.
- (D) Litter. Owners and occupants are responsible for keeping the area around recycling containers litter free.



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(b) **Multi-family residential recycling program - Buildings with 7 or more dwelling units.**

- (1) Applicability. This section is applicable to all generators, property owners, property managers, whether individuals or entities, and common ownership associations, including boards of condominium associations and cooperative housing projects (as those terms are defined in state law) of multi-family dwelling units that have 7 or more units ("multi-family entities"). This section is not applicable to facilities receiving collection as described in (a) or to businesses covered under (c).
- (2) Multi-family entities and residents must recycle. Materials which are required to be recycled are: mixed paper; commingled materials; yard trim; Christmas trees; and scrap metal items. Persons or entities covered by this section are encouraged to recycle any other materials for which there is a viable market.
- (3) Plan and report requirements.
 - (A) Designation of responsible agent. Multi-family entities subject to this section must designate an agent responsible for carrying out the plan and report requirements of this section. In the case of multi-family dwelling units covered by a common ownership association, the association representative, as listed in the Office of Common Ownership Properties, is responsible. In the case of leased units or facilities, the property owner or representative, as listed with the Montgomery County Office of Landlord and Tenant Affairs or as confirmed through other sources, is responsible.
 - (B) Waste reduction and recycling plan.
 - 1. Who must submit. Multi-family dwellings having 101 or more units must submit a waste reduction and recycling plan demonstrating how the entity will recycle or reduce the amount of solid waste going to disposal facilities with the goal of reducing solid waste for disposal by at least 50% annually, by volume or weight, for each facility. Multi-family dwellings having 100 or fewer units must submit a waste reduction and recycling



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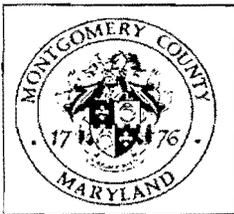
Subject Residential and Commercial Recycling	Number 15-04AM
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plan demonstrating how the entity will recycle or reduce the amount of solid waste going to disposal facilities with the goal of reducing solid waste for disposal by at least 50% annually, by volume or weight, within 60 days from receipt of a written request for a plan from the Department.

2. Contents of plan. The plan must be submitted on forms provided by the Department and must include, at a minimum, description of facility by type; name, address, and telephone number of contact person responsible for on-site recycling program; list of materials to be recycled; name and address of person/collection company providing recycling collection service; sites where materials are delivered; and description of waste reduction activities.

(C) Annual report on waste reduction and recycling activities.

1. Who must submit. All multi-family entities having 101 or more units must prepare and submit to the Department, on or before February 1 of each year, an annual waste reduction and recycling report for each facility covering the previous calendar year. Multi-family entities having 100 or fewer units must prepare and begin submission of initial annual waste reduction and recycling reports within 60 days from receipt of a written request for reports from the Department. From that time forward, each year, all of these entities must prepare and submit to the Department on or before February 1 annual waste reduction and recycling reports covering the previous calendar year.
2. Contents of report. The annual report must be submitted on a form provided by the Department and must include tonnages of materials collected for recycling and for solid waste disposal, and any changes from the approved recycling plan required under Section 3(b)(3)B(2) of this regulation. If recyclable materials are self-hauled to a recycling facility, the multi-family entity must obtain scale house tickets and provide these as documentation of quantity recycled for reporting requirements. Only in the event that scale house tickets are not obtainable, may receipts and/or



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other proof of quantity recycled be substituted. The annual report must also include a description of the multi-family entity's efforts to educate tenants, residents and/or employees about its recycling program.

3. Review Process. Annual reports will be reviewed, field verified and audited by the Department through on-site evaluation.
- (4) Certification. All reports and plans must be signed by a person authorized to bind the multi-family entity, and must certify that the information is correct to the best of his or her knowledge. Examples of authorized persons include the property owner or responsible agent.
- (5) Verification of information. Multi-family entities must maintain, and make available, upon request, to the Department for inspection and copying during normal business hours, any contracts and invoices for collection and disposition of materials to be recycled for a period covering the most recent five (5) years. Contract prices and other such financial information may be deleted from the materials provided.
- (6) Containers. Containers for all required recyclable materials in adequate sizes and quantities must be placed in each location where trash containers are located, and must be clearly labeled to indicate the appropriate material(s) to be placed inside for recycling. All containers must be located within reasonable and convenient proximity to all dwelling units, and to any offices, clubhouses, recreation facilities, and other uses on-site. In addition, wherever vending machines dispensing products in recyclable packaging are located, recycling containers for those materials must be located in close and convenient proximity.
- (7) Property Owner of Multi-family Properties. Property owners of multi-family entities must make recycling collection service and storage space for recyclable solid waste available to tenants in compliance with these regulations and Section 48-24 of the Montgomery County Code.



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(8) Collectors Servicing Multi-Family Entities.

(A) Collectors must collect and deliver to a recycling facility materials that have been source separated from the solid waste stream, unless the recyclable materials are not acceptable. If a collector determines that the recyclable materials are not acceptable then the collector must inform the generator or responsible agent in writing using a form designated by the County, keep a copy on file, and send a copy to the Department. The collector must indicate the name of the property, name of the responsible agent notified, date, time, address, the nature of the problem and suggested remedy and specify a collector contact name and phone number for additional information.

(B) Collectors must provide a copy of their current Montgomery County Collector's License to each customer at least once annually, and must keep a copy of such notice and the date provided to its customer in their business records. If a copy has not yet been provided and a customer requests one, the collector must provide the customer with a copy of its license within 3 business days.

(9) Contract Services.

(A) A multi-family entity, when contracting for collection service of recyclable materials must use a currently licensed collection company that has a license to collect and transport recyclable solid waste in the County ("Licensed Collector").

(B) A multi-family entity contracting for collection services with a Licensed Collector must maintain for inspection a copy of the Licensed Collector's license. A property manager or responsible agent must produce a copy of the license upon request by the Department within 3 business days.



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(c) **Commercial recycling and waste reduction program –
Generators/Businesses.**

- (1) Business Size. For the purposes of this subsection (c), businesses are classified into the following size categories:
Large businesses. All businesses with 250 or more employees.
Medium-sized businesses. All businesses with 100-249 employees.
Small businesses. Businesses with fewer than 100 employees.
- (2) Applicability. This section applies to all generators and businesses, which must recycle the materials described in Section 3(c)(3) herein. All businesses in Montgomery County must comply with these recycling regulations within 30 days of operating within the County.
- (3) Businesses and employees must recycle. Materials required to be recycled by businesses are: mixed paper or sorted paper; commingled materials (which may be sorted); yard trim; Christmas trees; and scrap metal items. Businesses are encouraged to recycle any other materials for which there is a viable market.
- (4) Verification of information. Businesses must maintain, and make available, upon request, to the Department for inspection and copying during normal business hours, any contracts and invoices for collection and disposition of materials to be recycled for a period covering the most recent five (5) years. Contract prices and other such financial information may be deleted from the materials provided.
- (5) Requirement for a waste reduction and recycling plan.
 - (A) Applicability.
 1. Large and medium-sized businesses. All large and medium-sized businesses must prepare a waste reduction and recycling plan demonstrating how the business will recycle or reduce the amount of solid waste going to disposal facilities with the goal of reducing solid waste for disposal by at least 50% annually, by volume or weight.



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2. Small businesses. Small businesses must prepare a waste reduction and recycling plan demonstrating how the business will recycle or reduce the amount of solid waste going to disposal facilities with the goal of reducing solid waste for disposal by at least 50% annually, by volume or weight, within 60 days from receipt of a written request for a plan from the Department.
 3. Property owner of multi-tenant facilities. Owners of multi-tenant facilities must file a waste reduction and recycling plan covering facilities in their entirety, and including information for all tenants, demonstrating how the businesses will recycle or reduce the amount of solid waste going to disposal facilities with the goal of reducing solid waste for disposal by at least 50% annually, by volume or weight.
 4. Multiple Business Locations. Each business required to submit a plan and/or report for multiple locations in the County may submit a single plan and/or report to cover multiple locations, or may submit an individual plan and/or report for each separate location demonstrating how the business will recycle or reduce the amount of solid waste going to disposal facilities with the goal of reducing solid waste for disposal by at least 50% annually, by volume or weight, in compliance with these regulations. Any plan and/or report covering multiple locations must list each property address subject to it, and each location covered by the plan and/or report must maintain a copy of the plan and/or report on the premise.
- (B) Plan updates. A business must update its plan if there are changes to the waste reduction and recycling activities of the business or if required as a result of revisions to these regulations.



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- (C) Contents of plan. The waste reduction and recycling plan must be on forms provided by the Department and must include the following:
1. A description of the business, including;
 - a. Name and address of the property owner and the reporting business.
 - b. Names of all entities affiliated with the business, including any parent and subsidiary business.
 - c. Number of full-time and part-time employees.
 - d. Number of square feet occupied by the business.
 - e. The activities conducted by the business.
 2. A description of the business' current solid waste generation, including:
 - a. Estimated tonnage of all solid waste produced.
 - b. Identification of recyclable solid waste defined in subsection (c)(3) above.
 3. A description of the business' waste reduction and recycling methods.
 4. Name(s) of the person(s) responsible for coordinating recycling and waste reduction activities, preparing the annual report, and for responding to the Department on actions concerning implementation and enforcement of these regulations.



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5. Name and phone number of the licensed collector responsible for collecting the materials to be recycled and sites where materials are delivered.
- (6) Requirement for an annual report on waste reduction and recycling activities.
- (A) Applicability.
1. Large businesses. Each year all large-sized businesses must prepare and submit to the Department on or before February 1 annual waste reduction and recycling reports covering the previous calendar year.
 2. Medium-sized businesses. Each year, all medium-sized businesses must prepare and submit to the Department on or before March 1 annual waste reduction and recycling reports covering the previous calendar year.
 3. Small businesses. Small-sized businesses must prepare and begin submission of initial annual waste reduction and recycling reports within 60 days from receipt of a written request for reports from the Department. From that time forward, each year, all of these small businesses must prepare and submit to the Department on or before March 1 annual waste reduction and recycling reports covering the previous calendar year.
 4. Property owner of multi-tenant facilities. Owners of multi-tenant facilities must file annual waste reduction and recycling reports covering facilities in their entirety, and including information for all tenants. Each year, owners must prepare and submit to the Department on or before March 1 annual waste reduction and recycling reports covering the previous calendar year.



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- (B) Review Process. Annual reports will be reviewed, field verified and audited by the Department through on-site evaluation.
- (C) Contents of the report. The annual report must include the following information on waste reduction and recycling activities conducted between January 1 and December 31 of the previous calendar year:
1. Any change in the description of the business as submitted in the waste reduction and recycling plan or most recent annual report, including:
 - a. The purpose of, and activities conducted by, the business.
 - b. The number of full-time and part-time employees associated with the business.
 - c. The number of square feet occupied by the business.
 2. Identification of the total annual tonnage of solid waste generated and the annual tonnage of each type of material being reduced or recycled.
 3. Name and phone number of the licensed collector responsible for collecting the materials to be recycled and sites where materials are delivered.
 4. If recyclable materials are self-hauled to a recycling facility, the business must obtain scale house tickets and provide these as documentation of quantity recycled for reporting requirements. Only in the event that scale house tickets are not obtainable, may receipts and/or other proof of quantity recycled be substituted.
 5. A description of the progress in waste reduction and reuse efforts undertaken by the business.



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6. A description of the property management's or business' efforts to educate tenants and/or employees about its recycling program.
- (D) Certification. All reports and plans must be signed by a person authorized to bind the business, and must certify that the information is correct to the best of his/her knowledge. Examples of authorized persons include a corporate officer (President, Vice-President, Chief Administrative Officer, Chief Operating Officer or their designee) or owner of the business.
- (7) Containers. The owner or operator of each business must place containers for all required recyclable materials in adequate sizes and quantities in each location where trash containers are located, and must clearly label each container to indicate the appropriate material(s) to be placed inside for recycling. All containers must be located within reasonable and convenient proximity to all buildings and other uses on-site. In addition, any business that sells or provides food or beverages in recyclable containers for on-site consumption must provide an adequate size and number of recycling containers for use by consumers, and wherever vending machines dispensing products in recyclable packaging are located, recycling containers for those materials must be located in close and convenient proximity.
- (8) Property owner of commercial properties. Property owners must make recycling collection service and storage space for recyclable solid waste available to tenants in compliance with these regulations and Section 48-24 of the Montgomery County Code.
- (9) Collectors servicing commercial properties.
- (A) Collectors must collect and deliver to a recycling facility materials that have been source separated from the solid waste stream, unless the recyclable materials are not acceptable. If a collector determines that the recyclable materials are not acceptable then the collector must inform the generator or responsible agent in writing using a form designated by the County, keep a copy on file, and send a copy to the Department. The collector must indicate the name of the business, name of the responsible agent notified, date, time, address, the nature of the problem and suggested remedy and specify a collector contact name and phone number for additional information.



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(B) Collectors must provide a copy of its current Montgomery County Collector’s License to each customer at least once annually, and must keep a copy of such notice and the date provided in their business records. If a copy has not yet been provided, and a customer requests one the collector must provide the customer with a copy of its license within 3 business days.

(10) Contract Services. Businesses that contract for recycling collection service are required to use a County-licensed collection company.

(A) A business, regardless of employee size or type, when contracting for collection service of recyclable materials must use a collection company that has a license to collect and transport recyclable solid waste in the County (“Licensed Collector”).

(B) A business contracting for collection services with a Licensed Collector must maintain for inspection a copy of the Licensed Collector’s license. A property manager or responsible agent must produce a copy of the license upon request by the Department within 3 business days.

Section 4. Administration

(a) Responsibilities of the Department.

(1) Forms. The Department must provide any forms, as appropriate, that assist multi-family dwellings with 7 or more units and businesses in meeting the requirements of these regulations.

(2) Confidentiality. Subject to applicable law, the Department must maintain the confidentiality of any information required to be provided in these regulations that identifies markets or customers. The Department must not, unless required by law to do so, disclose this information to third parties other than in nonspecific summary form in general recycling and solid waste analyses. This requirement does not prohibit the Department from using this information in preparing a summary analysis of waste reduction and recycling activities in the County.



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Section 5. Enforcement

These regulations may be enforced in accordance with Montgomery County Code 1994, as amended, Section 48-49.

Section 6. Construction

This regulation must be construed liberally to permit the Department to effectuate the purposes of Article V (recycling) of Chapter 48 of the Montgomery County Code (1994), as amended, and the policies of the County's Comprehensive Solid Waste Management Plan.

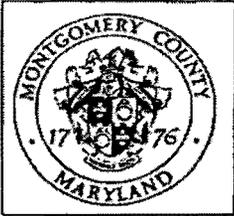
Handwritten signature of Douglas M. Duncan in black ink.

Douglas M. Duncan
County Executive

APPROVED AS TO FORM AND LEGALITY
OFFICE OF COUNTY ATTORNEY

BY Handwritten signature of the County Attorney.

DATE 2/2/05



MONTGOMERY COUNTY EXECUTIVE REGULATION

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Subject Collection, Transport and Disposition of Solid Waste	Number 18-04
Originating Department: DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	Effective Date February 8, 2005

Montgomery County Regulation on:

**COLLECTION, TRANSPORT AND DISPOSAL OF SOLID WASTE
OFFICE OF THE COUNTY EXECUTIVE**

Issued by: County Executive
Regulation No. 18-04

Authority: Montgomery County Code, 1994, Chapter 48, specifically Section 48-51
Supersedes: N.A.

Council Review: Method (1) under Code Section 2A-15
Register Vol. __, No. __

Effective Date: February 8, 2005
Comment Deadline: October 31, 2004

Summary: This regulation establishes certain requirements pertaining to the collection, transport and disposition of solid waste and recyclable materials.

Address for comments: Department of Public Works and Transportation
Executive Office Building
101 Monroe Street, Tenth Floor
Rockville, MD 20850

Staff Contact: William F. Davidson
240-777-6409



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Subject Collection, Transportation, and Disposition of Solid Waste	Number 18-04
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Background Information:

Council Resolution 15- 608, adopted May 19, 2004, called for the implementation of a ban on the disposal of mixed paper and old corrugated cardboard, preceded by a six month planning period and a twelve month technical assistance and monitoring period through an amendment to the Ten-Year Plan and requested that the County Executive propose revisions to existing recycling regulations. Proposed Executive Regulation 15-04, noticed in the Register on September 1, 2004, achieves these objectives by amending Executive Regulation 109-92-AM as requested. That proposed regulation expands the list of materials required to be recycled and applies it to all sectors (single family, multifamily, and commercial); it also improves existing recycling plan and reporting requirements. This companion regulation complements ER 15-04 by clearly establishing roles and responsibilities for licensed Haulers and Collectors and all other persons using County acceptance facilities for the disposal of solid waste. It also provides the first step toward implementing the actions outlined in the draft Ten-Year Plan currently before the Council for review. Consistent with the Ten-year Plan and the Council Resolution, many of these provisions will not become effective for at least one year from passage in order to provide time for significant preparation, education and outreach efforts as recommended.



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Section 1. Definitions. The terms used are as defined in Chapter 48 of the Montgomery County Code, and as may be amended, and as defined in this section:

- (a) **“Acceptable for Disposal”** means solid waste excluding recyclables which is otherwise appropriate for handling at a solid waste acceptance facility.
- (b) **“Recyclables”** means materials of the type required to be recycled pursuant to any regulation issued under Chapter 48.
- (c) **“Disposal Facility”** means the Montgomery County Transfer Station or any location operated by the County which accepts solid waste for disposal.
- (d) **“Recycling Facility”** means a facility which is able to accept and process recyclable materials in accordance with customary standards and applicable law.
- (e) **“Registration”** means, for the purposes of this regulation, a permit issued for a vehicle authorized to transport or collect solid waste.

Section 2. Collection

- (a) Collectors must separately collect waste set out for disposal from materials set out in separate containers for recycling collection. If the same vehicle is used to collect both types of waste (e.g. split body) then the separation must be maintained during collection, transportation and off-loading at respective Disposal and Recycling Facilities.
- (b) Any Collector who observes, or reasonably should have observed, recyclables in solid waste that have been set out for disposal must, notify the customer responsible by mailing notice of the problem to the customer on the same or following business day and on the same day mail a copy of the customer notice to the Department. In lieu of mailing copies to the Department, collectors having credit accounts with the Department may file electronic reports using their billing account on the Department’s web site in a format specified by the Department for that purpose, but only if the collector transmits the electronic notice no later than the next business day following the date of the incident and provided that the collector retains paper copies of electronic notices for inspection by the County for at least three years at the collector’s place of business. Each such notice under this paragraph, whether written or electronically transmitted, must be in a format designed by the Department, indicate the service location, name of the responsible agent notified, date of the offending observation, specific type of recyclables observed, suggested remedy, and a collector contact name and phone number for additional information.



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- (c) Collectors must not collect recyclables observed, or which should reasonably have been observed, to be mixed in with trash set out for disposal without posting the notices as described above.

Section 3. Disposal of Recyclables

- (a) Haulers, collectors and other persons must deliver solid waste acceptable for disposal only to disposal facilities.
- (b) Haulers, collectors and other persons must not deliver solid waste acceptable for disposal to any recycling facility.
- (c) Haulers, collectors and other persons must deliver recyclables acceptable for recycling only to recycling facilities.
- (d) No hauler, collector or other person, may deliver for disposal to any solid waste acceptance facility any solid waste that is acceptable for recycling.

Section 4. Recyclable Waste Banned from Disposal at County Solid Waste Acceptance Facility

- (a) All loads brought to a County acceptance facility may be subject to inspection.
- (b) Collectors who deliver for disposal recyclables mixed in with a load of material otherwise acceptable for disposal, must, immediately upon request, identify to the transfer station attendant the name(s) and corresponding service location(s) it will be sending notices to under paragraph 2(b), above related to the subject load.
- (c) At any time during its collection or off-loading activities, upon the request of the Director, collectors must immediately provide an accurate and legible list of all customer locations from which waste was collected for the load carried at the time of the request.
- (d) In addition to any other requirements herein, haulers and collectors delivering solid waste for disposal to the County Transfer Station in open-top roll off boxes, must accurately declare to the scale house attendant if the load originated from a construction, demolition, renovation or land clearing project site. The method of declaration shall be as specified by the Department.



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Section 5. Confidentiality

- (a) Except as may be necessary to investigate and bring enforcement actions against the collector and its customers, the Department shall make reasonable efforts to preserve the confidentiality of customer lists and other information of a proprietary nature received from a collector provided herein if requested by the collector in order to prevent the disclosure of proprietary information to disinterested third parties.
- (b) Nothing herein shall prohibit the Department from using any information obtained from the operation of this regulation in preparing a summary analysis or for the purposes of assisting the County in identifying potential sources of recyclables delivered in loads of solid waste otherwise acceptable for disposal.

Section 6. Enforcement and Effective Dates

- (a) These regulations shall take effect immediately upon adoption except that no fines may be assessed for violations of Sections 2(b), 2(c), 3(c), 3(d), 4(b) and 4(c) for a period of one year from the date this regulation takes effect. Fines may be assessed for all other provisions of this regulation immediately upon adoption.
- (b) In addition to any other relief under the Code or these regulations that may be available, compliance with these regulations is a condition of registration issued under Section 48-20 of the County Code. Violations of these regulations may, in the Director's discretion, provide a basis for revocation, suspension or non-renewal of registration.
- (c) These regulations may be enforced in accordance with Montgomery County Code 1994, as amended, Section 48-49.

Section 7. Construction

This regulation must be construed liberally to permit the Department to effectuate the purposes of Chapter 48 of the Montgomery County Code (1994), as amended, the policies of the County's Comprehensive Solid Waste Management Plan, and Council Resolution 15-608.

APPROVED AS TO FORM AND LEGALITY.

OFFICE OF COUNTY ATTORNEY

BY

DATE

[Signature]
9/17/04

[Signature]

Douglas M. Duncan
County Executive