

Montgomery County, Maryland

DIVISION OF
SOLID WASTE SERVICES



Comprehensive
Solid Waste
Management
10 Year Plan
2009-2019



DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF SOLID WASTE SERVICES
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- Appendix B. Material Flow Diagram and Recycling Calculations: Fiscal Year 2008**
- Appendix C. Landfill Site Selection Criteria**
- Appendix D. Community Agreements**
- Appendix E. Council Resolution 13-1498 “Creation of Facilities Implementation Group”**
- Appendix F. Montgomery County Executive Regulation 6-99AM Expansion of Leaf Vacuuming Collection District**
- Appendix G. Recommendations Provided by the Maryland-National Park and Planning Commission (M-NCPPC) and the Washington Suburban Sanitary Commission (WSSC)**

MONTGOMERY COUNTY, MARYLAND
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN
for the Years 2009 through 2019

**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 16-894 dated March 24,
2009 and Resolution Number 16-1254 dated February 9,
2010.**

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

Rockville, Maryland

Executive Summary

The Montgomery County, Maryland, Comprehensive Solid Waste Management Plan for the Years 2009 - 2019 has been prepared in accordance with Subtitle 5, Title 9 of the Environment Article, Annotated Code of Maryland. The Plan has been adopted by the Montgomery County Council Resolution 16-894 (see page xii), and approved by the Maryland Department of the Environment (see page xv).

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. No significant changes have occurred since the last Plan update.
- Enabling laws and regulations are updated and clarified.

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.
- Waste collection district and sub-district descriptions and the sub-district transfer process are conformed to recently passed Council Resolution, allowing adjustments to take place by means of Executive Regulation.
- Recycling descriptions are updated for Office Paper Systems (OPS) mixed paper operation.

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.
- A table, with accompanying text, is added enabling analysis, by sector, of the extent to which individual types of recyclable materials are being recycled and disposed.
- The recycling goal of 50 percent by 2010 is confirmed.
- Text is added clarifying the relationship between the recycling goal and tonnage projections under the County's solid waste management system.
- Text describing the County's electronics recycling program is added.
- Documentation concerning the options and currently known disposal of MSW and C&D at facilities other than the County Transfer Station is substantially expanded.
- A new planning direction towards exploring food waste composting is indicated.
- Text is added on the management of compact fluorescent lamps.
- A new section on green house gasses (GHG) and ozone related emissions is added.

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.
- Discussion of Transfer Station modifications to address peak flows under a current CIP project (future County Council appropriation required to perform construction) and the potential relocation of yard trim receiving, processing and shipping operations to a portion of the Gude Landfill site is updated, addressing requirements for MDE approval both for this project and its integration into a remediation and reuse plan for the Gude Landfill site.
- The County's ban on disposal of recyclables is described with respect to Executive Regulations 15-04AM and 18-04, and enforcement of those regulations is discussed.
- Contingency plans for yard waste management, to avoid exceeding the agreed limitation on annual tonnage received at the Dickerson Composting Facility, are expanded.
- Discussion of bypass in the context of facility capacity is expanded.
- The tipping fee policy is expanded and clarified.
- The summary Plan of Action table is updated and expanded.

Appendix A provides a list of term definitions. Changes to this appendix include:

- A definition for Land Clearing Debris is added.

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

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 Council Resolution 13-1498 “Creation of Dickerson Area Facilities Implementation Group (DAFIG)”.

Appendix F provides a copy of Montgomery 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).

Resolution No.: 16-1254
Introduced: January 12, 2010
Adopted: February 9, 2010

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: County Council

SUBJECT: Comprehensive Amendment to the Comprehensive Solid Waste Management Plan

Background

1. State law (Sections 9-503 and 9-515, Environment Article, of the Annotated Code of Maryland) requires the governing body of each County to adopt and submit to the Maryland Department of the Environment a ten-year plan dealing with solid waste disposal systems, solid waste acceptance facilities, and the systematic collection and disposal of solid waste.
2. The Environment Article further requires each County to review its solid waste management plan at least every three years.
3. On March 24, 2009, the County Council adopted the Comprehensive Solid Waste Management Plan for the years 2007 through 2016 for Montgomery County, Maryland by Resolution 16-894.
4. By letters dated July 24, 2009 and November 17, 2009, to the Montgomery County Division of Solid Waste Services, the Maryland Department of the Environment specified changes that it required in order for the Plan to be approved by the State.
5. On December 15, 2009, the County Executive transmitted to the County Council a revised Plan containing only those changes required by the Maryland Department of the Environment.
6. A public hearing was held on January 26, 2010.

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 modified as listed below and is approved as attached.

A. Zoning Ordinance Issue, MDE Letters, July 24 comment 1 and November 17		
<i>Location</i>	<i>Original</i>	<i>Proposed</i>
Page 2-11 Section 2.3.1	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.	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 (footnote) ² This plan shall not be used to create or enforce local land use and zoning requirements.
Page 4-53 Section 4.3.2	The County Zoning Ordinance includes standards for solid waste facilities.	The County Zoning Ordinance includes standards for solid waste facilities. ⁶ (footnote) ⁶ This plan shall not be used to create or enforce local land use and zoning requirements.
B. The Planning Period issue, MDE Letters, July 24 comment 2		
<i>Location</i>	<i>Original</i>	<i>Proposed</i>
Chapters 1, 2, 3, 4, 5, and Appendix B	(The data were listed for years 2007 to 2016)	(All tables updated and include the years 2009 to 2019)
C. Electronic Recycling issue, MDE Letters, July 24 comment 2		
<i>Location</i>	<i>Original</i>	<i>Proposed</i>
Page 4-16 Section 4.1.2.4	4.1.2.4 Drop-Off Programs (Second paragraph deleted) Electronics Recycling: The DSWS also recycles computers, televisions and other consumer electronics. The computer recycling program started in 2000, and this was expanded to include other consumer electronics in October, 2007. In April, 2008, this program was again expanded to	

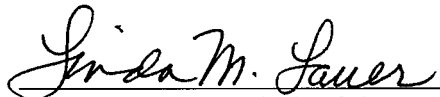
	<p>include electronics cell phones, PDAs, digital cameras, CD players and anything with a cord. Currently this program recycles about 90 tons of computers and 60 tons of televisions and other electronics per month. DEP is currently conducting a short-term program involving specially advertised and arranged collection events at satellite sites using Park & Ride lots and schools. This started in June 2008 and will continue until after June 2009 when the switch from analog to digital television signals occurs. Currently, E-Structors, located in Elkridge MD, receives material collected via the County's electronics recycling programs. The contract with E-Structors requires them to recycle all material except residue (non-electronic material).</p>	
<p>Page 4-17 Section 4.1.2.5</p>		<p>(added section) 4.1.2.5 Electronic Recycling Program Current Conditions and Constraints:</p> <p>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.</p> <p>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, to list some of the items. Currently, this program recycles about 55 tons of computers and 100 tons of televisions and other electronics per month. County</p>

		<p>residents and businesses 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 who are at a distance from the Transfer Station. These satellite events will continue for the foreseeable future and have occurred approximately on a monthly basis. Currently, E-Structors, located in Elkridge MD, receives material collected via the County's electronics recycling programs. The contract with E-Structors requires them to recycle all material except residue (non-electronic material).</p> <p>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.</p>
<p>Page 4-17 4.1.2.5</p>	<p>4.1.2.5</p>	<p>4.1.2.6</p>
<p>Page 5-35 Section 5.2.1.8</p>	<p>5.2.1.8 Recycling and Waste Reduction Programs g. Waste Stream Detoxification (removed last four paragraph)</p> <p>In addition to the HHW and Ecowise programs, 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.</p> <p>In addition to accepting these electronics at the Transfer Station, DEP has just recently</p>	

	<p>begun to routinely conduct several electronic collection events per year at various, more convenient, locations around the County. In the future, DSWS will continue to explore the most effective means of attracting electronics for recycling.</p> <p>For CFLs the County will continue to work to expand the number and locations of retailers who accept CFLs for recycling.</p> <p>DEP shall conduct an on-going assessment of existing waste detoxification procedures and identify additional feasible programs, and costs of such programs, to expand the detoxification of the waste stream in a manner that minimizes environmental and legal liability risks.</p>	
<p>Page 5-39 Section 5.2.1.9</p>		<p>(added section) 5.2.1.9 Electronic Recycling</p> <p>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.</p> <p>In addition to the HHW and Ecowise programs as described in previous section, 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</p>

		<p>components in working order are salvaged for reuse; hazardous and toxic materials in unusable components are recovered for proper disposal.</p> <p>DEP has also just recently begun to routinely conduct several electronic collection events per year at various, more convenient, locations around the County. For CFLs the County will continue to work to expand the number and locations of retailers who accept CFLs for recycling.</p> <p>Plan of Action: In the future, DED will continue to explore the most effective means of attracting electronics for recycling. DEP will also 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 at their current frequency.</p>
Page 5-40 5.2.1.10	5.2.1.9	5.2.1.10
Page 5-42 5.2.1.11	5.2.1.10	5.2.1.11
Page 5-43 5.2.1.12	5.2.1.11	5.2.1.12
Page 5-43 5.2.1.13	5.2.1.12	5.2.1.13

This is a correct copy of Council action.



 Linda M. Lauer, Clerk of the Council

Resolution No.: 16-894
Introduced: January 27, 2009
Adopted: March 24, 2009

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: County Council

SUBJECT: Comprehensive Amendment to the Comprehensive Solid Waste Management Plan

Background

1. State law (Sections 9-503 and 9-515, Environment Article, of the Maryland Code) requires the governing body of each County to adopt and submit to the Maryland Department of the Environment a ten-year plan dealing with solid waste disposal systems, solid waste acceptance facilities, and the systematic collection and disposal of solid waste.
2. The Environment Article further requires each County to review its solid waste management plan at least every three years.
3. The County Council adopted the Comprehensive Solid Waste Management Plan for the years 2004 through 2015 for Montgomery County, Maryland by Resolution 15-1218 on November 15, 2005.
4. On January 16, 2009, the County Executive transmitted to the County Council a revised and updated comprehensive amendment to the Comprehensive Solid Waste Management Plan which sets forth the goals, policies, and plans for the management of solid waste in the County from 2007 through 2016.
5. A public hearing on the revised proposed comprehensive plan amendment was held on February 24, 2009.
6. The Transportation, Infrastructure, Energy and Environment Committee discussed the proposed comprehensive plan amendment on March 9, 2009.
7. The County Council discussed the proposed comprehensive plan amendment on March 17, 2009.

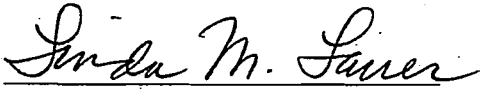
Action

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

1. The Comprehensive Solid Waste Management Plan for the Years 2007 through 2016 is approved as attached.
2. The Director of the Department of Environmental Protection must report to the Council on the following solid waste issues by the reporting deadlines listed below.

Item	Deadline for Submission to Council
Update on the status of the County's television recycling program	Quarterly Updates beginning no later than July 31, 2009
Update on the County's efforts to increase Land Clearing and Construction and Demolition Debris (C&D) recycling rates both by the County and in the private sector	February 1, 2010
Update on the findings of the 2009 Waste Composition Study and DEP's short and long-term strategies to maximize the County's recycling rate	February 1, 2010
Recommendations regarding the potential imposition of a plastic shopping bag ban or tax	February 1, 2010
Update on DEP's efforts to seek additional composting capacity and the potential expansion of the composting program to include food waste	February 1, 2011

This is a correct copy of Council action.


 Linda M. Lauer, Clerk of the Council



MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore, MD 21230
410-537-3000 • 800-633-6101

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

RECEIVED
DEPT OF ENVIRONMENTAL PROTECTION

Robert M. Summers, Ph.D.
Deputy Secretary

August 17, 2010

Aug 20 2010

The Honorable Isiah Leggett
County Executive, Montgomery County
101 Monroe Street, 2nd Floor
Rockville MD 20850

DIVISION OF SOLID WASTE SERVICES

Dear County Executive Leggett:

The Maryland Department of the Environment (the "Department") has completed review of the Montgomery County Solid Waste Management Plan (2009-2019), (the "Plan"), which was adopted by the Montgomery County Council on February 9, 2010.

Based on this review, the Department has determined that the Plan satisfies the Department's guidelines and complies with the defined requirements of the Code of Maryland Regulations (COMAR) 26.03.03. In accordance with §9-507(a) of the Environment Article, Annotated Code of Maryland, the Plan is approved.

Please be advised that §9-503(a) of the Environment Article, Annotated Code of Maryland, requires each County to have a County plan or a plan with adjoining counties that covers at least the next 10-year period following adoption by the County governing body. Per §9-515(b) of the Environment Article, Annotated Code of Maryland, Montgomery County must prepare the county Plan as well as a separate statement of objectives and polices covering factors such as planning, zoning, and population estimates at least once every three years. The law further requires the County Executive to prepare preliminary and final drafts of the plans as specified in §9-515(c) and submit to the Council for its approval. As the Montgomery County Council adopted the Plan on February 9, 2010 the new plan will be due to the Department on or before February 9, 2013. The Department recommends that the County submit a draft Plan six months prior to the due date so the Department can review and provide comments before the County adopts its next 10-year period Plan. The County must also comply with the public hearing requirements of § 9-503(d) of the referenced Article prior to the adoption of any revision or amendment.

Please note that §9-506(b)(2) of the Environment Article, Annotated Code of Maryland, requires the County to submit a report of its review conducted at least every two years including any revision or amendment of the County plan that has been adopted. Therefore, the County must submit to the Department the progress reports required by §9-506(b) on or before February 9, 2012.

In addition, §9-503(c) of the Environment Article, Annotated Code of Maryland, provides that each County must adopt and submit to the Department a revision or amendment to its County plan if the County considers a revision or amendment necessary or if the Department requires a revision or amendment. The Department will notify the County if a revision or amendment is required. However, if the County considers a revision or amendment is necessary, we recommend that the County submit a draft plan to the Department so that we can review and provide comments before the County adopts a revision or amendment to its approved and adopted plan. The County must comply with the public hearing requirements of §9-503(d) of the referenced Article prior to the adoption of any revision or amendment.

During the 2009 legislative session, the Maryland General Assembly passed House Bill 1290, *Environment-Recycling-Public School Plans*. The law became effective on July 1, 2009 (amending § 9-1703 of Environment Article, Annotated Code of Maryland). The law adds a requirement that must be addressed in a recycling plan in accordance with the provisions of § 9-505 of the Environment Article, Annotated Code of Maryland. Under § 9-1703(b)(10) of the Environment Article, Annotated Code of Maryland, the counties and Baltimore City are required to address the strategy for the collection, processing, marketing, and disposition of recyclable materials from public schools. In addition, § 9-1703(g) of the Environment Article, Annotated Code of Maryland requires a county to revise its recycling plan by **October 1, 2010**, to address the requirements of § 9-1703(b)(10). The Solid Waste Management Plan's Public School Plan should:

1. Provide a detailed description of the public school recycling program being developed, including what materials are to be recycled, how the materials will be collected, and how the materials will be marketed.
2. Define the roles and responsibilities of the stakeholders involved in the program.
3. Identify the public schools included in the program. The Office of the Attorney General has determined that all County public grade schools, colleges, and trade schools that receive county funding are covered by the law. Schools that are operated and funded primarily by the State and that are generally recognized as "state schools" are not subject to § 9-1703(b)(10) of the Environment Article, Annotated Code of Maryland even if receiving some funding from county sources.
4. Provide a roll out schedule for the development and implementation of the program.
5. Identify a system for monitoring the program to identify areas for improvement and to ensure continuous school participation in the program. Include contingency plans for contractor issues and steps to be taken if schools are not participating in the program.

Additionally, during the 2010 legislative session, the Maryland General Assembly passed House Bill 685, *Environment - Fluorescent and Compact Fluorescent Light Recycling – County Plans*. The law became effective on July 1, 2010 (amending § 9-1703 of Environment Article, Annotated Code of Maryland). The law adds a requirement that must be addressed in a recycling plan in accordance with the provisions of § 9-505 of the Environment Article, Annotated Code of

Maryland. Under § 9-1703(b)(11) of the Environment Article, Annotated Code of Maryland, the counties and Baltimore City are required to address the strategy for the collection and recycling of fluorescent and compact fluorescent lights that contain Mercury. In addition, § 9-1703(g) of the Environment Article, Annotated Code of Maryland requires a county to revise its recycling plan by **October 1, 2011**, to address the requirements of subsection § 9-1703(b)(11) of this section.

Thank you for your continuing interest and cooperation in providing sound and long-term solid waste management planning for the County. If you have questions or need additional clarifications on the matter discussed, please contact Ms. Hilary Miller, Program Manager, Technical Services and Operations Program at 410-537-3431 or you may contact me at 410-537-3304.

Sincerely,



Horacio Tablada, Director
Land Management Administration

HT:TM:tm

cc: Daniel Locke, Chief, Montgomery County Division of Solid Waste Services: Administration
Hilary Miller, Manager, Technical Services and Operations Program

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 2009 – 2019 (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. 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 ten-year planning period 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, commercial, institutional, industrial, and agricultural sectors during the ten-year period from 2009 through 2019. 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 should be 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 RRF ash, bypass waste, and non-processible waste that cannot be recycled or reused. “Bypass” means waste received by the County which is 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 50 percent recycling of municipal solid waste by the end of Calendar Year 2010. The third tier option is combustion of solid waste remaining after reduction and recycling that 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 (apartment) and commercial properties^{2,3} and has numerous programs to promote and further achieve its recycling goals, as detailed in

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.

Chapter 5. The County has also adopted a ban on all recyclables at any County's solid waste disposal facilities.

The MRA of 1988 sets a recycling goal of 20 percent for counties with populations over 150,000 residents. 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 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 % by weight and 90 % 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

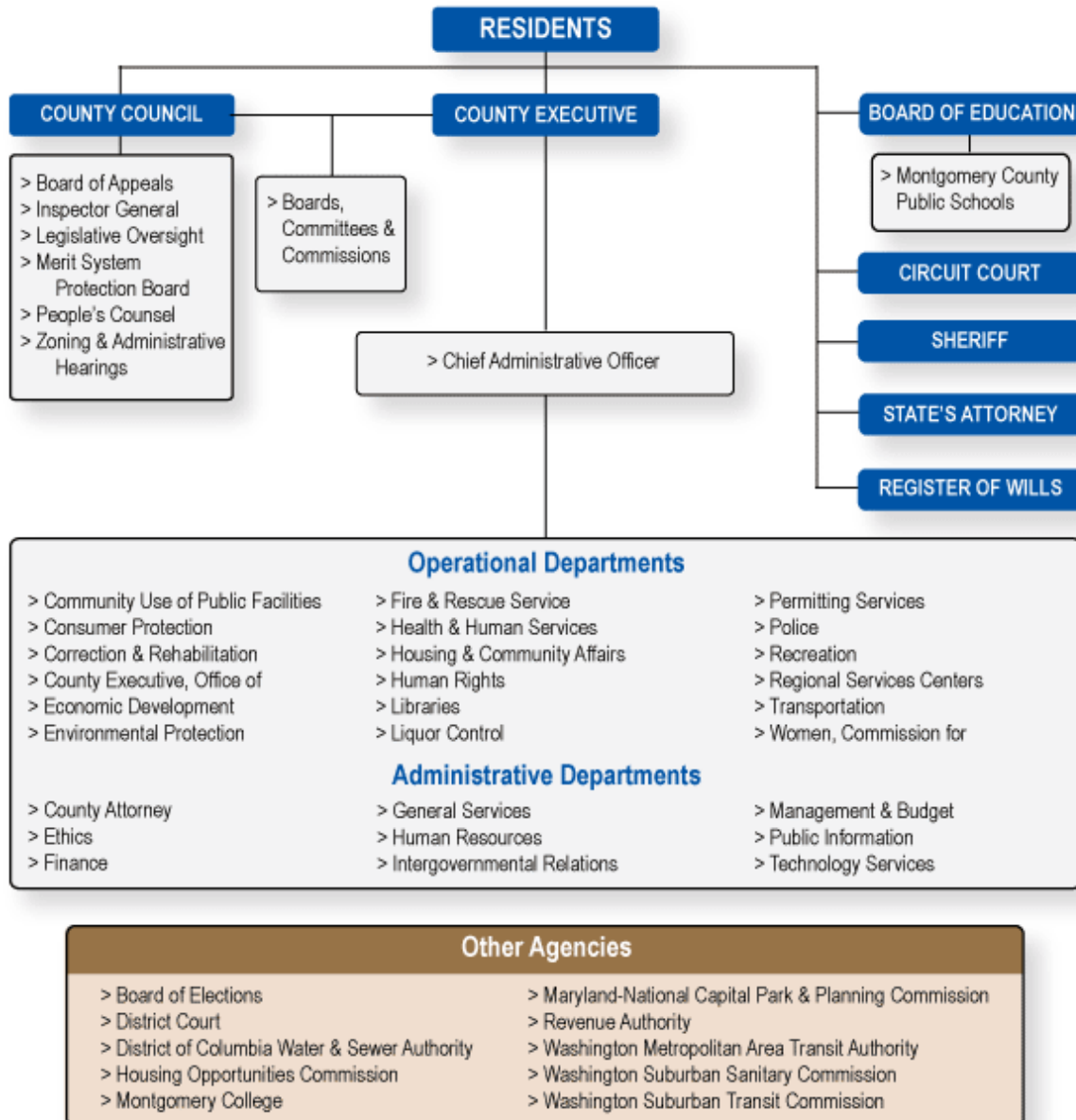
The County is a charter county of Maryland with a nine-member county council and a county executive. The County Executive drafts the Plan, its amendments and revisions, and recommends solid waste legislation. The County Executive also administers the County solid waste laws in Chapter 48 of the Montgomery 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



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 Department of Environmental Protection (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 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 providing education, training and technical assistance to the public about various components of the County's integrated solid waste management system;
- Administer 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), SWAC, 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 MCDOT 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 Division of Animal Services within the Police Department 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 January 23, 2009. M-NCPPC's recommendations are listed in Appendix G.

1.3.3.2 Washington Suburban Sanitary Commission

The 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 January 23, 2009. 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% 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 DC Water and Sewer Authority (WASA).

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 Yard Trim Composting Facility, and recycling activities taking place at the County 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 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 Council 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. Federal authority to implement federal laws and regulations is given to the state. The County's solid waste program and ordinances must meet or exceed the solid waste laws and regulations of the state.

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.

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;

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).

- (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.

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 Article 25A *Chartered Counties of Maryland*, the *Environment Article* and the *Natural Resources Article*. Pursuant to Article 25A, *Chartered Counties of Maryland*, charter counties have the power to enact local laws for the protection and promotion of public safety, health, and welfare relating to 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.

Title 9, Subtitle 17 of the Environment Article defines state recycling goals based on County population.

- 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 road 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;

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 (cont)
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 equipments and lamps.
- Part 503: Standards for the Use or Disposal of Sewage Sludge**
Establish 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.

- *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.

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.

Table 1.3
Maryland Statutes Affecting Solid Waste Management

Chartered Counties of Maryland (Article 25A)

Environment

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 System Hearings

Section 211 Landfills, Incinerators, and Transfer Stations: Requirements for Security

Section 212 Landfill Systems - Options to Purchase

Section 226 Certification 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 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

Section 1708 Natural Wood Waste Processing and Recycling

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

Subtitle 17, Chapter 2 Storm Water Management

Chapter 48 (Solid Wastes) provides for the management of solid waste⁶, which 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 provides for a recycling program in accordance with the approved Plan, and adopted regulations. 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 2008 is 951,240. During the 1980s, Montgomery County accounted for almost one-third of Maryland's population increase. Since 1989, Montgomery County has been the state's most populous jurisdiction. This period produced an annual growth rate of about 3.1 percent. While the growth rate during the 1990's was more moderate at about 1.54 percent annually, the Maryland State Office of Planning projects that the County will remain the most populous jurisdiction for the next 25 years. Two trends are attributed for this ongoing growth: record high levels of births to County residents; and strong immigration from other countries to the County.

Rapid growth in the number of County households occurred between 1970 and 1990. The rate of growth for households was almost twice the rate of total population growth in the same period. Damascus showed the greatest percent growth in households for the period. Over one-third of the County's gains in the number of households between 1980 and 1990 occurred along the Interstate-270 corridor in the Gaithersburg and Germantown areas. The Colesville area along U.S. Route 29 was second in growth with 18 percent. These three areas also had the most land available for new development. Combined, they accounted for 60 percent of total County growth in households. Between 1990 and 2000, total households in Montgomery County grew at approximately the same rate as population.

Another trend is the increase of racial diversity. According to M-NCPPC data, racial diversity continues to expand as the population grows in Montgomery County. During the County's high growth period, 1980 to 1990, when the total population increased by one-third, 60 percent of this growth was minority residents. Between 1990 and 2000, population share of minorities rose from 27 percent of the total population to 40 percent¹.

Following national trends, Montgomery County has become a community with fewer persons per household. The average household size dropped from 3.30 to 2.64 persons per household during the past 20 years. This historical trend has the effect of increasing per capita waste generation rates, which are discussed in the waste projections of Chapter 3. Each household requires a defined level of service and generates fixed waste (e.g. telephone directories, newspapers, bills) unrelated to the number of persons domiciled. Therefore, more households in a given population will generate more waste.

¹ http://www.mcparkandplanning.org/research/data_library/census2000/special_reports/SEmapbullets.pdf.

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 1.0 percent for each year from 2008-2019. Table 2.1 provides population projections for the years 2009-2019.

Table 2.1
Population of Montgomery County, Maryland 2008-2019

Year	Estimated County Population*
2008	951,240
2009	959,504
2010	966,000
2011	977,800
2012	989,600
2013	1,001,400
2014	1,013,200
2015	1,025,000
2016	1,035,000
2017	1,045,000
2018	1,055,000
2019	1,065,000

*Source: M-NCPPC, Cooperative Forecast, Round 7.2 Revised April 2009, five year increments (2005, 2010, 2015, and 2020), intermediate years interpolated; conforms to current County Fiscal Plan.

2.1.2 Municipalities

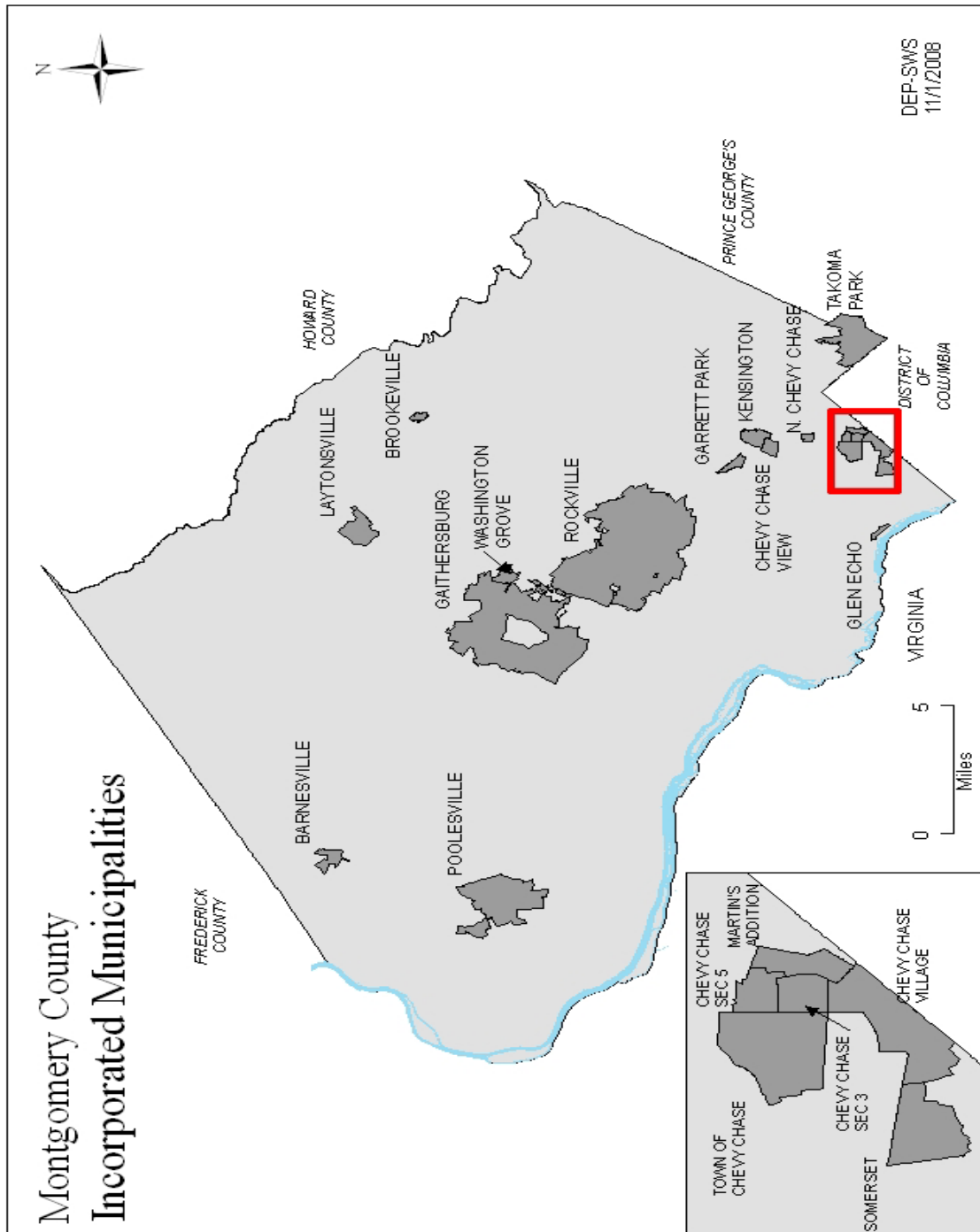
Montgomery County has 19 incorporated municipalities. Approximately 157,000 persons reside in incorporated municipalities within Montgomery County. Table 2.2 lists municipalities in Montgomery County and their populations. Figure 2.1 depicts a map of Montgomery County and locations of its incorporated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

Table 2.2
Population of Incorporated Municipalities in Montgomery County, Maryland

Incorporated Municipality	Year 2008 Population
Barnesville, Town of	197
Brookeville, Town of	131
Chevy Chase, Town of	2,803
Chevy Chase Section Five, Village of	659
Chevy Chase Section Three, Village of	793
Chevy Chase View, Town of	901
Chevy Chase Village, Town of	2,109
Gaithersburg, City of	58,744
Garrett Park, Town of	955
Glen Echo, Town of	255
Kensington, Town of	1,946
Laytonsville, Town of	353
Martin's Additions, Village of	900
North Chevy Chase, Village of	484
Poolesville, Town of	5,674
Rockville, City of	60,734
Somerset, Town of	1,169
Takoma Park, City of	17,701
Washington Grove, Town of	566

Source: U.S. Census Bureau, 2008

Figure 2.1
Map of Montgomery County including Municipalities



2.2 EMPLOYMENT TRENDS

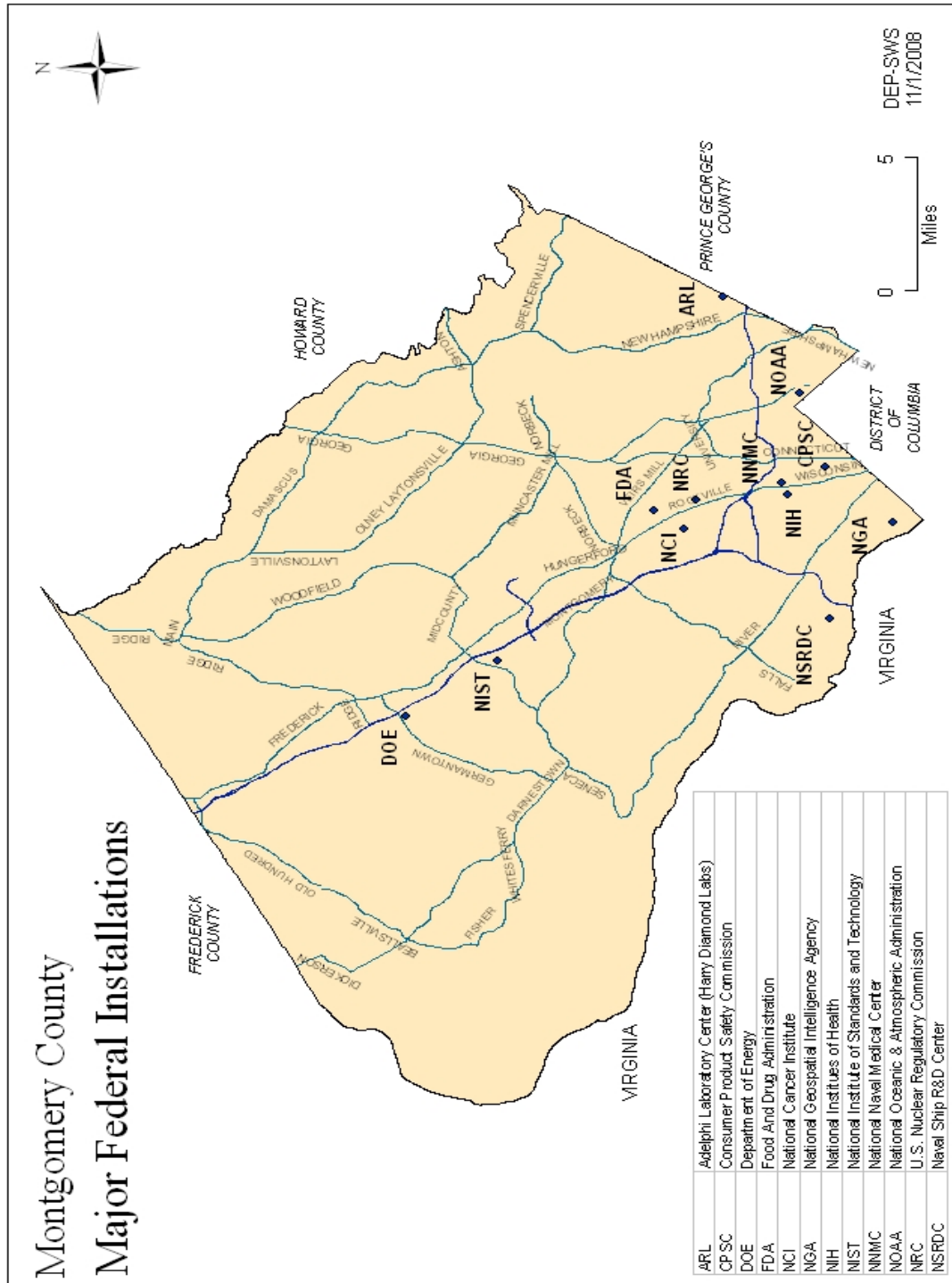
Montgomery County is the largest suburban employment center in the Metropolitan Washington Statistical Area, and is second only to Baltimore City within Maryland. During the last decade, the County led the State in employment growth. While the County experienced a decline in employment during the early 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. 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 2000s.

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.

Figure 2.2 Map of Montgomery County including Federal Installations



2.2.2 Employment Projections

An economic recession in the early 1990's resulted in the loss of 20,000 jobs in the County. A recovery began in 1992, with employment growth continuing through 2006. M-NCPPC forecasts at-place employment (the number of positions located in the County) to grow at an annual rate of 0.39 percent from 2009 to 2010, and then an average of 1.47 percent per year from 2010 to 2019, resulting in a projected employment in the year 2019 of 581,400. Table 2.3 shows M-NCPPC "Round 7.2" projections for at-place employment for the years 2008 to 2019.

Table 2.3
At-Place Employment, Montgomery County, Maryland 2008-2019

Year	Estimated County Employment*
2008	506,000
2009	508,000
2010	510,000
2011	517,400
2012	524,800
2013	532,200
2014	539,600
2015	547,000
2016	555,600
2017	564,200
2018	572,800
2019	581,400

*Source: M-NCPPC, Cooperative Forecast, Round 7.2 Revised April 2009 five year increments (2005, 2010, 2015, 2020), intermediate years interpolated; conforms to current County Fiscal Plan,

2.3 ZONING AND COMPREHENSIVE LAND USE

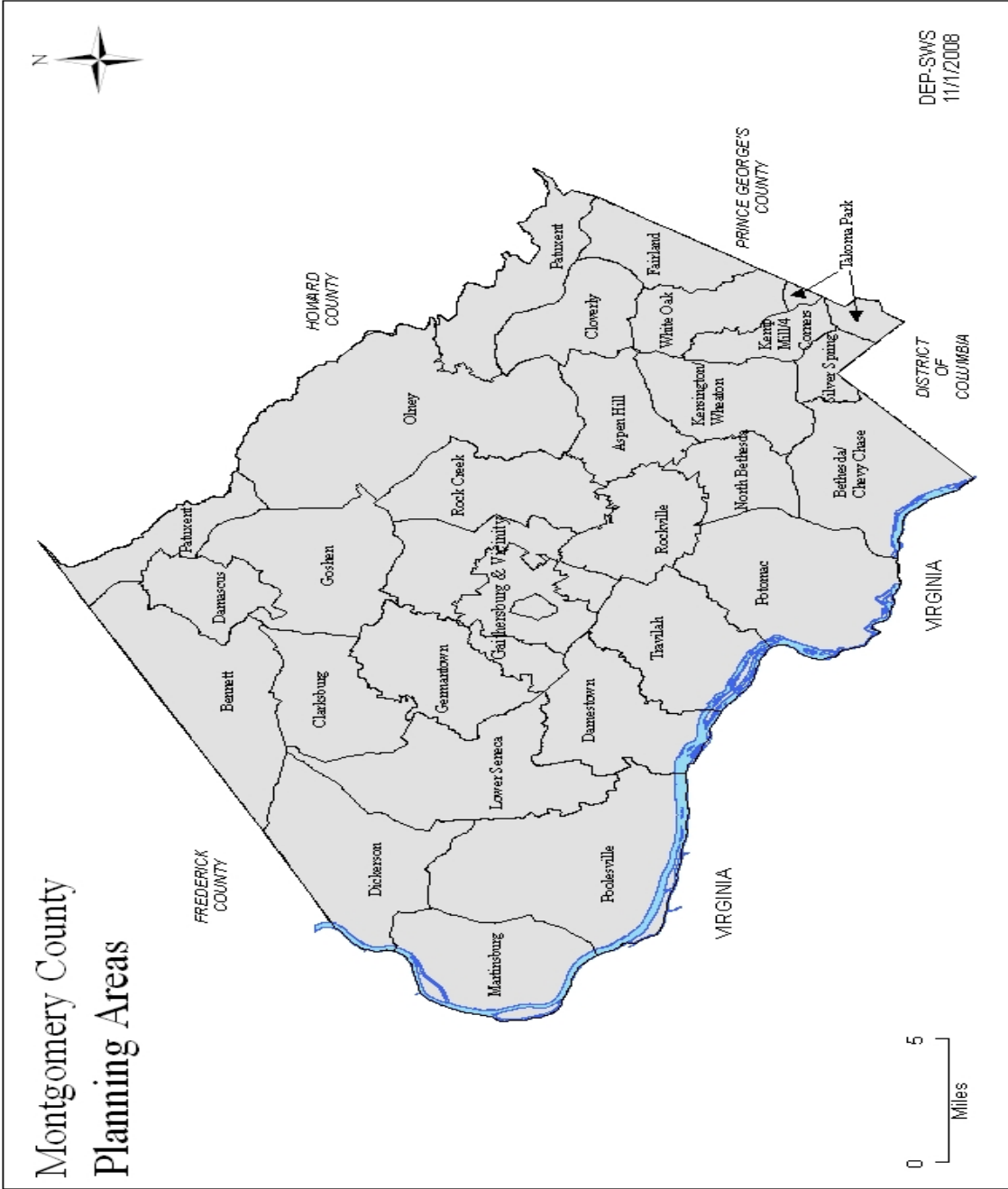
Land use policies in the County are implemented through planning and zoning decisions. Land use policies directly affect solid waste generation and management, both in terms of the quantity and type of waste generated as well as the properties on which solid waste management facilities may be located.

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 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 up 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

Figure 2.3
Map of Montgomery County Planning Areas



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 land fills 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 also considers variance requests relating to deviations from prescribed limitations such as setbacks and height restrictions. A zoning text amendment is the mechanism by

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

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.

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

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.

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. Department of Transportation (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 Solid Waste 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.

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.

Figure 2.4
Map of Major Roadways in Montgomery County



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 FY 2008 solid waste generation measurements by waste type as well as solid waste generation projections for the Fiscal Years 2009, 2014 and 2019. Subsequent sections of this chapter repeat portions of Table 3.1 for further analysis of each major category of solid waste. All years referred to in these tables are fiscal years, unless stated otherwise.

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.

The solid waste generation tables also distinguish between tonnages accepted at County operated solid waste management facilities versus facilities that are not part of the County-run solid waste management system described in Chapter 5 of this plan. Solid waste tonnages that are included in the tables below as being processed at “non-county

facilities” are processed at privately operated facilities, most of which are located outside the boundaries of Montgomery County.

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 the 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, the relative composition of wastes in the disposal stream, and the degree of backyard composting and grasscycling occurring in the County.

3.1.1 Municipal Solid Waste (Residential, Commercial, Industrial, and 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 recycling rate calculation report to the County Council is developed using a comprehensive accounting methodology that incorporates all data available on County MSW flows. Appendix B displays the result for the County for Fiscal Year 2008. The calculation is necessarily conservative in that it assumes that all waste burned at the RRF is MSW.

Table 3.2 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 1,249,376 tons, not including any amounts of C&D burned at the RRF. The

County estimates that 30,119 tons of C&D were burned at the RRF in FY08¹. Generation projections for Fiscal Years 2009, 2014 and 2019 are adjusted for increases in County population and employment only.

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

	2008 Processed at County Gov't Facilities	2008 Processed at Private Facilities	2008 Estimated Generation In County	2009 Projected** Generation In County	2014 Projected** Generation In County	2019 Projected** Generation In County
Municipal Solid Waste (MSW)	761,618	487,758	1,249,376	1,257,064	1,331,603	1,418,462
(a) Residential (Single-Family and Muti-Family)	453,913	126,833	580,746	585,792	618,574	650,199
Recycled	183,284	102,957	286,241	279,465	301,230	315,032
Disposed	270,629	23,876	294,505	306,327	317,344	335,167
Non-Residential	307,705	360,925	668,630	671,272	713,029	768,263
Recycled	43,015	216,183	267,260	289,399	342,256	377,958
Disposed	256,628	144,742	401,370	381,873	370,773	390,305
State-Required Breakout of Non-Residential MSW						
(b) Commercial (61.1% of Non-Residential)	188,100	220,633	408,733	410,349	435,874	469,639
Recycled	26,295	132,153	163,376	176,910	209,221	231,046
Disposed	156,877	88,481	245,357	233,439	226,653	238,594
(c) Industrial (33.1% of Non-Residential)	101,789	119,394	221,183	222,057	235,870	254,142
Recycled	14,229	71,513	88,410	95,733	113,218	125,029
Disposed	84,893	47,881	132,773	126,324	122,652	129,113
(d) Institutional (5.8% of Non-Residential)	17,816	20,898	38,714	38,867	41,284	44,482
Recycled	2,491	12,517	15,474	16,756	19,817	21,884
Disposed	14,859	8,381	23,239	22,110	21,468	22,599
(e) Land Clearing and Construction & Demolition Debris (C&D)	110,600 46%	128,660 54%	239,260	241,339	254,845	267,874
(f) Hazardous Waste	488	13,819	14,307	14,363	15,257	16,439
(g) Special Medical Waste	0	1,424	1,424	1,430	1,519	1,636
(h) Animal Carcass	0	145	145	146	154	162
(i) Bulky Waste Scrap Metal [included in (a) through (d) above]	6,382	79,575	85,957	86,704	91,556	96,237
(j) Automobiles	0	59,361	59,361	59,876	63,227	66,460
(k) Scrap Tires	193	9,319	9,512	9,595	10,132	10,650
(kk) Portion included in (a) through (d) above	193	5,059	5,252	5,298	5,594	5,880
(l) Biosolids	0	6,900	6,900	6,960	7,349	7,725
(m) Septage	0	18,000	18,000	18,000	18,000	18,000
TOTAL WASTE (all categories) *	762,106	587,406	1,349,512	1,357,839	1,437,109	1,528,884

Notes:

* Sum of (a) through (m) less (i) less (kk).

** Projections assume zero growth in per capita and per employee waste generation rates.

1 See Appendix B.

Table 3.2
Municipal Solid Waste Generation in Montgomery County, Maryland (Tons/Yr)
Residential, Commercial, Industrial, and Institutional Sectors

	2008 Processed at County Gov't Facilities	2008 Processed at Private Facilities	2008 Estimated Generation In County	2009 Projected Generation In County	2014 Projected Generation In County	2019 Projected Generation In County
(a) Residential (Single-Family and Multi-Family)	453,913	126,833	580,746	585,792	618,574	650,199
Recycled	183,284	102,957	286,241	279,465	301,230	315,032
Disposed	270,629	23,876	294,505	306,327	317,344	335,167
(b) Commercial (61.1% of Non-Residential)	188,100	220,633	408,733	410,349	435,874	469,639
Recycled	26,295	132,153	163,376	176,910	209,221	231,046
Disposed	156,877	88,481	245,357	233,439	226,653	238,594
(c) Industrial (33.1% of Non-Residential)	101,789	119,394	221,183	222,057	235,870	254,142
Recycled	14,229	71,513	88,410	95,733	113,218	125,029
Disposed	84,893	47,881	132,773	126,324	122,652	129,113
(d) Institutional (5.8% of Non-Residential)	17,816	20,898	38,714	38,867	41,284	44,482
Recycled	2,491	12,517	15,474	16,756	19,817	21,884
Disposed	14,859	8,381	23,239	22,110	21,468	22,599
Municipal Solid Waste (MSW)	761,618	487,758	1,249,376	1,257,064	1,331,603	1,418,462
		Recycling Rate*	44.3%	45.3%	48.3%	48.9%

* Projected recycling is conservative. It assumes approval of ER18-04, but it counts C&D burned in RRF as MSW, thus overstating recycling rate denominator.

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 counties.

The County validates generation rates by analyzing public and private sector waste disposal and recycling practices. Executive Regulation 58-92 requires that all private haulers that are permitted to transport solid waste in the County must submit semiannual reports about their activity. Reports must specify: (1) quantities of recyclables by categories of material; (2) quantities of solid waste; and (3) quantities of special wastes including Controlled Hazardous Substances (CHS) and construction and demolition

debris. Reports must indicate whether the material is delivered to destinations located inside or outside the County and must distinguish MSW from C&D.

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 Fiscal Year 2008 was 580,746 tons. This total residential waste generation figure includes processed MSW as well as solid waste recycled or composted. These data have been derived using a combination of weight reports from the County's Solid Waste Transfer Station, MRF, and Composting Facility records supplemented with information provided by licensed solid waste haulers.

In Fiscal Year 2008, the residential sector achieved a recycling rate of approximately 49.3 percent.² The overall residential recycling rate is based on a single family residential recycling rate of approximately 55.8 percent and a multi-family residential recycling rate of approximately 13.7 percent.

² See Section 3.1.10 for a comparison of County and State recycling rate calculations.

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 fifty-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:

<u>Sector</u>	<u>Percent of Non-Residential Waste Stream</u>
Commercial	61.1%
Industrial	33.1%
Institutional	5.8%

Non-residential waste generation figures include both waste disposed and waste recycled. As indicated as the sum of lines (b) through (d) in Table 3.2 shown previously, non-residential waste generation in Fiscal Year 2008 was 668,630 tons. This includes 30,119 tons of C&D estimated to have been burned at the RRF during FY08 and presumed to be MSW (as discussed earlier). Commercial, industrial and institutional waste generation tonnages displayed in Table 3.2 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 by licensed solid waste haulers.

In Fiscal Year 2008, the non-residential sector is estimated to have achieved a recycling rate of 40.0 percent. Table 3.2 shown previously projects non-residential waste generation for the 10-year time horizon of this Plan using the per employee waste generation rate applied to County employment projections. Non-residential waste generation is projected to increase at the same rate.

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 3.3, land clearing and demolition debris generation in the County was 239,260 tons in FY 2008.

Based on County and private sector scale records, private C&D disposal activity is reported to the County under Executive Regulation 52-98AM. Assuming that generation is proportional with population and employment change, projected total generation of land clearing and C&D for the Year 2019 is 267,874 tons. This is without regard for economic condition influences.

Table 3.3
Land Clearing and Demolition Debris Generation in Montgomery County (Tons/Yr)

	2008 Processed at County Gov't Facilities	2008 Processed at Private Facilities	2008 Estimated Generation In County	2009 Projected Generation In County	2014 Projected Generation In County	2019 Projected Generation In County
(e) Land Clearing and Construction & Demolition Debris (C&D)	110,600	128,660	239,260	241,339	254,845	267,874

Notes:

* For FY08, "Processed at County Gov't. Facilities" = all tons loaded on rail to RRF. (Counts C&D burned at RRF as if it were MSW, which it is not. See text.)

** Does not include C&D burned at RRF as MSW.

Approximately 46 percent of all land clearing and demolition debris generated in the County was brought to the County Transfer Station in FY 2008; about 54 percent was transported for processing at out-of-County facilities. County road construction and maintenance activities generate about 43,000 tons per year that is managed as non-processible solid waste.

3.1.3 Controlled Hazardous Substances

As indicated in Table 3.4, Controlled Hazardous Substances (CHS)³ 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.

3.1.3.1 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

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

hazardous waste per month; or, stores 100 kilograms or more of hazardous waste on site.⁴

The estimated 14,000 tons of hazardous wastes generated in the County shown in Table 3.4 are derived from a 1995 survey, conducted by MDE, of large quantity hazardous waste generators. Hazardous waste is projected to increase at the same rate as County employment growth. The projected County generation for the Year 2019 is 16,439 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 National Naval Medical Command in Bethesda. The Naval Surface Warfare Center in White Oak and the Safety-Kleen Corporation in Silver Spring were TSD permitted facilities, but are no longer operational. All hazardous waste generated and stored in the County is shipped out of the County for treatment, storage and disposal.

**Table 3.4
Controlled Hazardous Substances Generation in Montgomery County**

	2008 Processed at County Gov't Facilities	2008 Processed at Private Facilities	2008 Estimated Generation In County	2009 Projected Generation In County	2014 Projected Generation In County	2019 Projected Generation In County
(f) Hazardous Waste	488	13,819	14,307	14,363	15,257	16,439
(g) Special Medical Waste	0	1,424	1,424	1,430	1,519	1,636

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

⁴ For a complete description of State controlled hazardous waste generator requirements, see COMAR 26.13.02.

description of County efforts to manage household and small quantity generator hazardous wastes.

3.1.3.2 Special Medical Waste

Special medical wastes as defined in COMAR 26.13.11 include infectious or potentially infectious materials that result from contact with persons or animals suspected or diagnosed as being or having been exposed to contagious disease organisms.

Special medical waste is generated by hospitals, doctor offices, laboratories, and research institutions. Five accredited hospitals are located within the County: Holy Cross Hospital in Silver Spring, Suburban Hospital in Bethesda, Washington Adventist Hospital in Takoma Park, Montgomery General Hospital in Olney and Shady Grove Adventist Hospital near Gaithersburg. Three large federal hospitals and medical research institutions are located in Montgomery County: Walter Reed Army Medical Center Annex in Forest Glen, and the National Naval Medical Hospital and the National Institutes of Health, both in Bethesda.

Special medical waste generation in the County is based on hauler data. The quantity of special medical waste transported by licensed haulers in Fiscal Year 2008 was 1,424 tons. Special medical waste generation is projected to increase at the same rate as County employment growth. Therefore, the quantity generated in the Year 2019 is projected to be 1,636 tons. Data is not available for the amount of special medical waste generated and processed at on-site facilities in the County.

On-site special medical waste incinerators are required to have operating permits issued by MDE. At present, there is no permitted special medical waste incinerator operated in the County.

State law provides for a residential use (e.g., home insulin user) exemption for disposal of home medication material as MSW. Home generated medical waste is not regulated as special medical waste, as defined in COMAR 26.13.11.

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 is no animal carcass solid waste rendering facilities located in the County. Most farm animal carcasses, and 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 pet crematoria. One privately owned pet crematorium operates under State permit in the County.

In 2008, animal carcasses were estimated to comprise 145 tons of solid waste generated in the County (Table 3.5). This is based approximately 109 tons of dead animals estimated by the contractor to the County police department as collected from County roadways, plus 36 tons of dead animal carcasses reported by the Montgomery County Animal Shelter. For the purposes of this Plan, that 2008 animal carcass waste tonnage is projected to increase in the future in proportion to residential population.

Table 3.5

Animal Carcass Solid Waste Generation in Montgomery County

	<u>2008 Processed at County Gov't Facilities</u>	<u>2008 Processed at Private Facilities</u>	<u>2008 Estimated Generation In County</u>	<u>2009 Projected Generation In County</u>	<u>2014 Projected Generation In County</u>	<u>2019 Projected Generation In County</u>
(h) Animal Carcass	0	145	145	146	154	162

3.1.5 Bulky Waste, Automobiles and Scrap Tires

3.1.5.1 Bulky Waste

As indicated In Table 3.6, approximately 85,957 tons of bulky wastes were generated in Fiscal Year 2008. Bulky wastes include large household appliances (also known as white goods), and large scrap metal. The County recycles over approximately 6,300 tons of metals annually through its scrap metal program. Residents of single family homes may recycle white goods, swing sets, metal furniture, railings, disassembled sheds and other household metal items through the County’s curbside collection program. In addition, the County “Don’t Dump, Donate” program accepts about 68 tons annually of reusable building materials which are provided for low income housing projects.

Private collectors report delivering approximately 79,575 tons per year of scrap metal to private facilities in the County. In Fiscal Year 2008 the County received over 6,000 tons of “white goods” at the Transfer Station. Bulky waste generation is projected to increase consistent with population growth.

Table 3.6
Bulky Waste, Scrap Automobile and Scrap Tire Waste Generation in Montgomery County (Tons/Yr)

	<u>2008 Processed at County Gov't Facilities</u>	<u>2008 Processed at Private Facilities</u>	<u>2008 Estimated Generation In County</u>	<u>2009 Projected Generation In County</u>	<u>2014 Projected Generation In County</u>	<u>2019 Projected Generation In County</u>
(i) Bulky Waste Scrap Metal	6,382	79,575	85,957	86,704	91,556	96,237
(j) Automobiles	0	59,361	59,361	59,876	63,227	66,460
(k) Scrap Tires	193	9,319	9,512	9,595	10,132	10,650

3.1.5.2 Automobiles

The regulation of automobiles, other motor vehicles and vehicle junk yards is under the jurisdiction of the State's Motor Vehicle Administration. Line (j) of Table 3.6 indicates that 59,361 tons of scrap automobiles were generated in Montgomery County in 2008. The Motor Vehicle Manufacturers Association reported national statistics that an average of 8,835,400 cars and 2,258,000 buses and trucks were junked nationally, on average, from 1986 to 1990. This Plan assumes that the County generates scrap automobiles in proportion to national trends. M-NCPPC reports that Montgomery County's population equals 0.31 percent of total U.S. population. The scrap generation rate is derived from County population as a percent of national population and an assumed average vehicle weight of 2,850 lbs. per car and 6,170 lbs. per bus and truck.

There are five private businesses in the County that process junked vehicles. Scrap automobiles are hauled to automobile recyclers located outside of the County. The Montgomery County Police disposes of abandoned vehicles through public auction. The police process fewer than ten junk automobiles per year, which are sold to scrap dealers.

Future scrap automobile generation is projected in proportion to M-NCPPC population.

3.1.5.3 Scrap Tires

Federal guidelines suggest that scrap tire generation follows population and results in one tire scrapped per capita per year. Based on this guideline, 951,240 tires were scrapped in the County in 2008. Using an average tire weight of 20 lbs. per tire, County scrap tire generation was approximately 9,512 tons in 2008 as shown previously in Table 3.6.

The State of Maryland Scrap Tire Law⁵ 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 four or fewer scrap tires at the Solid Waste Transfer Station for recycling. In Fiscal Year 2008, the County received 193 tons of tires for recycling. MES transports scrap tires from the Transfer Station to one of several State permitted scrap tire recycling facilities.

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."

⁵ Section 9-228, the Criminal Article of the Annotated Code of Maryland.

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, or 79 million gallons per day (mgd) in 2001, 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.

In February 1999, the WSSC stopped sending biosolids to the MCRCF and proceeded with actions that would allow for the permanent closure of the facility. WSSC has received approval from all local, state and Federal interests for the permanent closure of the MCRCF. Land application contracts are now being utilized to manage the entire WSSC share of biosolids from Blue Plains. The contractor determines the land application sites, since permits for biosolids are a requirement of the contractor at the time they submit a bid for this work. Historically, these land application sites have been located in rural Maryland and Virginia where the biosolids are applied as a fertilizer, generally for field crops of corn and soybeans. Wastewater treatment biosolids that are land applied in Maryland are subject to a Sewage Sludge Utilization Permit issued by MDE.

The four other WWTP facilities in the County are: Seneca, Damascus, Hyattstown, and Poolesville. Table 3.7 shows the total amount of biosolids generated at these WWTP facilities based on the 2008 average daily flows. The Fiscal Year 2008 average daily flows of these facilities are as follows:

Seneca WWTP	15.2	mgd
Damascus WWTP	0.78	mgd
Hyattstown WWTP	0.04	mgd
Poolesville WWTP	0.56	mgd

Current biosolids generation at the four WWTP facilities is estimated at 6,900 dry tons per year and can be estimated for the purposes of this plan to be approximately 7,725 dry tons per year by 2019.

**Table 3.7
Biosolids Generation in Montgomery County (Dry Tons/Yr)**

	<u>2008 Processed at Private Facilities</u>	<u>2008 Estimated Generation In County</u>	<u>2009 Projected Generation In County</u>	<u>2014 Projected Generation In County</u>	<u>2019 Projected Generation In County</u>
(l) Biosolids	6,900	6,900	6,960	7,349	7,725

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. Table 3.8 shows the total County septage generation.

Using assumed tank capacities and discharge frequencies, the County estimates septage generation at approximately 18,000 wet tons annually. M-NCPPC projects that the number of homes on septic tanks is not expected to increase markedly over the next decade. Therefore, septic and holding tank sewage generation is projected to remain level through 2019.

**Table 3.8
Septage Generation in Montgomery County (Wet Tons/Yr)**

	<u>2008 Processed at WSSC Facilities</u>	<u>2008 Estimated Generation In County</u>	<u>2009 Projected Generation In County</u>	<u>2014 Projected Generation In County</u>	<u>2019 Projected Generation In County</u>
(m) Septage	18,000	18,000	18,000	18,000	18,000

3.1.8 Other Wastes

3.1.8.1 RRF Ash

The County's RRF combusts MSW, reducing the amount of material requiring disposal by about 70 percent (weight). This residue is transported to a private landfill in Brunswick County, Virginia. Since the RRF first began processing waste in 1995, RRF residue ash has been periodically characterized following protocols established by the United States Environmental Protection Agency (EPA) and MDE. For each characterization event, a composite sample is aggregated from fourteen representative samples of ash collected over a seven day operations period. The samples are prepared and handled in accordance with EPA guidelines. Laboratory analysis is performed by an EPA certified laboratory following EPA procedures established for the Toxic Characteristics Leaching Procedure (TCLP). TCLP test results to date show that the RRF ash is a non-hazardous solid waste. Therefore, the ash may be recycled, or transported to a MSW landfill.

**Table 3.9
Ash Produced at the RRF and Transported out-of-County (Tons)**

Fiscal Year	2008	2009	2014	2019
Total RRF Ash (Residue)	183,441	170,500	187,240	187,243

3.1.8.2 Agricultural waste

According to the University of Maryland Cooperative Extension Service, agricultural waste, including crop residue and animal manure in the County is generally land applied for beneficial crop use. Some crop residue is left on the field surface to reduce soil erosion. Manure is injected or plowed into cropland. Generation quantities are not available for agricultural waste and are considered insignificant sources of solid waste.

3.1.8.3 Mining waste

No generators of mining waste exist in the County.

3.1.8.4 Litter

The *Keep Montgomery County Beautiful* program of MCDOT generates annual litter collection of 7,000 tons.

3.1.8.5 Street sweepings

MCDOT and municipalities generate annual street sweepings of 3,000 tons.

3.1.8.6 Recreational wastes

M-NCPPC generates 1,300 tons annually of solid waste at County parks and from within M-NCPPC facility buildings.

3.1.8.7 Yellow Grease and Brown Grease

Yellow grease, comprised of used frying oils (typically from deep fryers at restaurants), is of growing interest as a potential energy resource, as is brown grease which is generated in grease traps at restaurants. It is estimated that 4,350 tons per year of yellow grease and 6,250 tons of brown grease are currently generated at County restaurants.⁶

3.1.9 Waste Importation and Exportation

3.1.9.1 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 Table 3.12 for complete list of solid waste facilities in County).

3.1.9.2 Exportation of Waste from the County

Approximately 24 percent of non-recycled MSW generated within Montgomery County is disposed of at facilities outside the County. In addition, 20 percent of MSW generated in the County is recycled at sites other than County-owned facilities (not including backyard composting), many of which are located outside of the County. Based on Table 3.1, approximately 46 percent of the C&D generated in the County is handled by the County Transfer Station, and 54 percent is exported to out-of-County

⁶ Estimates contained in Council Resolution 16-402 which also established a Working Group to explore these materials and to report on the potential for their collection and processing into biodiesel type resources. The Report from that Work Group is due to be released after this Plan is required to be submitted to the State.

facilities by the private sector. All other types of solid waste are processed primarily, or exclusively, at out-of-County facilities.

3.1.10 Calculation of MSW Recycling Rate: County and MRA Calculations

Table 3.10 displays the County's current and projected MSW recycling rates that include an estimate of backyard composting of yard trim and grasscycling using a national model. The County estimates that approximately 72,555 tons of yard trim were home composted or grasscycled at single family and multi-family residences during Fiscal Year 2008. The County estimates that an additional 8,062 tons were grasscycled on non-residential properties during the same year. In the absence of these backyard composting and grasscycling efforts, a similar amount of yard trim would have entered the County's solid waste management system.

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 calculating recycling rates for the purpose of compliance with MRA requirements. County and MDE tonnage measurements of recycling rate follow the same calculations with two exceptions. First, the County rate includes estimates of backyard composting and grasscycling that are based on national models; however, MDE guidelines do not recognize estimates or national models as documented recycling. Second, the County does not include recycled RRF residue, however, MDE guidelines do allow credit for recycled RRF residue.

Table 3.11 displays the County's current and projected MSW recycling rates without backyard composting and grasscycling in conformance with the MRA reporting guidelines developed by MDE.

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. 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 Collection District

Pursuant to the County Code, Section 48-29, and implementing regulations, the entire County is a collection and disposal district. Pursuant to 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. Private collectors may supplement collection for buildings with 6 or fewer dwelling units or provide collection services to any building with 7 or more dwelling units.

Table 3.10
Municipal Solid Waste Recycling Rate: County Calculation (Tons/Yr)
Includes Back Yard Composting and Grasscycling, and
Assumes That All Tons disposed in RRF Were Eligible for Recycling

	2008	2008	2008	2009	2014	2019
	Processed at County Gov't Facilities	Processed at Private Facilities	Estimated Generation In County	Projected Generation In County	Projected Generation In County	Projected Generation In County
Residential (Single-Family and Muti-Family)	453,913	126,833	580,746	585,792	618,574	650,199
Recycled	183,284	102,957	286,241	279,465	301,230	315,032
Disposed	270,629	23,876	294,505	306,327	317,344	335,167
Non-Residential	307,705	360,925	668,630	671,272	713,029	768,263
Recycled	43,015	216,183	267,260	289,399	342,256	377,958
Disposed (including C&D burned at County RRF)	256,628	144,742	401,370	381,873	370,773	390,305
Municipal Solid Waste (MSW)	761,618	487,758	1,249,376	1,257,064	1,331,603	1,418,462
		Recycling Rate	44.3%	45.3%	48.3%	48.9%

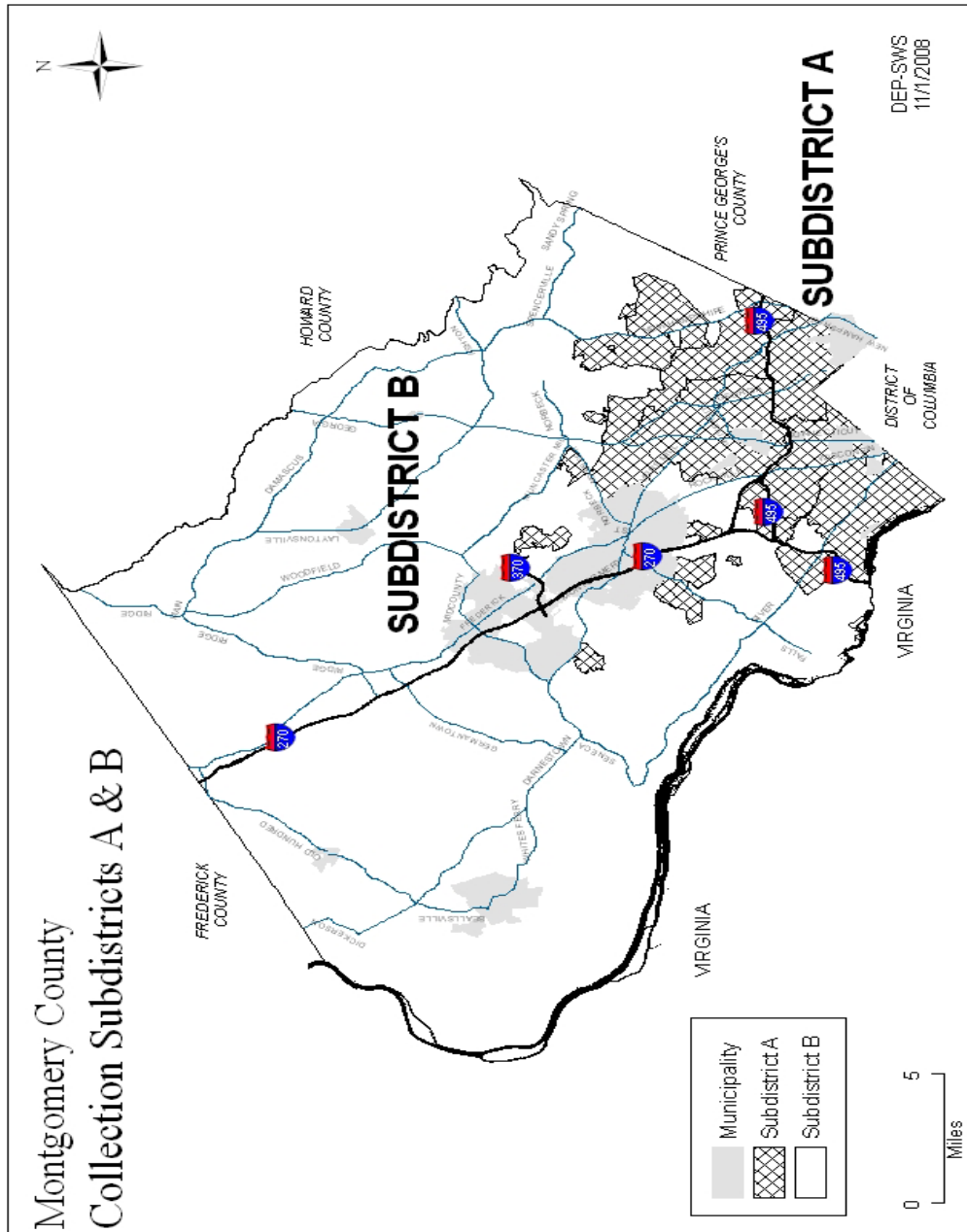
Table 3.11
Municipal Solid Waste Recycling Rate: MRA Calculation (Tons/Yr)
Does not Include Back Yard Composting or Grasscycling

	<u>2008</u> Processed at County Gov't Facilities	<u>2008</u> Processed at Private Facilities	<u>2008</u> Estimated Generation In County	<u>2009</u> Projected Generation In County	<u>2014</u> Projected Generation In County	<u>2019</u> Projected Generation In County
Residential (Single-Family and Muti-Family)	453,745	49,375	503,120	580,670	613,107	644,406
Recycled	183,116	25,499	208,615	274,343	295,763	309,239
Disposed	270,629	23,876	294,505	306,327	317,344	335,167
Non-Residential	299,630	358,258	657,889	668,582	710,171	765,185
Recycled	43,002	213,517	256,519	286,709	339,399	374,879
Disposed (including C&D burned at County RRF)	256,628	144,742	401,370	381,873	370,773	390,305
Municipal Solid Waste (MSW)	753,376	407,633	1,161,009	1,249,252	1,323,279	1,409,591
		Recycling Rate	40.1%	44.9%	48.0%	48.5%
		State Recycling Credit for Approved County Reduction Programs	5.0%	5.0%	5.0%	5.0%
		MRA (State) Recycling Rate	45.1%	49.9%	53.0%	53.5%

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.

Figure 3.1
Map of Collection Subdistricts A and B



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 collection contractors to obtain supplementary solid waste collection services. In 2008, Subdistrict A included approximately 89,900 single family residences⁷.

Bulky objects generated by single-family residences and multi-family residences 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 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 licensed 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 residences⁷. The Independent Collection Contractor contracts directly with its customers for the collection service. In 2008, Subdistrict B included approximately 119,400 single family residences⁷.

⁷ 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.

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.

3.2.3 County Contracted Recycling Collection

3.2.3.1 Single Family Recycling Collection Service

County 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 and bi-metal cans, certain plastic containers, grass, brush, leaves, Christmas trees and large household appliances (“white goods”) and select other scrap metals. 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 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 Processing, Marketing and Disposition of Recovered

Materials

All recyclable materials received through the curbside collection program are transported to the County's MRF (see Section 3.3.1.3).

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.

Grass and leaves are shipped by truck and rail to the County's 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.

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 6-99AM⁸ in Appendix F) allowing communities to opt in/out of the leaf collection district.

3.2.5 Waste Collection in Incorporated Municipalities

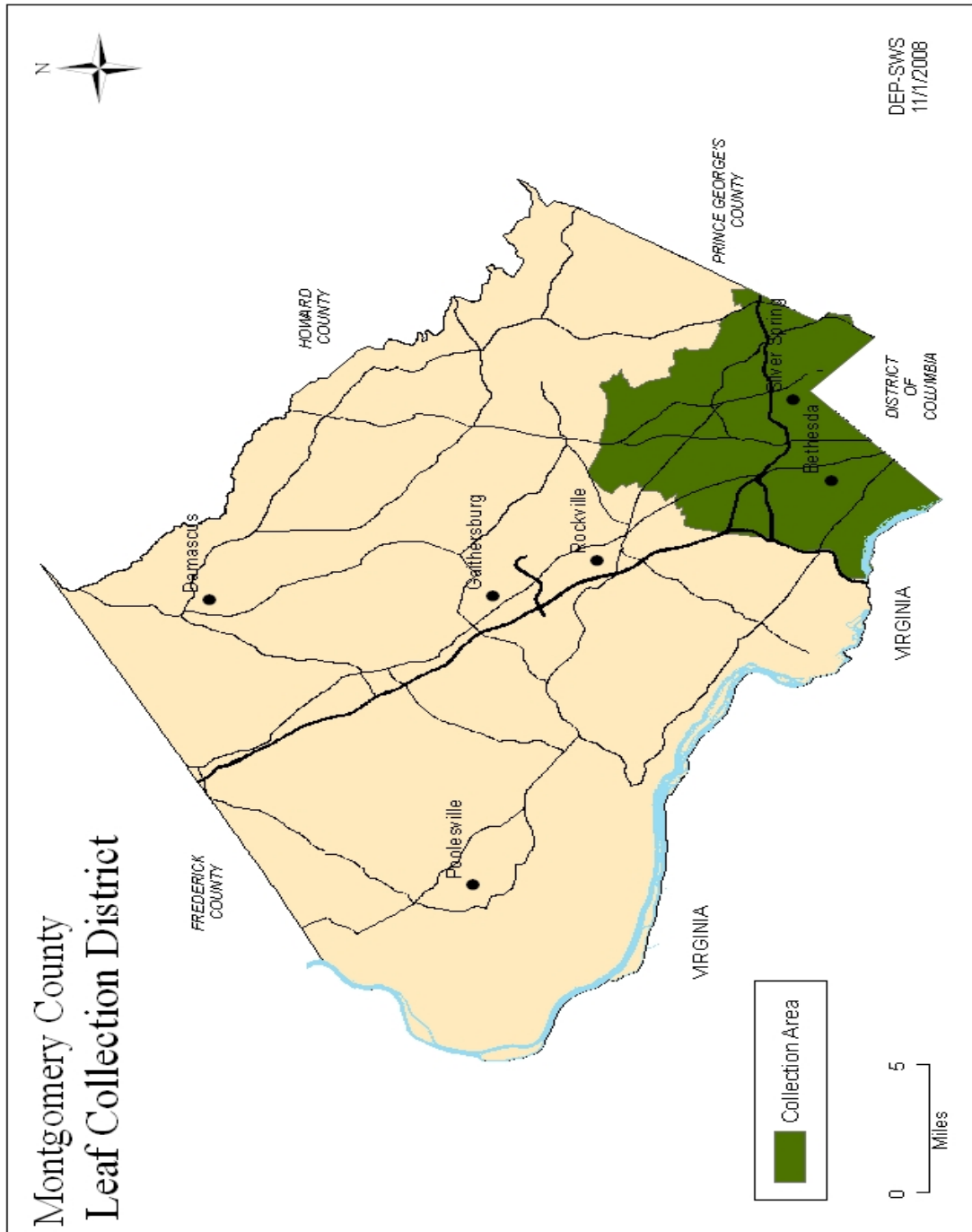
There are 19 incorporated municipalities within Montgomery County with responsibility for the collection of refuse and recyclables from within their jurisdictions. See Table 2.2 for a list of municipalities. Municipalities have the option of delivering refuse to the County Transfer Station and recyclables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

3.2.6 Independent Waste Collection

The collection and disposal of wastes generated on multi-family residential properties with seven or more units and non-residential (commercial, industrial and institutional) properties is the responsibility of the property owner. Wastes from these sources are either collected by a private collection company or self hauled to a waste acceptance facility. Independent commercial collectors must have a Montgomery County solid waste hauling license.

⁸ 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.

Figure 3.2
Map of Leaf Collection District



Private commercial collectors also provide recycling collection service to multi-family residential and nonresidential 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 licensed haulers for collection.

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.

3.2.7 Waste Collection and Transportation Conditions

3.2.7.1 Licensure

No person may engage in the business of collecting or transporting refuse within the County without first obtaining a Collector's license from DEP.

Any company or person engaged in or to become engaged in the business of collecting solid waste as a licensed collector or hauler under the terms of the Montgomery County Code may apply to be an Independent Collection Contractor authorized to collect solid waste on behalf of the County from residences included in the Solid Waste Collection and Disposal District. Only licensed collectors may be Independent Collection Contractors.

Licensees must operate fully in accordance with the Montgomery County Code. In accordance with Executive Regulation 58-92AM, all County-Licensed collectors and haulers must submit a semi-annual tonnage report.

3.2.7.2 Solid Waste Transport

The County requires that vehicles used in the transport of solid wastes shall be such that blowing refuse, litter, and spills of putrescible and noxious materials will not occur. Generally, such vehicles will have an enclosed, water-tight steel body of the packer type that is readily cleanable and sanitary. An exception is made in the case of vehicles used only for hauling building materials, trees and parts of trees, rubble, refuse packaged in cardboard boxes or plastic bags, abandoned vehicles, machinery,

appliances and other non-combustible materials. It further requires that the vehicles shall be operated in a safe and sanitary manner and upon such a schedule that the impact on traffic is kept to a minimum.

Hauling routes to be used by public vehicles and vehicles under contract to the County, and their schedules of operation, are designated by the County Executive.

3.2.7.3 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 residences⁹ in the district. Independent Collection Contractors are prohibited from billing County residences any tip fee for refuse collected at those homes.

3.2.8 Litter

3.2.8.1 Maryland Litter Control Law

The Maryland Litter Control Law¹⁰ 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

⁹ 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.

¹⁰ Section 10-110, the Criminal Article of the Annotated Code of Maryland (2002).

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 3.12, 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 composting facilities generally do not require a MDE

**Table 3.12
Solid Waste Facilities Located in Montgomery County**

Facility Type/Name	Location (Maryland Grid Coordinates)	Owner	Permit Status	Operating Status	Remaining Life	Types of Waste	Annual Tons
Recycling Facilities Georgetown Paper Stock	535-B Southlawn Ln Rockville (1272031, 519641)	Georgetown Paper Stock, Inc.	not applicable	active	indefinite	paper products	36,768 (FY 08)
Montgomery County MRF (Materials Recovery Facility)	16101 Frederick Rd Derwood (1264254, 529421)	Montgomery County	not applicable	active	10-15 years	paper products; containers (Al, Fe, glass, plastic)	91,132 (FY 08)
Montgomery Scrap	15000 Southlawn Ln Rockville (1273591, 523254)	Montgomery Scrap Corp.	not applicable	active	indefinite	scrap metal	89,295 (FY 08)
Office Paper Systems	7650 Airpark Rd Gaithersburg (1267736, 547772)	Office Paper Systems, Inc.	not applicable	active	indefinite	paper products	30,724 (CY 08)
Southeast Recycling	9001 Brookville Rd Silver Spring (1292142, 478582)	Southeast Recycling, Inc.	not applicable	inactive	Indefinite	paper products; Al containers	--
Composting Facilities Montgomery County Yard Trim Compost Facility	21210 Martinsburg Rd Dickerson (1185038, 558347)	Montgomery County	permitted	active	indefinite	leaves and grass	74,040 (FY 08)
ACME Biomass Reduction	21601 New Hampshire Av Brookville	ACME Biomass Reduction, Inc.	permitted	active	indefinite	wood	19,109 (FY 08)
Twin Ponds Farm	15315 Mt Nebo Rd Poolesville	Twin Ponds Farm, LLC.	permitted	active	indefinite	wood	5,539 (CY 08)

Table 3.12 (con't)
Solid Waste Acceptance Facilities, Montgomery County, Maryland

Facility Type/Name	Location (Maryland Grid Coordinates)	Owner	Permit Status	Operating Status	Remaining Life	Types of Waste	Annual Tons
Construction Debris Reclamation Facilities C&D Recovery LLC	24220 Frederick Rd Clarksburg (1226619, 578608)	Environmental Alternatives Reclamation, Inc.	permitted	active	--	construction and demolition debris	63,292 (FY 08)
Transfer Stations, Public Montgomery County Solid Waste Transfer Station	16101 Frederick Rd Derwood (1263505, 529641)	Montgomery County	permitted	active	indefinite	MSW, Nonprocessibles Yard Trim Other recyclables	(FY 08) 579,660 ¹¹ 80,481 ¹² 51,500 10,490
Sanitary Landfills Gude Sanitary Landfill (closed)	600 E. Gude Dr Rockville (1271271, 524364)	Montgomery County	permit expired	inactive	closed facility	--	--
Oaks Sanitary Landfill (closed)	6001 Olney- Laytonsville Rd near Laytonsville (1278703, 556080)	Montgomery County	permit expired	inactive	closed facility	--	--
Site 2 Landfill Site (in reservation)	near Martinsburg Rd & Wasche Rd Dickerson (1183472, 553143)	Montgomery County	permitted	820-acre land reserved for possible future need	--	--	--
Rubblefills Bonifant Road Rubblefill (closed)	1201 Bonifant Rd Silver Spring (1303174, 520238)	Maryland- National Capital Park and Planning Comm.	permit expired	inactive	closed facility	--	--

11 Amount loaded on rail to the RRF

12 Non-burnable materials going to recycling or a landfill

Table 3.12 (con't)
Solid Waste Acceptance Facilities Montgomery County, Maryland

Facility Type/Name	Location (Maryland Grid Coordinates)	Owner	Permit Status	Operating Status	Remaining Life	Types of Waste	Annual tons
Resource Recovery Facilities Montgomery County Resource Recovery Facility	21204 Martinsburg Rd Dickerson (1183469, 559168)	Montgomery County (land); Northeast Md. Waste Disposal Authority (RRF)	permitted	active	Indefinite	municipal solid waste	579,660 (FY 08)
Special Medical Waste Incinerators Bioqual, Inc.	2501 Research Blvd Rockville (1258799, 524014)	Bioqual, Inc.	permit expired	inactive	--	--	--
Montgomery General Hospital	18101 Pr. Phillip Dr Olney (1296766, 541693)	Montgomery General Hospital	permit expired	inactive	--	--	--
PerImmune, Inc.	1330A Piccard Dr Rockville (1261591, 523282)	PerImmune, Inc.	permit expired	inactive	--	--	--
Shady Grove Adventist Hospital	9901 Med. Center Dr Rockville (1255982, 521430)	Shady Grove Adventist Hosp.	permit expired	inactive	--	--	--
Pet Crematoria Heavenly Days Animal Crematory	605 S. Stonestreet Rockville (1271597, 515706)	Heavenly Days Animal Crematory	permitted	active	Indefinite	dead animals	39 (CY 08)

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, private solid waste facilities are subject to County zoning requirements.

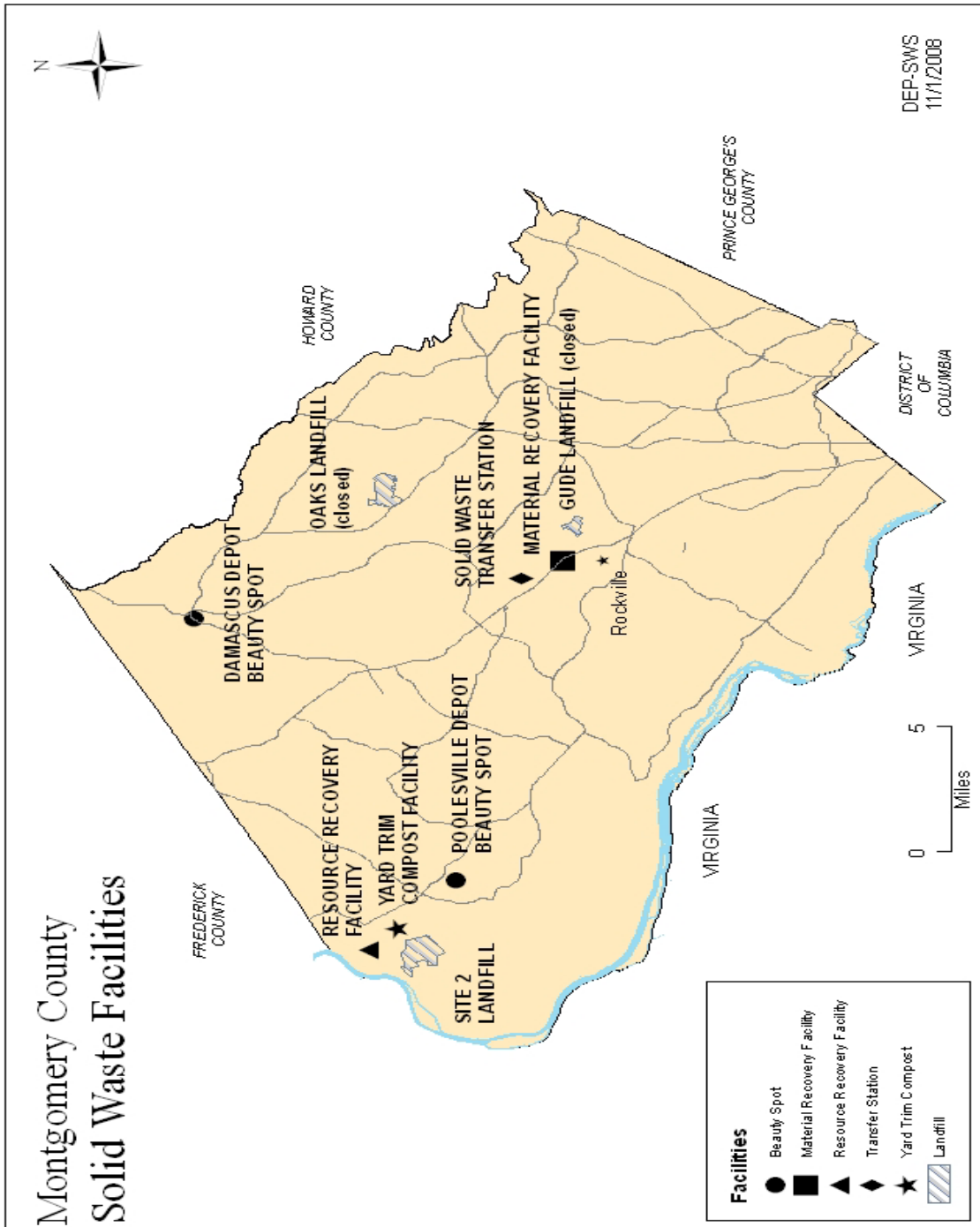
3.3.1 County Solid Waste Facilities

The County's existing solid waste management system is served by several principal facilities, each described below. The locations of each in-county facility that comprises the solid waste 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. 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. Containers of compacted waste are driven to the rail yard for shipment to the RRF. Non-processible waste received at the Transfer Station that can not be recycled is transported by tractor trailer to a private landfill in Brunswick County, Virginia. 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 and the contractor's dedicated scale. Inspectors also routinely check waste loads for other types of unacceptable materials.

Figure 3.3
Facilities of the County Solid Waste Management System



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, automotive fluids and batteries, household hazardous wastes, rechargeable batteries, building materials, textiles, and tires.

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 and 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 a subsidiary company of Mirant Americas Energy

Marketing, LP (MAEM). 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., f/k/a Ogden Martin Systems of Montgomery, Inc., a subsidiary of Covanta Energy Corporation, f/k/a Ogden 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 a 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 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 8-hour shift, and is operated one shift per operating day.

Commingled containers, including glass and plastic bottles, 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 100 tons of

mixed containers per 8-hour shift, and is operated generally on the basis of one shift per operating day.

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 two satellite drop-offs facilities (also referred to as convenience centers or “Beauty Spots”) for the purpose of citizen disposal of non-putrescible residential solid waste. These convenience centers are located at MCDOT Division of Highway Services (DHS) transportation depots: one in Poolesville at 19200 Jerusalem Road and one 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 Saturdays, and from 9:00 a.m. to 1:00 p.m. on Sundays.

The satellite convenience centers were started by the Division of Highway Services (DHS) in the mid-1980s in an effort to eliminate roadside trash dumping. Soon after DHS started the convenience centers, DSWS took over the management of the contract to haul waste from the convenience centers and DHS continued the daily operations at the sites. 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 waste quantities into stand-by roll-off containers.

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.

3.3.1.6 Out-of-County Landfill

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 2012. The landfill is owned by Brunswick Waste Management Facility (BWMF), Inc., a wholly owned subsidiary of Allied Waste Industries of North America, Inc. 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 County no longer manages Regulated Asbestos Containing Material (RACM) and does not use the landfill for its disposal.

The private landfill in Brunswick County, Virginia, is a permitted Subtitle D facility that opened in 1997. The County's contract provides for disposal of County waste in a dedicated landfill cell reserved for County waste exclusively. All permits needed for this site are current and valid. The remaining capacity for the dedicated cell is at least 17 years at the current disposal rate from the County. The contract may be extended for five additional years under the existing contract terms, through 2017, at the County's option.

3.3.1.7 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.

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

Brunswick Waste Management transports ash from the RRF in 20 ft. intermodal containers via rail over existing commercial rail lines to a depot in Petersburg, Virginia. From the rail depot, the containers are transferred to truck trailers for roadway transport to a privately owned landfill in Brunswick County, Virginia.

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

Brunswick Waste Management transports non-processible waste and bypass waste received at the Transfer Station that can not be recycled via over-the-road trailers to its privately owned landfill in Brunswick County, Virginia. Material that can be recycled such as asphalt and concrete are transported via truck to rubble recycling facilities.

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.

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.

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

4.1 MANAGEMENT NEEDS: MUNICIPAL SOLID WASTE

As presented in Chapter 3, approximately 1,249,376 tons of MSW were generated in the County during Fiscal Year 2008 and 1,418,462 tons are projected to be generated in FY 2019. 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 consumer education and technical assistance using various media, including development, production and distribution of educational and promotional 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, recycling, 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, computers, textiles and other materials.

Needs Assessment and Plan Direction: The County will continue to promote waste reduction through resident and consumer education and business technical assistance. 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. Waste reduction and reuse efforts in its operations include installing two-sided copying machines in many offices and promoting the use of electronic mail in place of paper memoranda. In addition to two-sided copying, and use of e-mail 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, 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 Policy to perform its mission while producing less resulting waste.

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 Greater Washington Metropolitan Council of Governments, the MDE, the Maryland Recyclers' Coalition 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. Effecting 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

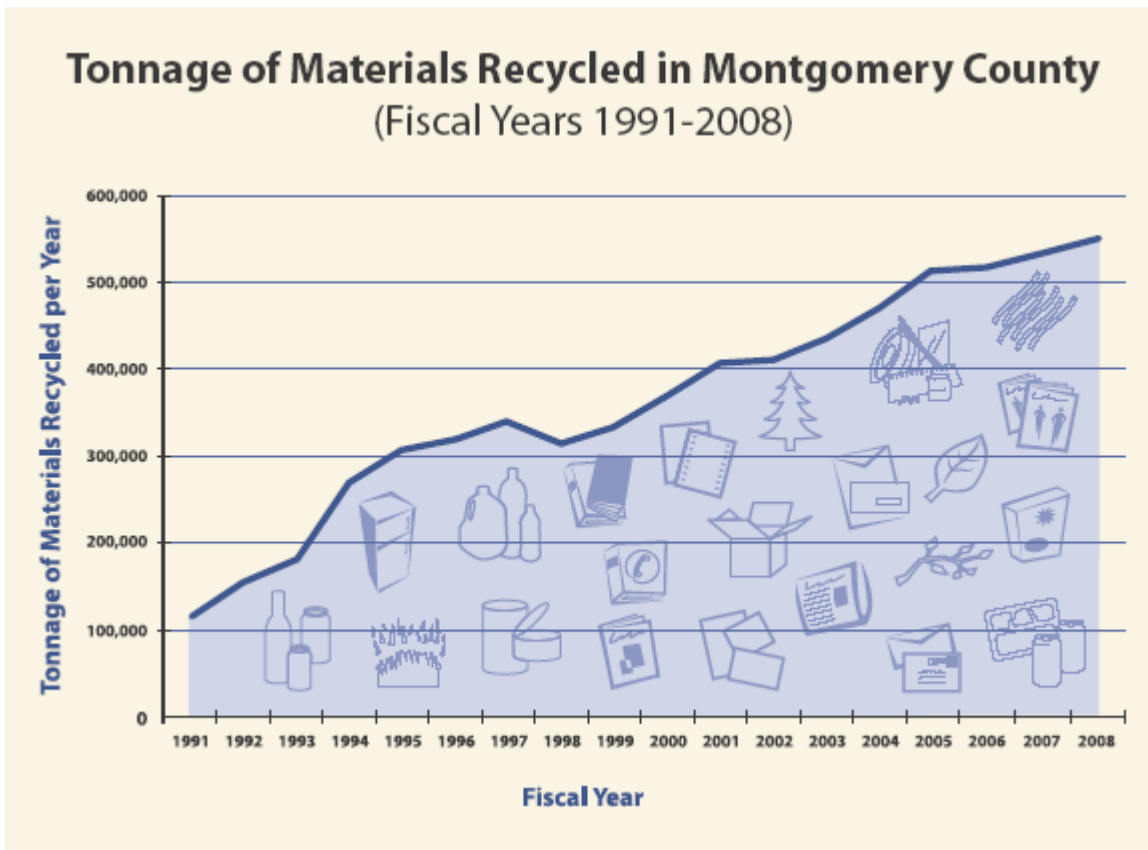
Current Conditions and Constraints: The County provides education and technical assistance to all types of waste generators emphasizing the economic benefits of waste reduction and increased recycling for lowering waste disposal costs.

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 COOP (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 since the inception of its recycling programs in 1992.

Figure 4-1



During Fiscal Year 2008, over 553,000 tons of municipal solid waste generated within Montgomery County, were recycled.

As is also suggested by the image above, MSW is comprised of many different types of materials. In fact, it is comprised of virtually every “thing” in our everyday culture. Markets determine if a particular type of material is 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 enables one to take stock of those opportunities, material type by material type, and both in terms of tonnage potential, and in terms of individual capture rates. The table was constructed by applying the results of the County's most recent waste composition analysis 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 increased recycling tonnage opportunities and at the same time appears to validate the feasibility of the County's overall 50 percent recycling goal.

For example, Table 4-1 indicates that of all the waste glass bottles and jars generated in the single-family sector, 70.9 percent, or 14,386 tons, were captured for recycling, leaving 29.1 percent, or 5,344 tons of glass disposed. That disposed tonnage represents the estimated *opportunity* for additional recycling offered by glass bottles and jars in the single-family sector.

Taking another example, the table indicates that only 46.2 percent of the non-residential paper was captured during FY08, leaving 53.8 percent, or 108,662 tons of paper, disposed from that sector.

By comparison, it can be seen that a shift of 71,186 tons of any material from disposal to recycling, for the FY08 period, would have resulted in the County having achieved its overall 50 percent recycling goal that year.

**Table 4.1
Waste Recycling by Material type: Achieve and Opportunity**

Basis for composition of disposed waste is the interpolated estimate of FY05 & FY09 waste sorts.	FY08 Actuals									Opportunity: Recyclable but Disposed			Total Disposed (Tons)
	Single-Family			Multi-Family			Non-Residential			Disposed by Sector (tons)			
	Generated (lbs)	Captured (lbs)	Capture Rate %	Generated (lbs)	Captured (lbs)	Capture Rate %	Generated (lbs)	Captured (lbs)	Capture Rate %	Single-Family	Multi-Family	Non-Residential	
Banned ER 15-04	323,838	259,525	80.1%	36,746	10,622	28.9%	381,860	232,700	60.9%	64,314	26,124	149,159	239,597
Banned Composite													
Paper	109,501	67,467	61.6%	18,661	1,850	9.9%	202,086	93,424	46.2%	42,034	16,811	108,662	167,507
Glass	19,730	14,386	72.9%	3,407	622	18.2%	10,547	2,864	27.2%	5,344	2,786	7,683	15,813
Other Ferrous	15,488	11,419	73.7%	3,364	1,616	48.1%	98,896	87,203	88.2%	4,069	1,747	11,693	17,510
Yardwaste	165,492	160,220	96.8%	7,014	5,901	84.1%	52,458	43,960	83.8%	5,272	1,113	8,498	14,883
Narrow-Neck Plastics	7,305	3,667	50.2%	2,149	160	7.4%	7,410	711	9.6%	3,638	1,989	6,699	12,327
Ferrous/Bimetal Containers	3,167	1,599	50.5%	1,100	352	32.0%	2,786	314	11.3%	1,568	748	2,472	4,788
Aluminum Beverage Cans	1,509	691	45.8%	517	28	5.5%	2,051	371	18.1%	818	488	1,681	2,987
Other Aluminum (foil)	764	18	2.3%	259	1	0.2%	1,126	1	0.1%	746	258	1,125	2,129
Other Non-Ferrous Metal	882	58	6.6%	276	92	33.4%	4,499	3,854	85.7%	824	184	645	1,653
Encouraged													
Textiles & Leather (no Rugs)	5,673	120	2.1%	1,730	6	0.4%	6,605	158	2.4%	5,553	1,724	6,447	13,724
Wood Waste (including pallets)	7,581	6,367	84.0%	1,160	66	5.7%	40,271	20,491	50.9%	1,214	1,094	19,781	22,090
Whole Tires (as Rubber)	2,179	2,101	96.4%	628	528	84.0%	4,379	2,628	60.0%	78	101	1,752	1,930
Lubricants (e.g. motor oil)	4,127	3,993	96.7%	1,127	1,079	95.8%	2,889	2,679	92.7%	135	47	210	392
Electronics	4,911	1,033	21.0%	2,143	35	1.6%	4,216	354	8.4%	3,878	2,108	3,861	9,847
Batteries	270	262	97.2%	124	9	7.1%	1,670	1,455	87.1%	8	115	215	338
Tire Steel	485	213	43.9%	132	53	40.4%	814	266	32.7%	272	79	547	898
Potential													
Food Waste	44,636	15	0.0%	13,304	0	0.0%	72,293	5,043	7.0%	44,621	13,304	67,249	125,174
Film Plastic	16,051	-	0.0%	4,680	-	0.0%	26,843	474	1.8%	16,051	4,680	26,369	47,100
Other Plastic	7,319	213	2.9%	2,905	2	0.1%	14,322	1,011	7.1%	7,106	2,903	13,311	23,319
Carpets / Rugs	3,685	-	0.0%	1,717	-	0.0%	13,259	-	0.0%	3,685	1,717	13,259	18,661
No Markets													
Other Wood	4,022	-	0.0%	1,895	-	0.0%	11,758	-	0.0%	-	-	-	17,675
Other Glass	609	-	0.0%	294	-	0.0%	739	-	0.0%	-	-	-	1,642
Disposable Diapers	11,346	-	0.0%	3,496	-	0.0%	3,332	-	0.0%	-	-	-	18,174
Other Waste	53,815	-	0.0%	18,118	-	0.0%	83,380	-	0.0%	-	-	-	155,312
TOTAL	490,547	273,841	55.8%	90,199	12,401	13.7%	668,630	267,260	40.0%	146,914	53,996	302,160	695,874

Notes:

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

Encouraged: Although not subject to a disposal ban, these materials are recycled via standing programs. Consistent, if not strong, markets exist for these materials. Textiles are recycled only via voluntary drop-offs (does not include clothing donations).

Potential: Markets either exist for these materials, or could exist with additional processing. (e.g. As of 7/1/08, additional rigid plastics, not just narrow-necked bottles, were deemed reliably marketable and added to the County's recycling program.)

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

Using Table 4-1 to examine just that group of recyclable materials that have been banned from disposal (by Executive Regulations ER15-04AM and ER18-04), it can be shown that those banned materials are already being recycled at an aggregate rate of 63.2 percent. Another inference that can be taken from Table 4-1 is that in order to have achieved an overall system-wide 50 percent recycling rate in FY08 *just on the basis of increased recycling of banned materials alone*, the aggregate capture rate for those banned materials would need to have been increased to 77.3 percent. The County judges, therefore, that achieving its overall 50 percent recycling goal is achievable, but ambitious.

Goals should be ambitious. An important planning question is how and when this goal can be achieved. As reviewed in Chapter 3, and detailed above and in Appendix B, the County's recycling rate for Fiscal Year 2008 was over 44.3 percent.

The tonnage projections provided in Chapter 3 (See Table 3-10) envision the County reaching 48.3 percent recycling in FY14, and then leveling off at that level. In this regard, 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 an eight 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. Thus, the tonnage projections presented in Chapter 3 of this plan are consistent with the County's Fiscal Plan for Solid Waste Management published Mach 15, 2009.

Yet, achieving or exceeding a 50 percent overall recycling rate by the end of Calendar Year 2010 remains the County's goal. The challenges toward meeting that goal

are multiple—to annually advance recycling achievement within the fiscal constraints of approved programs, to track achievement, continually identify new opportunities to enhance recycling achievement, and 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 50 percent 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 50 percent 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.

It is important to note that this Comprehensive Solid Waste Management Plan, need not be amended in order for the County to amend, from time to time (as it does annually as part of its fiscal process) its tonnage projections, its recycling projections, or its Recycling Plan Update. 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 209,000 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.

Separated materials recycled through the County's curbside collection program include 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 (junk mail, catalogs, paperback books, magazines, cardboard boxes, newspaper, office paper and telephone books) 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 segregation of commingled containers and also serves as a transfer station for transport of mixed paper. 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 Fiscal Year 2008, single-family homes in the County set out 31,780 tons of commingled recyclable containers and 67,467 tons of tons of mixed paper.

In Fiscal Year 2008, the single-family residential sector accounted for 39.3 percent of the total County municipal solid waste generation (MSW) and recycled 55.8 percent of the MSW it generated.

In addition to a strong public 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 Executive Regulations 15-04AM and 18-04).

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 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 over 80 percent. Even discounting the most highly recycled component, yard waste, the single family sector is capturing 62.7 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 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. In deed, relative to the multi-family and

non-residential sectors, Table 4-1 indicates higher single-family recycling capture rates and thus higher over all compliance with recycling rules within the single-family sector. However, as also indicated in Table 4-1, there remained over 64,000 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 Fiscal Year 2008, the multi-family residential sector accounted for 7.2 percent of the total County waste generation. Multi-family residents recycled 12,401 tons or 13.7 percent of the waste generated in the 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 training and provide guidance to promote full

compliance with County regulations and enforcement actions. In addition, DEP is studying the current costs of recycling and waste disposal collection experienced by multi-family properties and is assessing the feasibility of collection scenarios which would successfully decrease the realized and internalized 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 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 Fiscal Year 2008, the non-residential sector accounted for 53.5 percent of the total County solid waste generation and recycled 267,260 tons or 40 percent of the solid waste generated in the 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. While most large and mid-sized

employers in the County have implemented recycling programs, many small businesses 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 on-site training and provide 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 COOP program (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 as needed.

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. It also became apparent that 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, Bethesda and Wheaton CBD's. 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 these 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 50 percent recycling goal. DEP will continue evaluating this and other opportunities 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, used motor oil, antifreeze, automobile batteries, building materials, computers, and white goods/scrap metal (large home appliances). Chlorofluorocarbon (CFC) refrigerants and polychlorinated biphenyl (PCB) containing capacitors are removed from white goods in accordance with Federal and State regulations.

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.

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, to list some of the items. Currently, this program recycles about 55 tons of computers and 100 tons of televisions and other electronics per month. County residents and businesses 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 who are at a distance from the Transfer Station. These satellite events will continue for the foreseeable future and have occurred approximately on a monthly basis. Currently, E-Structors, located in Elkridge MD, receives material collected via the County's electronics recycling programs. The contract with E-Structors requires them to recycle 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: Large quantities of recyclables, particularly from the non-residential and multi-family residential sectors, are exported from the County for processing and marketing. 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.

Needs Assessment and Plan Direction: While out-of-County processing of recyclables is not itself a problem, the lack of nearby recycling acceptance facilities raises the cost and limits the feasibility of additional private sector recycling. While current recycling facility capacity is adequate, future needs will be projected and facilitated when appropriate.

4.1.3 County Provided Disposal System

While the County strives to achieve its overall 50 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, Inc. (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 and includes an option, exercisable at the County's sole discretion, to extend the term through 2017. The same contract also provides for back-up landfill capacity in Georgia, or other approved locations, should the Brunswick County facility become unavailable. This is discussed further in the next chapter (Section 5.2.1.5.). With

respect to the FY2019 planning horizon, there will be a need to secure an additional two years of capacity.

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 FY08, private sector collectors chose to dispose of 168,618 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.

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 just recently have been renovated. 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 520,400 tons.¹ During FY08, about 57 percent of the private sector MSW export from Montgomery County went to the Annapolis Junction facility, and about 22 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.

¹ Personal communication with Jeffery Dickerson, District of Columbia, 11/10/08.

Figure 4.2

County Facilities Accepting Out-of-Jurisdiction MSW

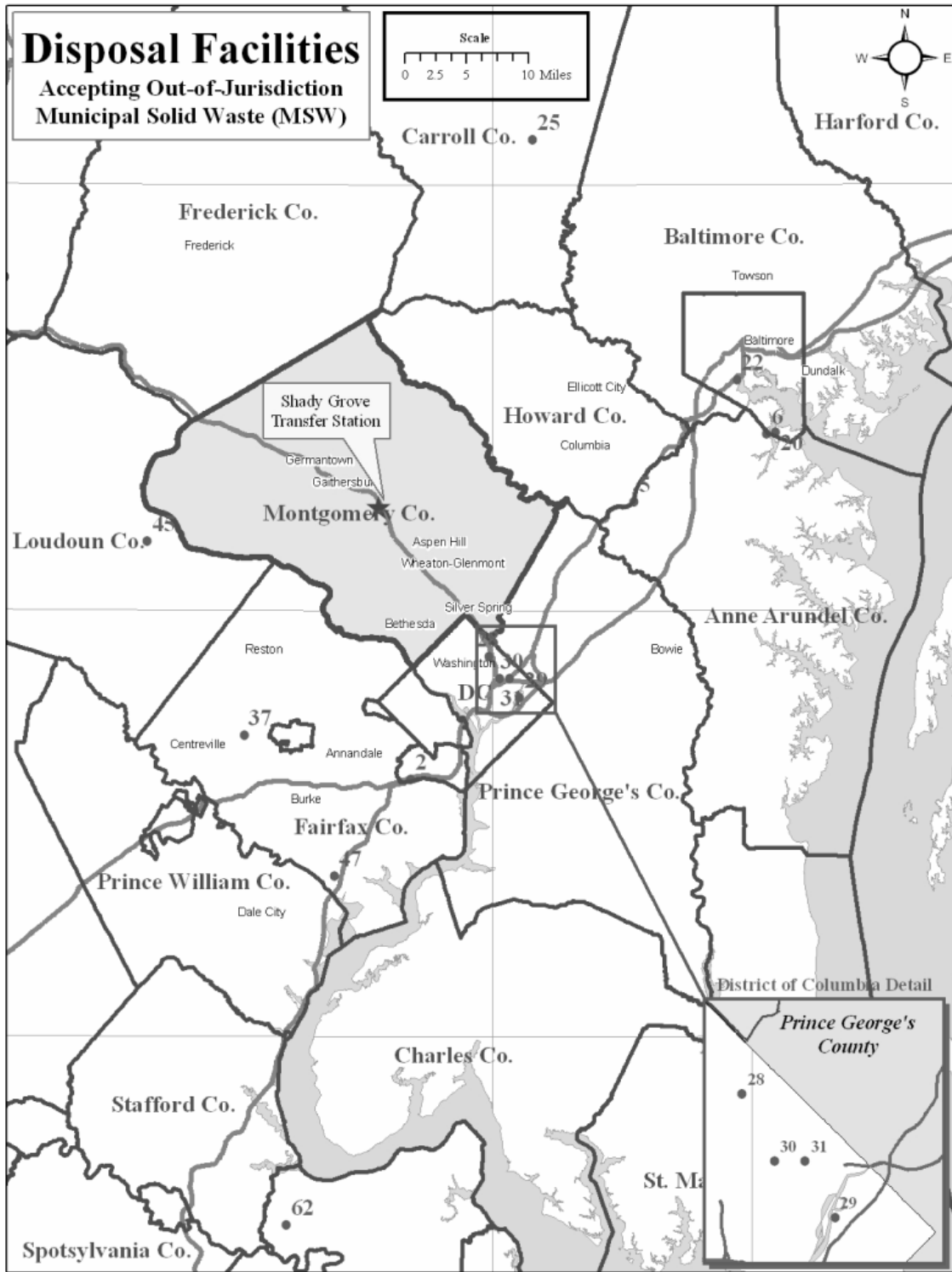


Table 4.2
Disposal Facilities Accepting Out-of-Jurisdiction
Municipal Solid Waste (MSW)

FAC_ID	Facility	County	State	Road Distance
2	Alexandria WTE	Alexandria	VA	31
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
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
37	Fairfax County TS - a.k.a I-66	Fairfax	VA	28
45	Old Dominion Transfer Sstation	Leesburg	VA	37
47	Fairfax County WTE	Lorton	VA	36
62	King George County Landfill	King Georges	VA	75

Table 4.3
Private Sector MSW Export

Facility Name	Location	FY08 Tons	Percent
Annapolis Junction	Jessup, MD	91,787	57.2%
Fort Totten (DC Government)	NE, Washington DC	27,762	17.3%
Waste Management	Queens Chapel, Rd, NE	25,429	15.8%
Federal IPC	NE, Washington DC	8,253	5.1%
Sixteen Other Locations	Various	5,559	3.5%
Alexandria WTE	Alexandria, VA	1,766	1.1%
		160,556	100%

4.1.5 Municipal Solid Waste Composting

Current Conditions and Constraints: With the exception of yard trim composting, 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 the status of the technologies, none is expected in the near future.

As a categorical component of MSW, food waste represents an estimated 125,174 tons of disposed waste according to Table 4-1, and thus a theoretical 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.

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.

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. In addition, the HHW program also includes four satellite collection events each year. Approximately 60,000 households participate in the HHW collection program each year. Since its inception, the HHW program has processed 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 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.

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.

Also, for electronics recycling, see discussion in Section 4.1.2.4., above.

Needs Assessment and Plan Direction: DEP will pursue additional opportunities to expand participation in both the HHW and small quantity generator programs in a cost effective manner. 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 this practice, and also will investigate the feasibility of County-sponsored satellite collection centers for CFLs and fluorescent tubes.

4.2 MANAGEMENT NEEDS: SPECIAL WASTE STREAMS

4.2.1 Land Clearing and Demolition Debris Needs

Traditionally the bulk of rubble and land clearing debris was handled almost exclusively by the private sector, with the County handling only about 40,000 TPY of materials generated by its own road operations.

Current Conditions and Constraints: As reported in Chapter 3, during FY08, the County received at its transfer station 110,600 tons (or 46 percent of the total C&D generated), and private facilities received about 128,660 tons (or 54 percent of the C&D total generated). Table 4-4, below, presents more specifically, the generation and disposition of the 239,260 tons of C&D generated in the County during FY08.

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 FY08, however, that facility accepted only 32,963 tons. Most of this was delivered by collectors affiliated with the owner. This is 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

there relative to the conditions of the mix collected and potentially delivered. There may also be private and economic circumstances. The facility appears to maintain its tipping fee slightly higher than the County's. Less than 40 percent of the incoming material at the Clarksburg facility is recycled—the balance being disposed in rubble fills located outside the County.

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

Total C&D Generation, FY08	Tons	100%	Tons Breakouts	
Received by Montgomery County	110,600	46%		
Recycled by County (does not count toward Recycling Rate)			5,057	2.1%
Disposed by County via its Out-of-County (OOC) Landfill Contract			75,424	31.5%
Burned by County in RRF (remaining ash also disposed in OOC Landfill)			30,119	12.6%
Handled Entirely by the Private Sector	128,660	54%		
Clarksburg C&D (< 40% gets recycled. Permitted for 250,000 TPY)			32,963	13.8%
39 Other Private Facilities (59,000 tons went to just 12 other facilities)			95,697	40.0%

As noted in Table 4-5, there are another 39 outside the County that accepted C&D, with just 12 of them accepting 95,697 tons in FY08 and accounting for the disposition of 40 percent of total C&D generated. Table 4-5 details the FY08 disposition of that 128,660 tons of C&D that was handled entirely by the private sector during FY08 (e.g. not delivered to the County).

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 4.6). This modification provides for the recycling of mixed dirt, rocks, brick, concrete and rebar 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, maps most of these facilities,

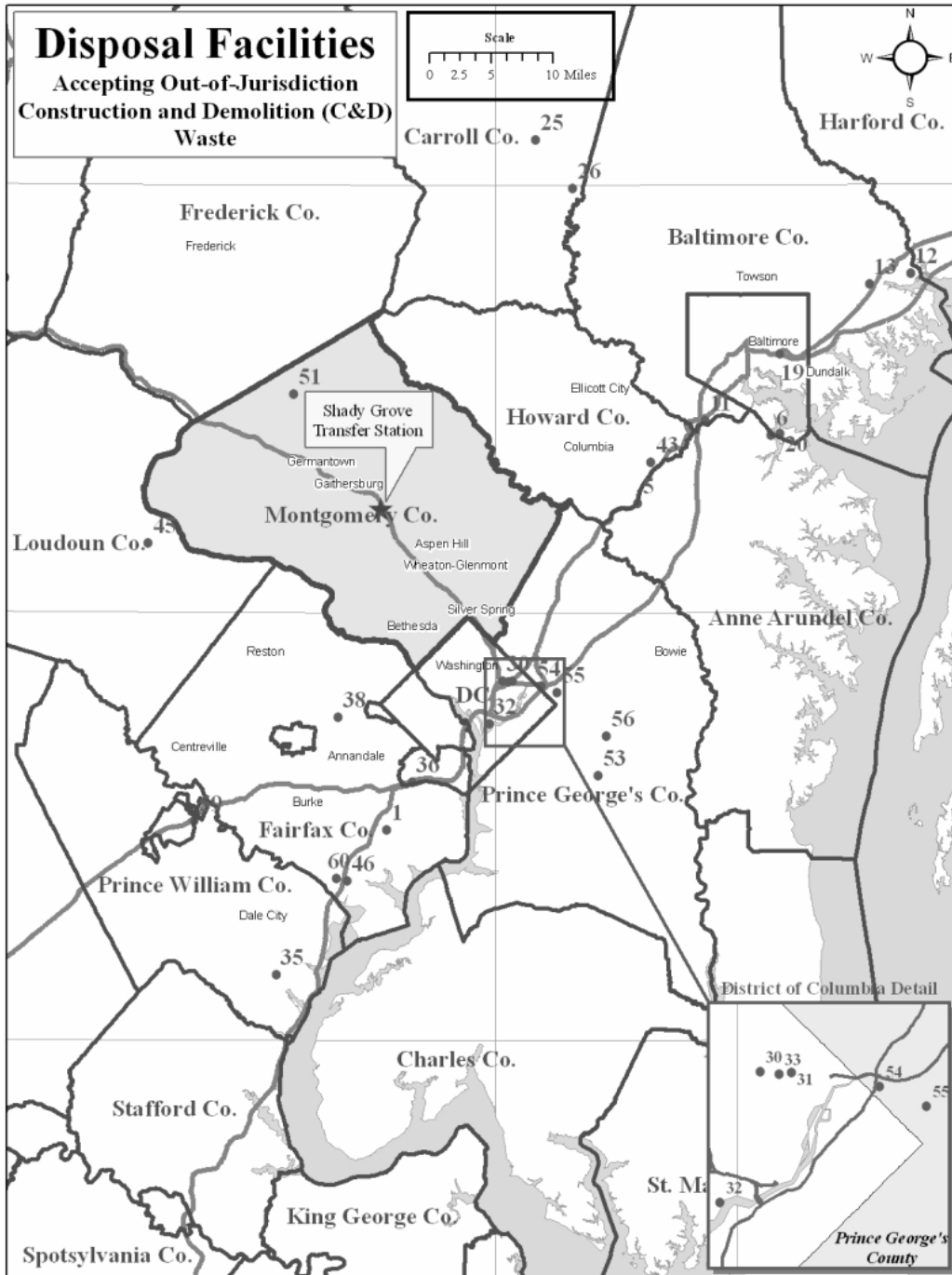
and accompanying Table 4-5 shows road-distances from the center of Montgomery County.

**Table 4.5
FY08 C&D Private Sector Export from Montgomery County by Destination**

Facility Name	Facility Location	State	Tons
Ritchie Land Rubble LF	2001 Ritchie Marlboro Rd, Upper Marlboro, MD 20772	MD	40,374.91
C & D Recovery PF	24120 Frederick Rd, Clarksburg, MD 20872	MD	32,962.53
Eyler Rubblefill	Libertytown	MD	16,500.00
Ameriwaste PF & TS	7150 Kit Kat Rd, Elkridge, MD 21075	MD	7,232.51
Federal IPC	1220 W St, NE, Washington, DC 20018	DC	5,822.59
Merrifield	2801 Dorr Ave, Fairfax, VA 22031	VA	4,386.87
TRC	14852 Old Gunpowder Rd, Laurel, MD 20707	MD	3,484.00
ADS	5900 Sherriff Rd, Capitol Heights, MD 20743	MD	2,972.80
Annapolis Junction	8077 Brock Bridge Rd, Jessup, MD 20794	MD	2,211.58
Potomac Landfill	3730 Greentree La, Dumfries, MD 22026	MD	1,990.00
Brandywine Sand & Gravel	Captiol Heights, MD 20743	MD	1,963.00
Reliable Recycling Center	502 East St, Frederick, MD 21701	MD	1,440.25
Percontee	Silver Spring, MD 20904	MD	1,352.95
Hilltop C & D	7950 Telegraph Rd, Alexandria, VA 22315	VA	851.00
Machado	Baltimore	MD	834.50
PMI	6931 B&A Blvd, Baltimore, MD 21201	MD	802.50
Lorton Landfill	10001 Furnace Rd, Lorton, VA 22079	VA	567.00
C & D Recovery II	Manassas	VA	273.30
Calvert Trash Systems	1601 Skinners Turn Rd, Owings, MD 20736	MD	265.00
EAR of MD	Baltimore	MD	244.77
Recovermat	2202 Halethorpe Farm Rd, Halethorpe, MD 21227	MD	233.50
Curtis Creek	Baltimore, MD 21226	MD	214.75
Days Cove	6415 Days Cove Rd, White Marsh, MD 21162	MD	214.75
Honey Co	10701 Philadelphia Rd, Perry Hall, MD 21128	MD	214.75
L & W	8308 Lokus Rd, Odenton, MD 21113	MD	192.00
Asphalt Roof Recycling Center	1005 Rising Ridge, Mt. Airy, MD 21771	MD	158.00
Roll-Off Express	Finksburg, MD 21048	MD	142.00
Rodgers Brothers	2225 Lawrence Ave, NE, Washington, DC 20018	DC	136.98
East End Landfill	Richmond	VA	128.00
BRESCO	Baltimore, MD 21230	MD	83.10
Reico	1801 Annapolis Rd, Baltimore, MD 21230	MD	73.50
Land Venture II	Centerville, VA 20120	VA	64.00
Belle Grove	Baltimore, MD 21225	MD	60.00
DC Materials, Inc.	3334 Kenilworth Ave, Hyattsville, MD 20781	MD	60.00
Old Fort Farms	10001 Sunset Vw, Ft. Washington, MD 20744	MD	52.00
Westport Reclamation	Baltimore	MD	32.00
Waste Mgmt.	2160 Queens Chapel Rd, NE, Washington, DC 20018	DC	29.35
Benning Rd Transfer Station	3400 Benning Rd, Washington, DC 20019	DC	21.00
Barnabas Pitt	4714 Chilton Rd, Temple Hills, MD 20748	MD	10.00
Patuxent Materials	Baltimore	MD	8.00
			128,659.74

Source: Reports Submitted by Licensed Haulers and Collectors Under Executive Regulation 58-92AM

Figure 4.3
Facilities Accepting Out-of-jurisdiction C&D



**Table 4.6
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

It should be noted that Figure 4-3 and corresponding Table 4-5 do not necessarily include processing facilities that are not required to be permitted by a local authority. Figure 4-3 maps all available privately run options in jurisdictions adjacent to Montgomery County in Maryland which are known to be accepting 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 and Table 4-5 do not necessarily represent the total number of available facilities for C & D.

Needs Assessment and Plan Direction: As noted above, the amount of C&D generated in the County in FY08 was about 239,000 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. Thus, this amount is projected to increase, by FY 2019, to 267,874 TPY. With developable land comprising less and less of the County, it is postulated 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 increasing the challenge of recycling and disposal of that material.

As Figure 4-4 and Tables 4-3 and 4-4 show, there is no shortage of destinations other than Clarksburg or the County Transfer Station which can and do receive C&D generated in Montgomery County. However, only seven of the 39 facilities inventoried above are equipped for any level 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. In addition, the County should endeavor to more closely monitor and encourage private sector C&D recycling activities and opportunities.

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 DFRS, 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, Annex P, the Montgomery County DEP is responsible for "detection, monitoring, sampling and analysis of water borne, land borne, and air borne hazards when releases of hazardous materials occur." In addition, Annex Z of this plan provides mandates for addressing hazardous material releases. Annex Z was written in accordance with the requirements of the Federal Superfund Amendments and Reauthorization Act. DEP also has coordination responsibility for addressing releases of hazardous material.

The Division of Environmental Policy and Compliance (DEPC) within 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 DFRS 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. DFRS is responsible for on-site materials containment and stabilization. Once DFRS 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 19-50), 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. Haulers transporting special medical waste within the County must have a County solid waste license.

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 Fiscal Year 2008, private renders in Virginia and Pennsylvania processed an estimated 109 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's Animal Services Division in the Department of Police, 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 a non-profit organization located in Baltimore, Maryland, for use in low income housing projects throughout Maryland. Other bulky items that are not suitable for disposal at the RRF are included with other non-processible waste sent for disposal at a private landfill in Brunswick County, Virginia.

As indicated in Chapter 3, County bulky waste generation in FY 2008 is estimated at 79,575 tons per year.

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.

As indicated in Chapter 3, County scrap automobile generation is estimated at 59,361 tons per year.

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: In February 1999, WSSC ceased the delivery of biosolids to the Montgomery County Regional Composting Facility (MCRCF). The biosolids formerly being composted at the MCRCF have been directed to WSSC land application contractors. All local, State and Federal approvals for permanent closure have been received and WSSC has closed this facility.

The four wastewater treatment plants located in the County currently treat approximately 20 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: The County will promote the recycling of the nutrients and organic material present in biosolids to benefit growth of crops and improve soils. Land application and composting are the preferred beneficial uses of biosolids. Disposal processes such as landfilling and incineration will not be used as the primary means of biosolids management.

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 Montgomery County DEP. In 2009 WSSC expects to propose an updated management plan for the septage hauled to its facilities.

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 and the remaining materials are transported to a privately operated MSW landfill in Brunswick County, Virginia.

Litter and recreational wastes are considered MSW and are processed along with all other MSW received at County facilities.

Street sweepings are included with the non-processible waste transported to a privately operated landfill in Brunswick County, Virginia.

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. 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.

“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

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

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.

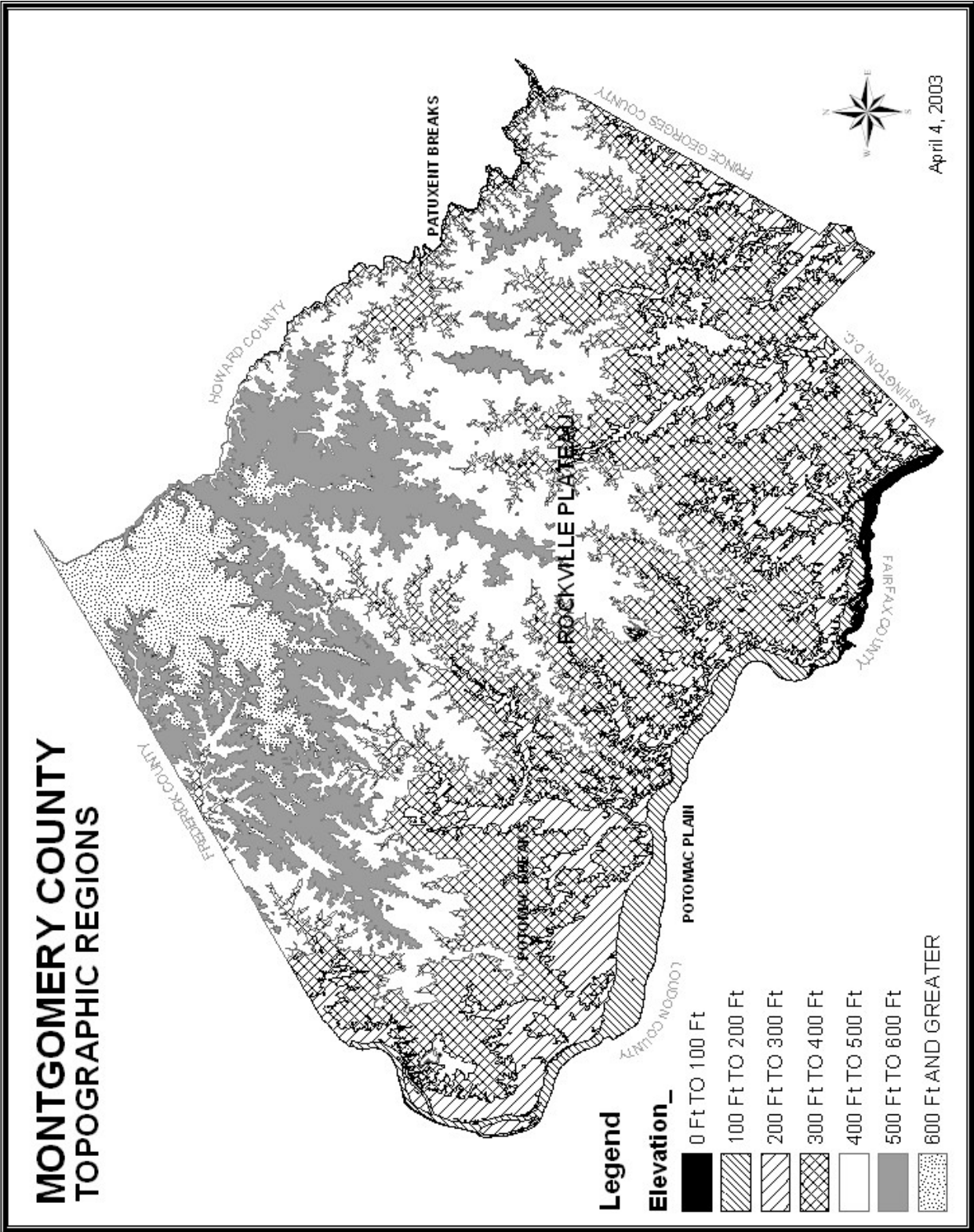
“Chillum-Croom-Beltsville” soils are nearly level to steep, well drained and moderately well drained, very deep soils. This soil type is found in the eastern part of the County along the Prince George’s County line. It is found on broad ridgetops and side slopes. Chillum-Croom-Beltsville soils make up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

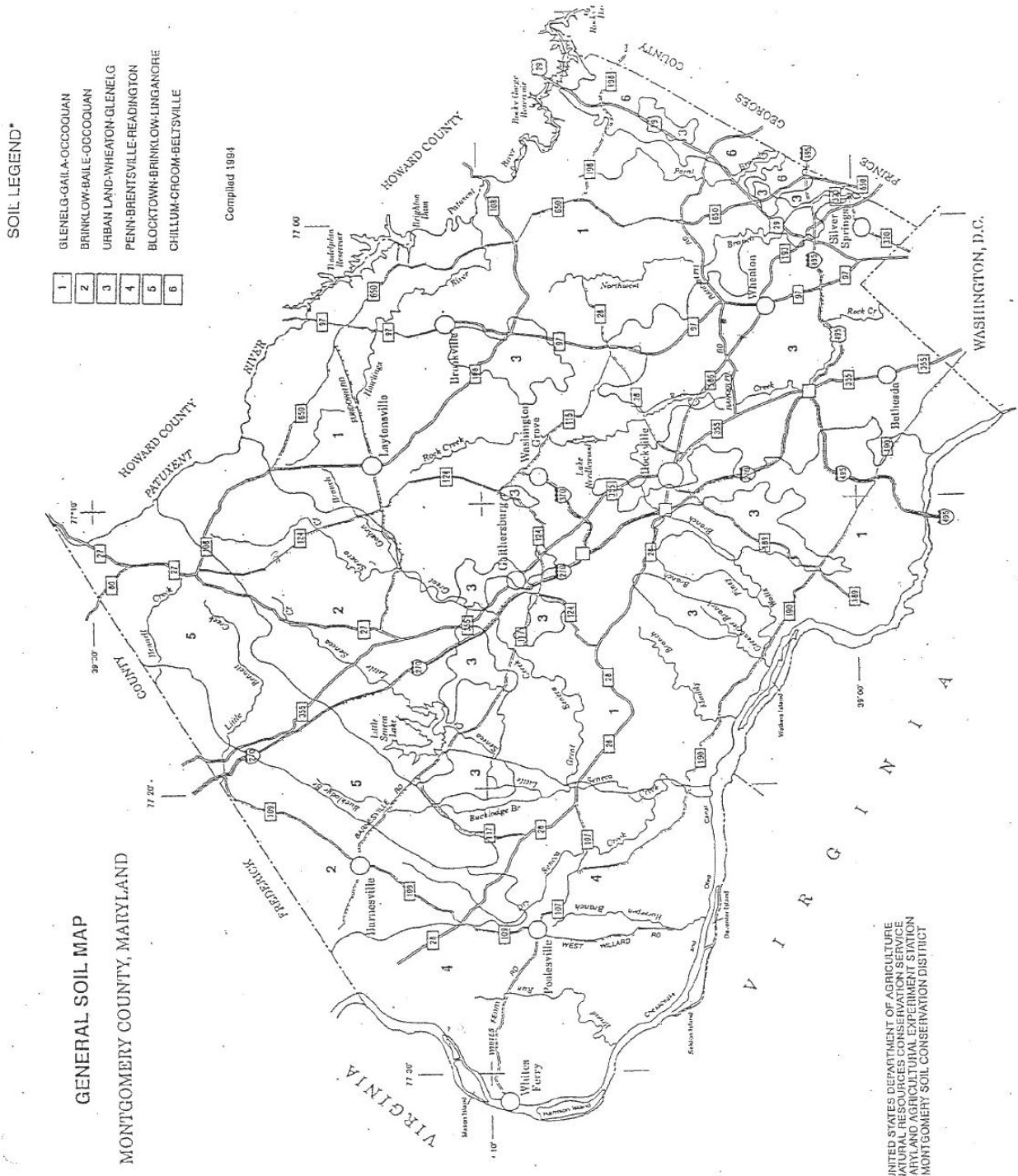
The bedrock in the eastern two-thirds of the Piedmont consists of rocks of the Wissahickon Group. The best example of these rocks is exposed in the quarry of Rockville Crushed Stone Company south of Hunting Hill. The serpentinite here is quarried for use as crushed stone aggregate. Quarries for building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

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

Figure 4.4
County Topographic Map



**Figure 4.5
County General Soil Map**



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.

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.

GENERALIZED BEDROCK GEOLOGIC MAP
OF
MONTGOMERY COUNTY, MARYLAND

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

Figure 4.6
County Geologic Conditions Map

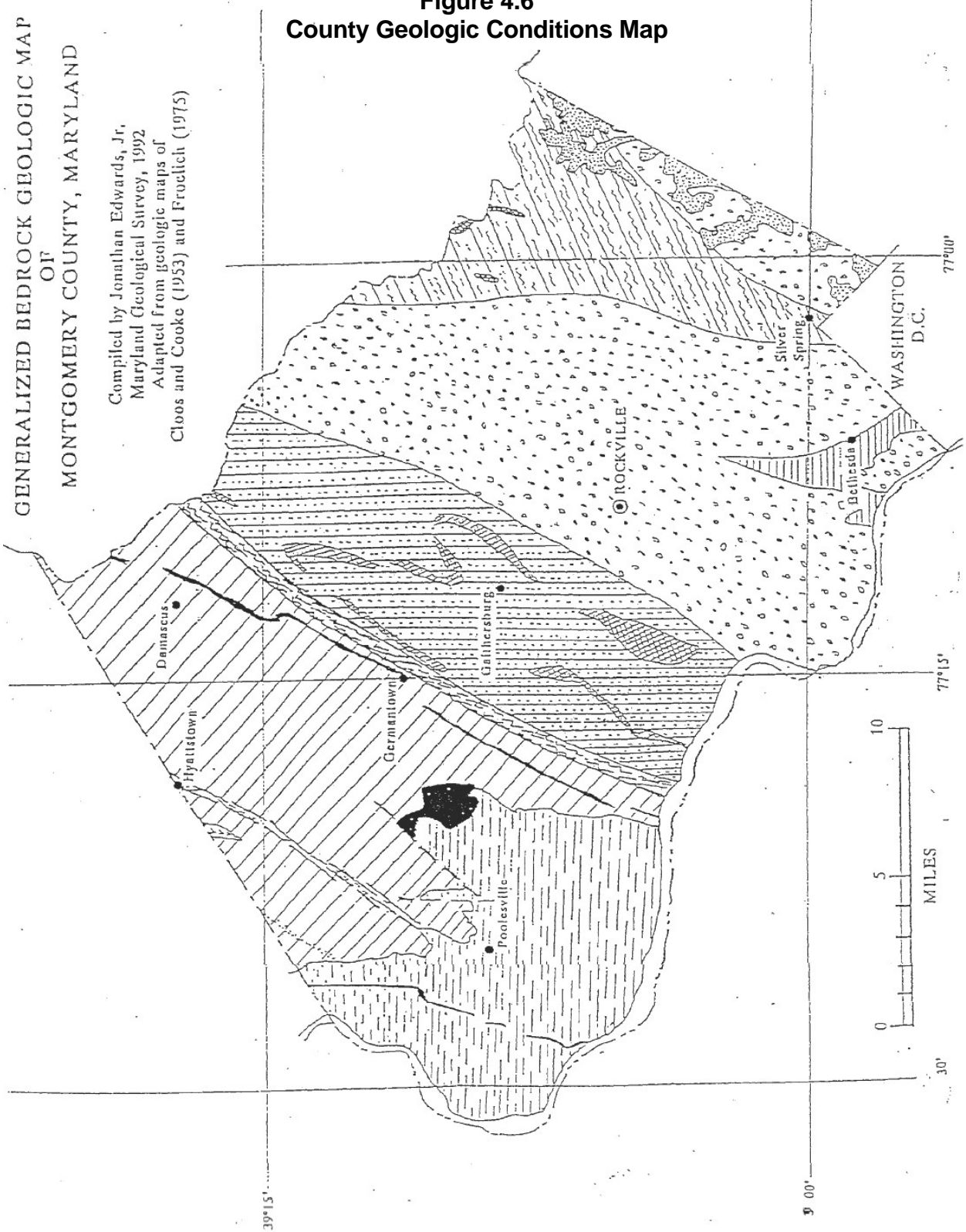


Figure 4.6 (con't)

EXPLANATION OF GEOLOGIC MAP

MESOZOIC

CRETACEOUS



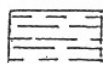
Potomac Group: Unconsolidated deposits of quartz-pebble gravel; white, tan, and pink sand; and gray, white, tan, and pink clay of the Patuxent, Arundel, and Patapsco Formations

JURASSIC



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

TRIASSIC

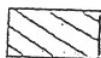


New Oxford Formation: Brick-red shale, siltstone, and red to gray sandstone. Cobble to pebble conglomerate at base.

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.

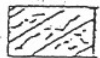
Wissahickon Group:



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.

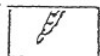


Eastern schist facies: Medium- to coarse-grained, gray to brownish-gray, garnet-bearing biotite-plagioclase-muscovite-quartz schist interlayered with biotite-muscovite-quartz-plagioclase gneiss.



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.

(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.

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.

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.

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

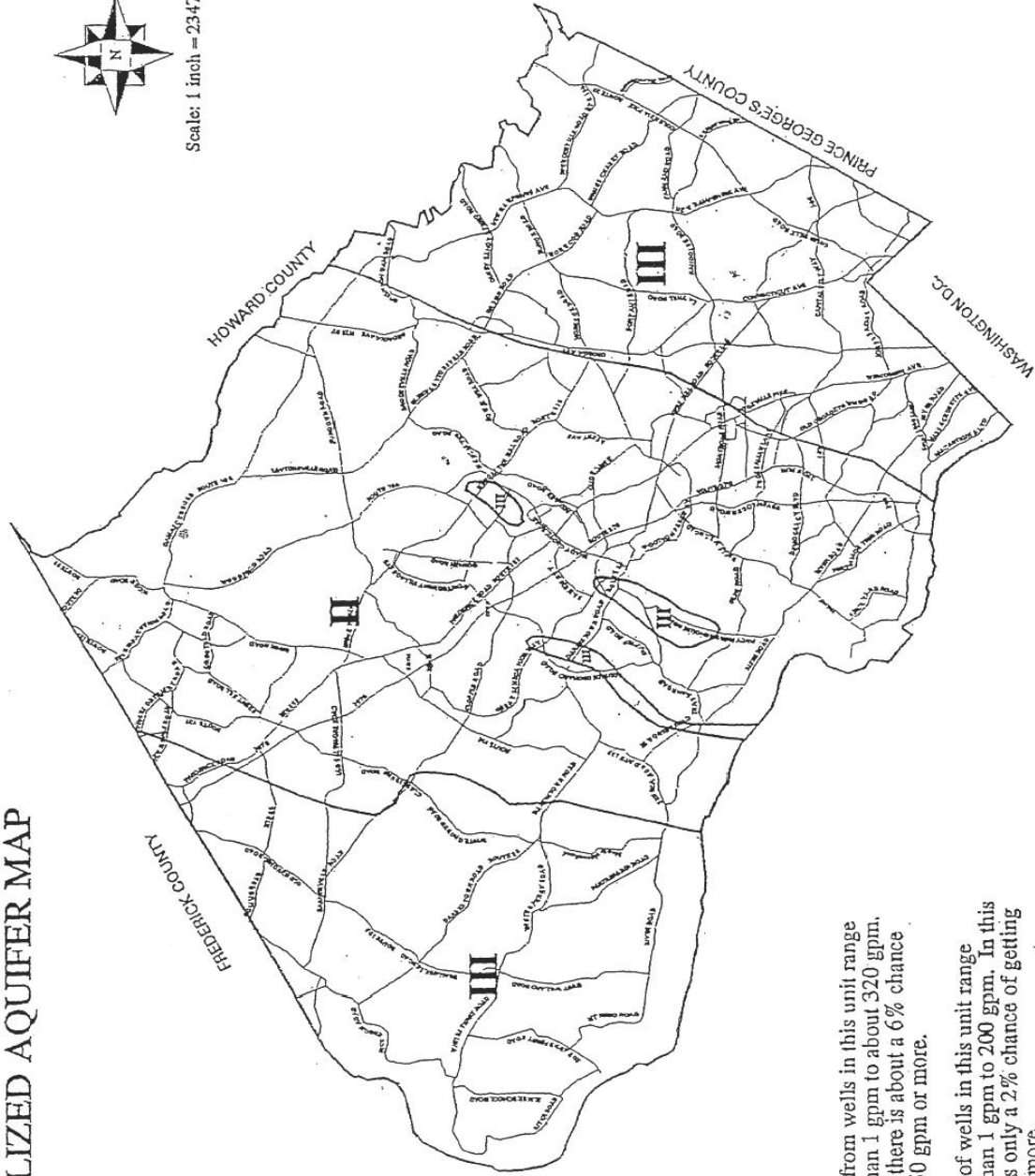
of this surface water comes from naturally occurring run-off from rain and snow. All of the lakes in the County are man-made. The larger lakes were built for flood and sediment control and water supply. Some County waters also are used to receive treated sewage and excess storm water run-off. Ultimately, 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.

**Figure 4.7
County Hydrogeologic Units Map**

**MONTGOMERY COUNTY
GENERALIZED AQUIFER MAP**



- I** 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.
- II** 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.

(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.

Figure 4.8
Surface Drainage Patterns Map

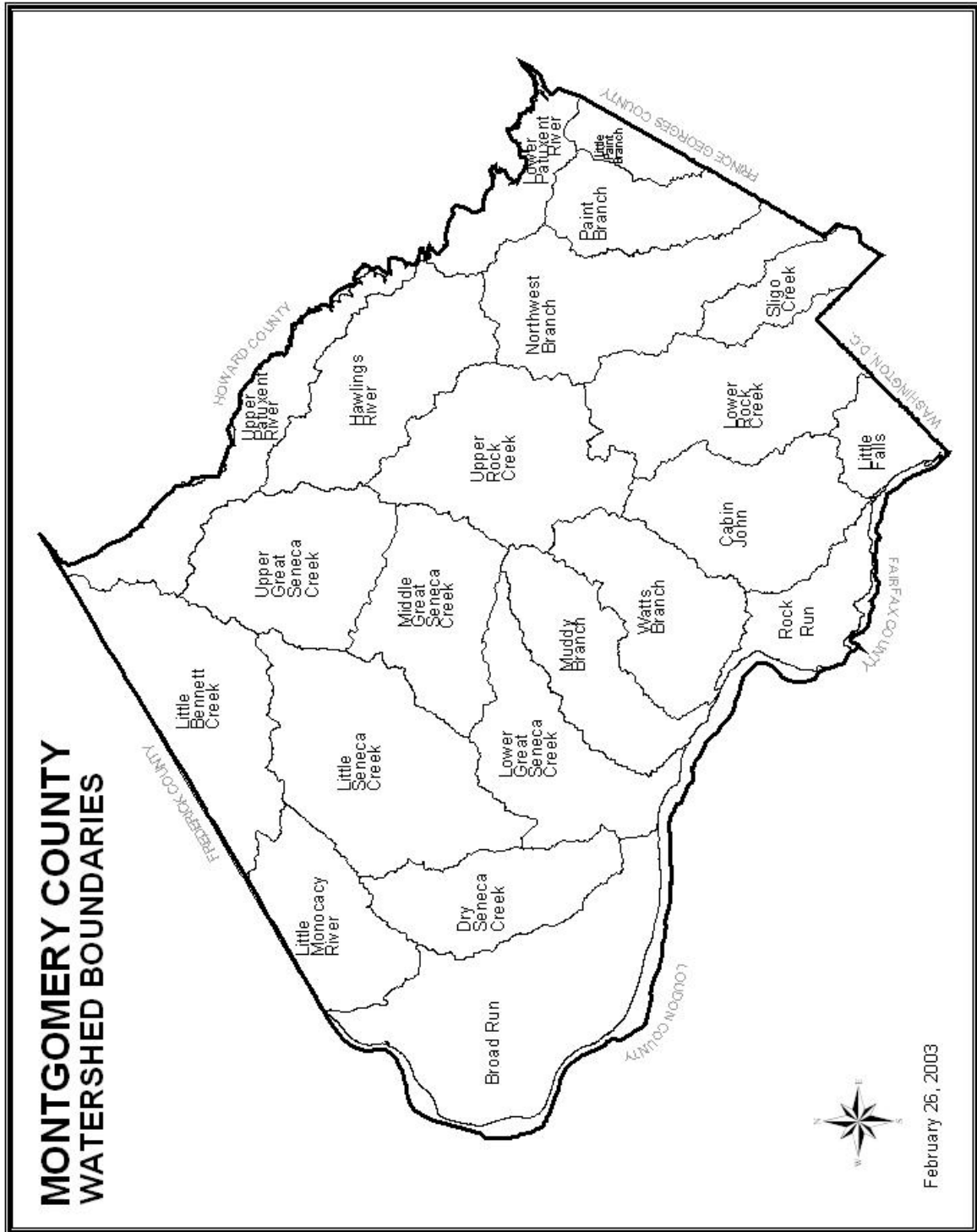
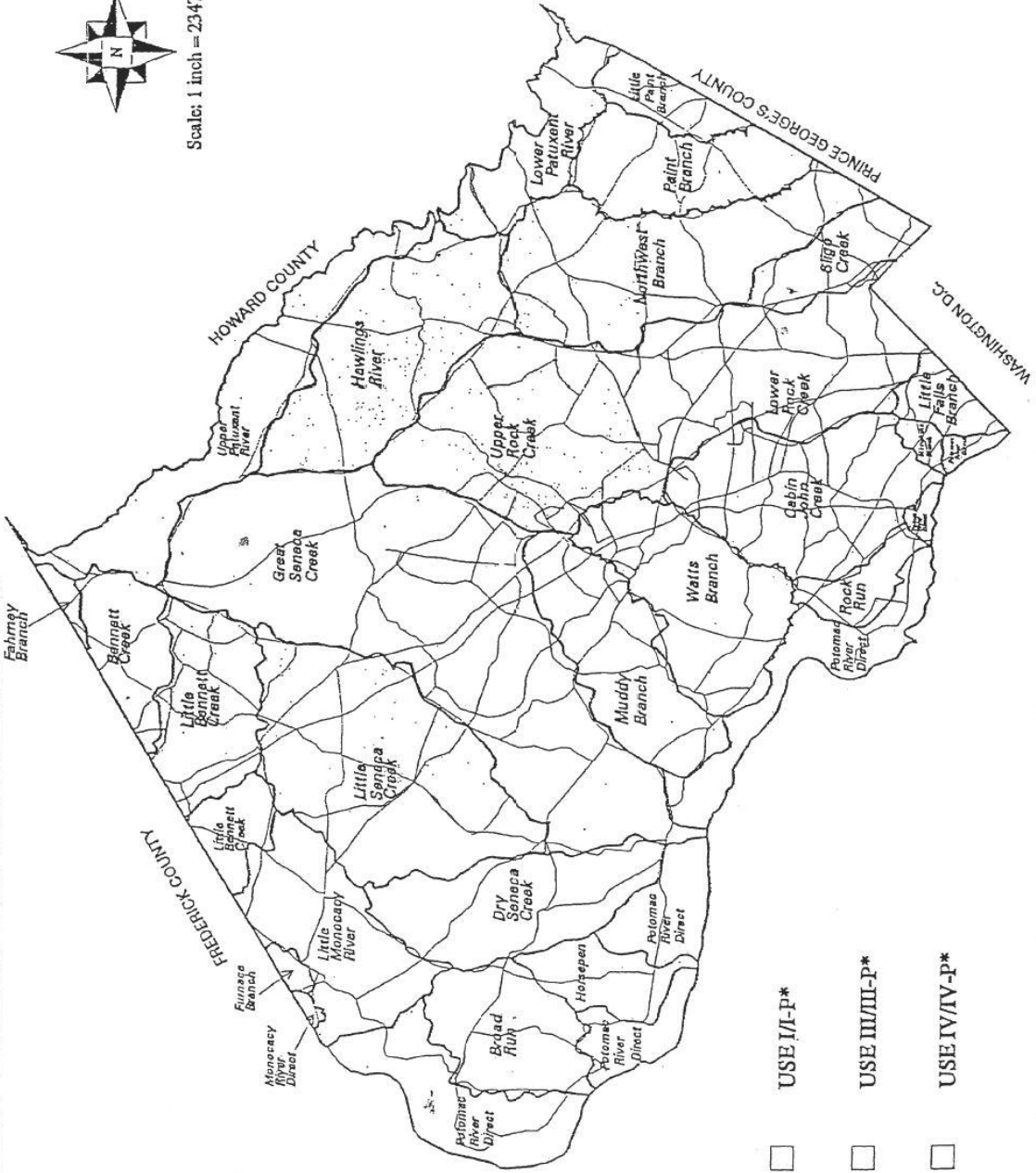


Figure 4.9
County Surface Water Use Designations Map

MONTGOMERY COUNTY STREAMS STATE WATER USE DESTINATIONS



Scale: 1 inch = 23470 feet



* All watersheds within Montgomery County are designated as water supply (P) except Paint Branch Northwest Branch, and Rock Creek above MD Rte. 23.

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 capacity has more than sufficient useful life for the planning period (see section 5.2.1.5.) as does the County's Site 2 back-up in-County landfill. Construction is currently

underway on landfill gas-to-energy projects at both the Gude and Oaks closed landfills in the County. These gas-to-energy projects became operational in mid-2009. The County is currently performing design work toward relocating its yard trim/wood waste operations away from the Transfer Station site to the closed Gude Landfill. This work is contingent upon future County Council appropriation, appropriate environmental and engineering assessments and MDE approval of this facility and its integration into the remediation plan and proposed future land uses for the site. Capital improvements to the Transfer Station were constructed in 2007 to enhance both facility safety and customer service. These capital improvements included the addition of two new truck scales to reduce waiting times, an addition to the transfer building, upgrades to the scale house, an additional citizen unloading bay, and road improvements. The final decisions on site improvements being designed for relocation of yard trim operations from the Transfer Station to an area of the Gude Landfill will be made during subsequent regulatory agency and CIP review of that design.

4.4 SOLID WASTE OUTREACH, EDUCATION AND PROMOTION

Education and promotion 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 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:

- Residential curbside recycling;
- Multi-family recycling;
- Non-residential recycling (by businesses, organizations, both for-profit and non-profit, and government facilities);
- Yard trim composting and grasscycling;
- Waste reduction;
- Reuse, including donation programs;
- Consumer 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 a cost effective and appropriate, productive 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, 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, 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;

- 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 composting techniques); and
- Incentives, including discount or free compost bins and lawn care products, 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 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 2005 are listed below.

<u>FY Year</u>	<u>Hours Served by Volunteers</u>
FY 2005	606
FY 2006	967
FY 2007	1,310
FY 2008	1,576

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.

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 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.

Needs Assessment and Plan Direction: As indicated in Chapter 3, the County recycled over 44 percent of its MSW stream in FY08, continuing a steady clime. 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. Public outreach and education will play a central role in County strategies to meet its goal of 50 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. 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, notices of violation, and citations (which include levying of fines).

4.6 SYSTEM APPROACH TO GREENHOUSE AND OZONE-RELATED EMISSIONS

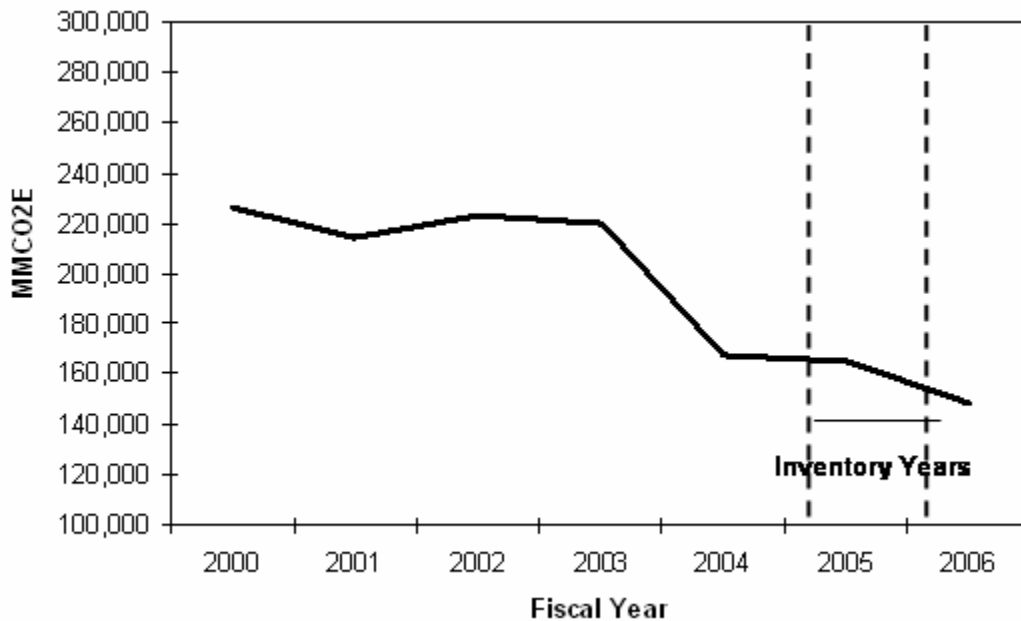
Montgomery County is dedicated to the goal of providing healthy and sustainable communities, and solid waste management plays a part.

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. From that growing understanding, and a sense of responsibility to do what it can in the fight to manage global warming, Montgomery County has aspired to a leadership position since 1999 when the County first became a member of the International Council for Local Environmental Initiatives, Cities for Climate Protection Campaign (CCP). Most recently Montgomery County has reaffirmed its commitments via the Cool Counties – Climate Stabilization Declaration. This pivotal Declaration signed by 36 leading Counties committed Montgomery County to 80 percent reductions in GHG emissions by 2050 with aggressive interim goals of 10 percent reductions every five years, this initiative was further formalized by Council Bill 32-07 which created a Sustainability Working Group to develop a detailed climate action plan.

Current Conditions and Constraints: DEP's Climate Action Team has already taken the first steps in reviewing local greenhouse gas emissions, and has estimated, as shown in Figure 4-10, below, that waste management activities contribute approximately 165,166 million tonne CO₂-equivalent net GHG emissions for baseline year 2005. DEP further estimates that this amount represents approximately one to two percent of countywide GHG emissions. In reality, the actual emissions from this sector may be significantly less, or even negative, due to the County's robust recycling and waste management efforts and the difficulty in evaluating the upstream GHG reductions from this important resource recovery.

Figure 4.10
Net GHG Emissions (MMTCO₂-e) from Solid Waste Management in the County



One constraint on the task of making such evaluations 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 provided by International Council for Local Environmental (ICLEI), of which the County is a member, employs embedded coefficients and algorithms that are subject to updates from time to time as knowledge improves. A full update to the ICLEI model is not expected for at least another six months. Thus, the results, at least at the current time, need to be treated with some forbearance, and largely as a measure of relative emissions and not absolute emissions. A second constraint, at least with respect to the ICLEI model licensed to DEP, is that the scope of activities which the model recognizes within its “waste management” sector, while holistic in many respects, does not include the activity of waste collection, nor any aspect of the intra-facility vehicular transportation (rail and truck hauling), or upstream benefits from the recovery of materials via recycling which considerable activity is intrinsic to Montgomery County’s solid waste management system. Emissions from these activities are understood to be implicitly estimated by the model but reported out within other large

sectors of the ICLEI model (e.g. “community” or “transportation”) and cannot be isolated for recognition as part of waste management. A third and related constraint may be the relative unavailability of data needed to assess emissions from private waste collection vehicles and activities, as compared to that associated with County contract vehicles and activities for which information may be more readily available. As the ICLEI model is improved, or superseded by other protocols and tools, these estimates may change, however any changes will need to be reconciled back to the baseline year of 2005.

Needs Assessment and Plan Direction: Montgomery County’s solid waste management system is comprised of a great variety of inter-related activities. In addition to that which the County’s ICLEI model recognizes, 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. Such an accounting will be designed to complement the County’s ongoing ICLEI-based GHG inventory and modeling efforts. Such solid waste system-wide inventory will 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 8-hour 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 vehicles with internal combustion engines and any power generation based on combustion. Possibly the largest single source of NO_x within the County solid waste system is the County's RRF, which typically emits a little over 1,000 tons per year of NO_x. The County is currently pursuing a capital improvement program at the RRF expected to substantially reduce NO_x emissions. 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 VOC emissions.

Needs Assessment and Plan Direction: In order to identify additional opportunities to assist with ozone-related emission reductions, the County should develop a solid waste system-wide emission generation inventory tool. Such a tool could 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 if and whenever the County finds it necessary or appropriate. The County will review and, if necessary, update the Solid Waste Management Plan at least once every three years in accordance with a schedule established by MDE. 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 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.

Whenever possible, traffic flow patterns of publicly contracted or commercial vehicles engaged in the collection of solid waste and associated transfer to solid waste facilities are adjusted in order to avoid conflicts with school bus schedules and to ensure traffic safety for both school-related traffic and that of other institutions. Rail transfer of MSW from the County Shady Grove Processing Facility and Transfer

Station to the RRF is used to reduce the vehicular traffic impact of these solid waste facilities. Rail is the preferred mode of solid waste transfer whenever economically and operationally feasible.

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. The County promotes the recycling of the nutrients and organic material present in biosolids to benefit the growth of crops and improve soils. Processes presently employed such as beneficial land application and composting support the beneficial uses of biosolids. 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 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 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 notice of the hearing is given 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 2008 through 2019. 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 landfill disposal 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.

5.2.1.1 Shady Grove Processing Facility and Transfer Station

a. **Facility Description** – Refuse collected by licensed 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 2,120 tons per operating day in Fiscal Year 2008. 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 that can not be recycled has been transported by tractor trailer to a private landfill in Brunswick County, Virginia. Ash residue is transported from the RRF by rail to a rail yard serving the same landfill facility and trucked the final 40 miles to the landfill. 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.

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

FACILITY/ PROGRAM	SUMMARY PLAN OF ACTION
Shady Grove Processing Facility and Transfer Station	Assessment of the relocation of yard waste transfer and grinding operations to Gude Landfill subject to future County Council appropriation. 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	Periodically explore the feasibility of RRF ash and/or non-ferrous recycling. Set tip fee per Section 5.4.2.1. Aggressively market electricity and ferrous to secure the best prices available. Conduct detailed energy balance analysis to maximize thermal and power efficiency.
Materials Recovery Facility	Continue to aggressively market recovered materials to capture best prices. Encourage increased usage of unused MRF capacity by non-residential generators.
Yard Trim Composting Facility	Continue aggressive promotion of grasscycling and backyard composting. Maintain back-up contracts for composting yard trim in excess of 77,000 tons. Increase market share and diversity 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.
Out-of-County Landfill	Encourage private sector recycling of construction and demolition materials and other nonprocessable solid waste rather than landfilling.
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	Monitor the performance of all transportation contractors to ensure reliability. Build contingency capacity to ensure waste transport.

Recycling and Waste Reduction Programs	<p>Aggressively encourage backyard composting including giving away compost bins.</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 and outreach.</p> <p>Rigorously enforce the recycling bans instituted by ER15-04AM and 18-04.</p> <p>Vary size and styles of replacement 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>Continue to evaluate innovative collection techniques to increase recycling.</p> <p>Continue to promote cooperative collection contracting among commercial generators</p>
Private Facilities	<p>Work cooperatively to promote expansion and use of private recycling infrastructure within County, including C&D.</p>
Oaks and Gude Landfills	<p>Operate an oil-grit separator for nonprocessible solid waste collected from County storm water captors at Oaks.</p> <p>Implement gas-to-energy projects at both landfills.</p> <p>Improve gas capture and minimize migration.</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 propose environmentally friendly options.</p>

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 materials including computers, televisions, automotive fluids and batteries, scrap metal, rechargeable batteries, building materials, textiles, 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 FY 2005.

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 in Fiscal 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 same capital improvement project, ongoing at this time, includes design of the site improvements needed to relocate yard waste handling operations from the Transfer Station to the closed Gude Landfill. This project, and 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 Mirant Americas Energy Marketing (MAEM) 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 Council must approve or disapprove the proposed change within 30 days or two regular Council work sessions, whichever is longer. If the 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. **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).

Currently, pursuant to a County capital improvement project, the RRF is undergoing a voluntary APC upgrade designed to substantially reduce emissions of NO_x, and to eliminate the storage and use on site of anhydrous ammonia (a hazardous chemical).

Covanta Montgomery has attained membership status in the USEPA National Environmental Performance Track (NEPT) Program which ongoing membership requires continuous environmental improvements beyond regulatory standards.

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 municipal solid waste (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 BTU/lb. During FY08, a total of 579,660 tons of processible waste was sent to the RRF. This includes 30,119 tons of C&D burned, and 549,541 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 50% 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 92 percent of permit capacity (e.g. 558,450 to 604,440 tons per year). 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 Executive must notify the 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** – Pilot studies completed by the County in 2001 with American Ash Recycling Corporation indicated that ash recycling is technically feasible. However, responses to a competitive procurement in 2002 were not viable as the County could not identify a financially viable vendor. Again during 2008, the County

solicited interest in ash processing. At this time, there appears to be some technical interest, including in the potential for additional metals recovery, but this is dampened by a recent strong downturn in markets related to global economic conditions. DEP will periodically solicit proposals again in upcoming years and will monitor similar efforts by other jurisdictions.

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 pursue the potential feasibility and cost effectiveness of recovering non-ferrous metals and/or reuse of RRF ash as road aggregate, construction material and other specialized products. If the Department recommends a new contract to recycle RRF ash, the Executive shall report relevant details to the County Council.

DEP may propose ash recycling in the future, but only if the costs, benefits and risks to recycle ash outweigh those for the disposal of the ash.

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. Unless the need for an alternative tipping fee is demonstrated by DEP, the tipping fee will be set at a level such that processible waste delivered to the Transfer Station for disposal matches, as nearly as possible, 85 percent to 92 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 ferrous materials.

5.2.1.3 Materials Recovery Facility

a. **Facility Description** – The MRF is located on a 9-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 expanded to accommodate the implementation of the residential mixed paper recycling program. OPS transfers mixed paper received at the MRF to the OPS paper recycling facility in the County.

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 100 tons of mixed containers per (8-hour) day. During FY 2002, 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 FY 2003 when most of the processing equipment was replaced.

e. **Plan of Action: Materials Recovery Facility** – The County has entered into a fifteen-year contract with a private recycling firm, OPS, to transport the County's residential mixed paper for processing at the OPS recycling 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 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. DEP will strive to increase material revenues and encourage increased usage by non-residential County generators to fill unused MRF capacity.

The Department will encourage non-residential generators to take advantage of available MRF capacity to recycle aluminum, bi-metal, steel, plastic and glass containers.

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 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 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 FY 2008, a total of 74,040 tons of leaves and grass were delivered to the County for composting. At the same time the County has: (i) aggressively expanded its promotion of grasscycling and backyard composting, (ii) raised its yard waste tipping fee to dissuade deliveries from outside the County, and (iii) and begun diverting leaves into its mulch production operations. Projecting that figure to increase in proportion with single-family housing growth suggests that the 77,000 TPY limit in that Sugarloaf agreement might not be reached in FY 2015. However, yard waste deliveries are known to be influenced also by other factors including weather.

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 yardwaste 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.

DEP will also explore the feasibility of limited yard waste processing in connection with yard waste operations being considered for relocation from the Transfer Station to the site of the old Gude Landfill. This project would be subject to future County Council appropriation, MDE approval and integration into the remediation and future land use plan for the entire Gude Landfill site.

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 20,000 tons of additional yard waste composting capacity for County use. In this connection, the County will explore the feasibility of including limited types of food waste in such procurement.

An on-going structural maintenance program will continue at the Yard Trim Composting Facility including scheduled replacement of portions of the paved pad and

regular inspections and preventative maintenance to the 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 including exploring diversity of mulch and compost products and bag sizes.

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. To that end, a formal Environmental Management System (EMS) will be developed over the next three years in which environmental aspects of the operation will be inventoried, opportunities for continuing improvement beyond regulatory requirements identified and ranked, and selected opportunities pursued. Once completed, the County will explore the additional costs and benefits of seeking membership in the USEPA National Environmental Performance Track (NEPT) Program.

5.2.1.5 Out-of-County Landfill Contract

a. **Contractual Arrangement** – 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, until at least the Year 2012. At the County's sole option, the contract may be extended for five additional years under the existing terms, and there are no requirements for negotiations or additional obligations in order for the County to do so. 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 Sections 5.2.1.2(f) and 5.4.1.2). Any bypass waste would be shipped to the landfill in Brunswick County by over the road trailers from the Transfer Station. The landfill 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 twelve 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. 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 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. An aerial survey conducted on January 16, 2008 indicated that dedicated cell 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 lb/cy in-place density for ash and 1,000 lb/cy 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 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 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 anticipates exercising its option to extend its contract with BWMF through 2017. Under the contract, County has reserved the option to recycle any portion of the waste stream currently being landfilled. DEP will continue to periodically evaluate the feasibility and cost effectiveness of recycling RRF ash and other solid waste materials transported to the BWMF Inc. landfill for disposal. Presently, selected rubble material and bulky wood waste is

segregated for recycling at the County Transfer Station. DEP will encourage recycling of rubble and other nonprocessable solid waste rather than landfilling. So as to assure availability of a dedicated cell, the County will track, on a rolling twelve month basis, the amount of waste disposed of via its out-of-County Landfill contract. If, at the end of any three-month period, the three-month total exceeds by 10 percent or more the amount for the same period during the previous year, then the County will give such notice.

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 in 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 Petersburg, Virginia. From the rail depot, the ash is transferred to trailers for roadway transport to a privately owned landfill in Brunswick County, Virginia.

c. **Transfer Station to Out-of-County Landfill: Other Wastes** – Brunswick Waste Management transports nonprocessible waste, and if necessary bypass waste. Nonprocessible waste is waste that is not suitable for burning. Nonprocessible waste that can be recycled is sent to various regional reclamation facilities. The remaining nonprocessible 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 County's goal is to achieve, maintain or exceed 50 percent recycling of municipal solid waste (MSW) by the end of Calendar Year 2010. 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. For the purpose of this calculation, the recycling rate shall be defined as the total measurable quantity of MSW that is recycled, composted or source reduced as a percent of the total quantity of MSW generated in the County. In performing its calculation, DEP will utilize, to the maximum extent possible, documented data sources. Waste materials that are not typically considered MSW, including land clearing debris, construction and demolition debris, hazardous waste, and special medical waste, and incinerator ash is not to be counted in the County's recycling rate

calculation (see Council Resolution 14-443 in Appendix F). In order to implement this, DSWS has implemented a means of accounting for any C&D that is burned at the RRF.

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

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 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/DSWS web site, delivery of service notices (on recycled paper) to each

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

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 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 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 County mandates through Executive Regulation 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 greater than 6 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** -- Executive Regulation 15-04AM mandates recycling of mixed paper or sorted paper, commingled containers, yard trim, Christmas trees, and scrap material items at all County businesses, institutions and government agencies. As detailed in Executive Regulation, businesses with 100 or more employees, as well as certain select other businesses, must 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 9AM to 5PM, 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 Fiscal Year 2008, the residents and businesses of Montgomery County had achieved a recycling rate of approximately 44.3 percent.

To reach its 50 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 50% 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, Executive Regulation (ER) 15-04AM as it pertains to businesses and multi-family properties by thoroughly investigating cases of non-compliance.

(4) Continue dedicated enforcement of the County's companion recycling regulation, Executive Regulation (ER) 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 July, 2008, the County expanded the types of plastics included in its recycling programs. Almost all types of plastics other than clamshells, 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: The Department 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 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 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.

In addition to the HHW and Ecowise programs as described in previous section, 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 has also just recently begun to routinely conduct several electronic collection events per year at various, more convenient, locations around the County. For CFLs the County will continue to work to expand the number and locations of retailers who accept CFLs for recycling.

Plan of Action: In the future, DED will continue to explore the most effective means of attracting electronics for recycling. DEP will also 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 at their current frequency.

5.2.1.10 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 are scheduled for completion in 2009.

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.

5.2.1.11 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 Saturdays, and from 9:00 a.m. to 1:00 p.m. on Sundays. Typical materials received at the centers are large, bulky items such as home remodeling debris, and furniture.

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

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

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.

5.2.1.12 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 propose environmentally friendly options.

5.2.1.13 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. 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% 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 has been expanded from a 5 mgd facility to a 20 mgd facility. Seneca plant expansion from 20 mgd to 26 mgd is currently under design. Expansion of the facility has resulted in an increase in the amount of dry tons of sludge produced. A comparison of 2002 and 2008 with the new plant and dewatering facility in operation is listed:

Year	Final Effluent Flow (avg mgd)	Wet Tons Hauled	Percent Solids	Dry Tons Hauled
2002	6.3	11,124	11.9%	1,324
2008	15.2	23,945	26.4%	6,206

Even though the dewatering efficiency did increase significantly, the large flow increase (plus lime addition) resulted in an overall increase in wet tons hauled.

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 foodwaste. 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 regulations require all licensed private 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 Monthly Reports

DEP prepares monthly 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. Monthly 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 regarding the status of the County's solid waste management system. Annual reporting will include:

- a. The annual average actual unit costs (\$/ton) for major tonnage-related County solid waste programs and activities evaluated on a full-cost accounting basis;
- b. An estimate of the current overall County recycling rate calculated on a fiscal year basis, which report shall appear on the DEP website;
- c. An estimate of the marginal costs of increased recycling;
- d. 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), above; and

- e. An estimate of the greenhouse gas and ozone-affecting emissions generated by the solid waste management system, and an identification of opportunities for their reductions achievable by changes in component activities of the solid waste management system including increased recycling, and changes to the collection and transportation systems. (The first of this new reporting requirement (e) is to be provided within one year of adoption of this plan.)

In addition to annual reports, DEP will brief the County Council quarterly or at other frequencies as necessary to inform the County Council 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 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; Residential, Commercial, Industrial, and Institutional MSW

The MSW stream 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 the MSW generated by these sectors.

5.3.1.1 Residential Municipal Solid Waste

As indicated in Table 3.1, MSW generated from the residential sector in Fiscal Year 2008 was 604,113 tons. Of this total, 453,913 tons were processed at County and other facilities for disposal and 286,241 tons were recycled or composted. Table 3.1 (a) - (d) also projects residential waste generation for the 10-year time horizon of this Plan using the per capita rate applied to population projections. Accordingly, changes in residential waste generation are directly proportional to changes in population. The Year 2019 generation for this sector is projected to be 650,199 tons. Of this total, 335,167 tons are projected for disposal and 315,032 tons are projected for recycling or composting.

5.3.1.2 Commercial Municipal Solid Waste

As indicated in Table 3.1, MSW generated from the commercial sector in Fiscal Year 2008 was 408,773 tons. Of this total, 180,497 tons were processed by County and other facilities for disposal and 163,376 tons were recycled. Table 3.1 also projects commercial waste generation for the 10-year time horizon of this Plan using a fixed per

employee waste generation rate multiplied by projected County employment levels. Accordingly, changes in commercial waste generation are directly proportional to changes in employment. The Year 2019 generation for the commercial sector is projected to be 469,639 tons. Of this total, 238,594 tons are projected for disposal and 231,046 tons are projected for recycling.

5.3.1.3 Industrial Municipal Solid Waste

As indicated in Table 3.1, MSW generated from the industrial sector in Fiscal Year 2008 was 221,183 tons. Of this total, 101,789 tons were processed at County and other facilities for disposal and 88,410 tons were recycled. Table 3.1 also projects industrial waste generation for the 10-year time horizon of this Plan using a fixed per employee waste generation rate multiplied by projected County employment levels. Accordingly, changes in industrial solid waste generation are directly proportional to changes in employment. The Year 2019 generation for the industrial sector is projected to be 254,142 tons. Of this total, 129,113 tons are projected for disposal and 125,029 tons are projected for recycling.

5.3.1.4 Institutional Municipal Solid Waste

As indicated in Table 3.1, MSW generated by the institutional sector in Fiscal Year 2008 was 38,714 tons. Of this total, 17,816 tons were processed at County and other facilities for disposal and 15,474 tons were recycled. Table 3.1 also projects institutional waste generation for the 10-year time horizon of this Plan using a fixed per employee waste generation rate multiplied by projected County employment levels. Accordingly, changes in institutional waste generation are directly proportional to changes in employment. The Year 2019 generation for the institutional sector is projected to be 44,482 tons. Of this total, 22,599 tons are projected for disposal and 21,884 tons are projected for recycling.

5.3.1.5 Adequacy of System and Facilities

In FY 2019, the combined total MSW generation from all sectors is projected to be 1,418,462 tons. Of these, and 692,990 tons are projected to be recycled leaving 725,473 tons for disposal.

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 100 tons of incoming material per 7.5 working-hour shift (13.4 tons per operating hour). 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. During FY 2008, total of 21,980 tons of container materials were shipped to market from the County MRF, and for the FY 2019, a total of 24,609 tons officially projected to be shipped. This projection does not include another 3,000 tons of plastics hoped to be recycled as a result of the addition of more types of plastics, a program expansion initiated in July 2008. Allowing for this potential, and for slightly higher residue rates (incoming materials not marketable), a weekly second shift may be needed. 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.

(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 as 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 FY 2019, the County projects recycling 77,423 tons of residential mixed paper through the MRF, or about 298 tons per day. Thus, the County's MRF and RMP contract provide 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 year. Also as discussed in Section 5.2.1.4, during the most recent fiscal year, demand on the Yard Trim Composting Facility was 74,040 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 in FY 2015. 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 carry out 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 – Non-recycled MSW that is generated in the County is processed for disposal either at County facilities or at private facilities. As indicated in Chapter 3, of the 695,875 tons of MSW disposed of during FY08, 168,618 tons were disposed of at non-county facilities, and in FY 2019, it is projected that 725,473 tons will require disposal. In the unlikely event that none of those 725,473 tons of MSW projected for disposal in the Year 2019 were processed at non-county facilities, then the County's RRF could process up to an average of 1,800 tons per day, taking in a permitted 657,000 tons. Recovering 17,628 of ferrous metals for recycling, this would result in a net of 639,372 tons of MSW being disposal via the RRF, leaving a total of about 91,280 tons of MSW (about 250 tons per day) needing to be landfilled without benefit of resource recovery. This capability is within the capability of the Transfer Station physical and permitted capacity and the capacity of the County's contract with BWMF for transport and disposal at the out-of-County landfill. As the latter expires in 2017, there will be a need to secure additional landfill contract capacity near the end of the planning horizon. The County has already provided adequate MSW disposal system capacity through the 2017. In order to assure system capacity for the entire planning period, the County will begin, no later than FY2014 a procurement process to extend or secure additional out-of-County landfill capacity.

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 92 percent of RRF permit capacity, designed to avoid the circumstance of bypass waste. 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. In order to avoid sending any processible waste out of County (from the County Transfer Station) in FY 2019 (i.e. to avoid any bypass waste at the County's hands), the County tip fee policy at that time would need to result in private sector MSW exportation of about 121,033 tons. This is substantially less than the amount of export already demonstrated to be absorbed by regional disposal facility options inventoried in Chapter 4 (e.g. private sector MSW export is projected to be reduced from 23 percent of disposal to 18 percent of total disposal). Increased compliance in recycling regulations by the private sector could further reduce projected export.

In summary, the County, itself, has already provided adequate MSW disposal system capacity through 2017 and reasonably expects to procure additional landfill contract capacity needed for the last two years of the planning period. 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.)

Traditionally, the private sector provided almost all of its C&D disposal capacity needs, and the County provided for only its own government (e.g. road operations) generated disposal. During the period 2001 to 2004, several regional C&D disposal options closed. Because these were more supplanted, capacity-wise, by a large private-sector C&D recycling facility located in Clarksburg, Maryland, C&D deliveries to the County have reduced to the point that the County Transfer Station is now the less preferred disposal site, accepting in FY08 46 percent of all C&D generated in the County.

As indicated in Table 3.1(e), land clearing and demolition debris (C&D) generated in the County was found to be 239,260 tons in Fiscal Year 2008. Of this amount, 128,660 were delivered to various private sector C&D acceptance facilities in the region, and 110,600 tons were delivered to the County's Transfer Station. Of the latter amount, 49,862 tons was generated by County government activities, including 5,057 tons that were sufficiently homogeneous that the County was able to recycle them. (As C&D is not MSW, recycled C&D is not counted in the County's MSW recycling rate.) The County owns no C&D processing equipment. Burnable components of C&D delivered to the County are processible (e.g. burned for renewable energy recovery) at the RRF, but only to the extent that RRF capacity is available. The County sets a separate tipping fee to accept C&D (see 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 included about 50,000 tons generated by County government

activities (e.g. road maintenance). 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 267,874 tons of land clearing and construction and demolition debris are projected to be generated in FY 2019.

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 FY 2019. 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 deal with the scenario described in the previous section regarding any sudden reversal in MSW export.

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. As indicated in Table 3.4, hazardous waste generated in Montgomery County was 14,307 tons for Fiscal Year 2008.

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 16,439 tons in 2019. 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.

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. MDE licenses special medical waste haulers. Special medical waste reported by licensed haulers was 1,424 tons for Fiscal Year 2008. Since controlled medical waste is projected to increase at the same rate as County employment growth, the projected County generation for the Year 2019 is 1,636 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

As indicated in Table 3.5, animal carcass waste generation was 145 tons for Fiscal Year 2008.

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.

One permitted pet crematoria (with a capacity of 36 tons per year) operates in Montgomery County.

Animal waste is projected to increase at the same rate as population growth. Over the next ten years, existing pet crematoria and cemeteries and out-of-County 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. According to Table 3.6, 85,957 tons of bulky wastes were generated in Montgomery County during Fiscal Year 2008.

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 nonprocessible waste sent for disposal at a private landfill in Brunswick County, Virginia.

Bulky waste generation of scrap metal and white goods is projected to be 96,237 tons in Fiscal Year 2019. Existing facilities and programs are sufficient to process these materials for the next decade.

5.3.6.2 Automobiles

Table 3.6 indicates that an estimated 59,361 tons of automobile waste was generated in the County in Fiscal Year 2008. As explained in Chapter 3, annual

generation is expected to grow in proportion to population increase over the next decade.

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

According to Table 3.6, approximately 9,512 tons of scrap tires were generated in Fiscal Year 2008. Federal guidelines suggest that future scrap tire generation will be directly proportional to population growth. Accordingly, 10,650 tons of tires are projected to be scrapped in the County in Fiscal Year 2019.

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 Fiscal Year 2008, the County received and recycled approximately 193 tons of scrap tires.

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, according to a 1993 inventory of tire dumps conducted by the State. 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.

The WSSC share of biosolids (80 dry tons per day) from the Blue Plains³ WWTP is presently being land applied to agricultural land under contracts managed by the WSSC. Improvements to the Blue Plains solids handling and processing systems are being made in an effort to improve the long-term viability of this beneficial recycling process for biosolids. In 1996, the Blue Plains Regional Committee (BPRC) completed a study called *The Blue Plains Regional Biosolids Management Plan*. The BPRC subsequently recommended a significant capital improvement program at Blue Plains to implement the improvements recommended in this study. This plan was the basis for an expanded biosolids management plan developed by the DC Water and Sewer Authority (WASA). In 2008, WASA updated the Blue Plains Biosolids Management Plan to include thermal hydrolysis, a process that reduces the number of digesters needed to process the biosolids from Blue Plains. WASA is evaluating a comprehensive biosolids processing program that is expected to be proposed in the FY 2010 WASA Capital Improvements Plan. WSSC will be responsible for approximately 45 percent of the capital program costs based on their allocation of capacity at the Blue Plains facility.

The County's biosolids management plan is detailed in the *Comprehensive Water and Sewer Plan for Montgomery County*.

³ 1985 Inter-Municipal Agreement (IMA).

5.3.8 Septage

Current facilities and services are adequate to manage County septic and holding tank biosolids generation through the life of the plan. The County's plan for septage management is detailed in the *Comprehensive Water and Sewer Plan for Montgomery County*.

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. OMB assists the 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 fiscal year will match, as nearly possible, a target of 85 percent to 92 percent of the RRF permit capacity (e.g., 558,450 to 604,440 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 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 Materials Recovery Facility 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 Waste 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

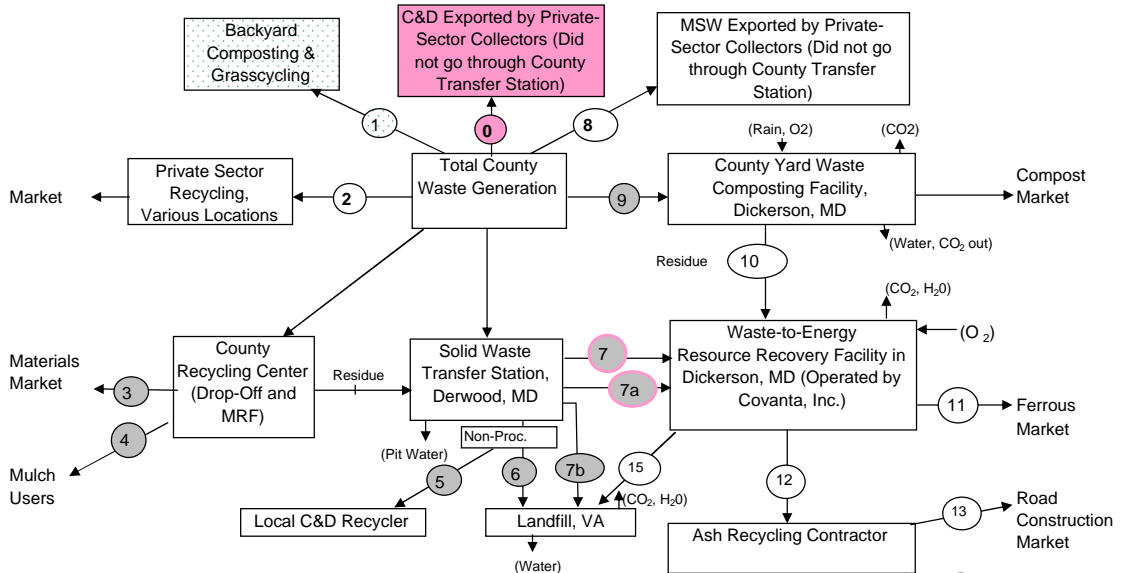
APC	air pollution control
BWMF	Brunswick Waste Management Facility
C&D	construction and demolition
CAA	Clean Air Act
CBD	Central Business District
CEM	continuous emission monitoring
CFC	chlorofluorocarbon
CFL	compact fluorescent light
CFR	Code of Federal Regulations
CHS	controlled hazardous substance
CIP	capital improvement program
COG	Council of Governments
COMAR	Code of Maryland Regulations
CY	calendar year
DAFIG	Dickerson Area Facilities Implementation Group
DEP	Department of Environmental Protection
DEPC	Division of Environmental Policy and Compliance
DFRS	Department of Fire and Rescue Services
DHCA	Department of Housing and Community Affairs
DNR	Maryland Department of Natural Resources
DSWS	Division of Solid Waste Services
EMS	Environmental Management System
EPA	Environmental Protection Agency
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
MDE	Maryland Department of Environment
MES	Maryland Environmental Service
MCDOT	Montgomery County Department of Transportation
MCRCF	Montgomery County Regional Compost Facility (Site II)
MDA	Maryland Department of Agriculture
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: Fiscal Year 2008

MATERIAL FLOW DIAGRAM Fiscal Year 2008



- KEY:**
- 1 Calculated by netting measured collection from estimated yard waste generation.
 - 2, 8 Audited or otherwise documented. Often based on truck scales of others.
 - 3 Data is from State-certified County truck scales Owned by County.
 - 4 Data is from State-certified truck scales, privately operated under contract to County.
 - 5 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	1,488,636
County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6 + 7+7a+7b + 8 + 9 =	1,359,977
MSW Generated (above less streams 5, 6 and 7a)	1,249,376

Stream No.	Material Description	Sources of Data	Total (tons/yr)	Comments
0	Construction & Demo Debris Private Export	Licensed Collector Reports under ER 92-59	128,660	Not County-managed and not eligible for recycling
1	Yard Waste Source Reduction	Calculated w/ estimates & measurements	80,617	17.5% of MSW less leakage less yard waste facility tons
2	Recycled via non-County Facilities	Collector, Processor, Business & Self-Hauler Rpts.	246,585	Filtered to avoid double-counting
3	County Recycling Facility Material Sales	County TS & MRF Scales, Outbound	101,584	Outgoing to Market from County Recycling Center
4	Mulch Loaded Out From TS	County Transfer Station (TS) Scale Records	36,453	Scaled Out As Taken to Mulch Preserve Locations
5	Non-Processibles Recycled**	County TS Scale Out Records	5,057	
6	Non-Processibles Land filled**	County Trans. Stat'n. & Covanta Scale Records	75,424	
7	Loaded on Rail to RRF (MSW burned)	Covanta Scales as Loaded	549,541	Total Tons Loaded on Rail to RRF Net of 7a
7a	Loaded on Rail to RRF (C&D Burned)	County Transfer Station (TS) Scale Records	30,119	In-Bound C&D less Outbound Non-Processibles Landfilled
7b	By-pass (Accepted Processible Land filled)	County TS Scale Out Records	-	
8	Refuse Disposed Out of County	Audited 6-Mo. Hauler Reports	160,556	Private Sector MSW Collection not delivered to County TS
9	All Incoming Leaves and Grass	Compost Facility & TS Scale Records	74,040	Includes 0 to Backup Composters
10	Composting Residue to RRF	Covanta Scale Records	-	
11	Ferrous recovered at RRF	Covanta Scale Records	14,222	
12	Ash Loaded to Ash Recycling Contractor	No ash recycling at this time.	-	No ash recycling at this time.
13	Non-Metal Outgoing from ash Recycler	No ash recycling at this time.	-	No ash recycling at this time.
14	Metals (Fe, Cu, Brass, Coins)	No ash recycling at this time.	-	No ash recycling at this time.
15	All ash not recycled	Covanta Scale Records	183,441	

Recycling Rate Calculations		Numerator	Denominator	Rate
County Recycling Rate	$(1 + 2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW - 5 - 6 - 7a) =$	553,501	1,249,376	44.3%
County Recycling Rate "Without Ash"	(Same as above but without Stream 13)	553,501	1,249,376	44.3%
State Recycling Rate	$(2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW - 1 - 5 - 6 - 7a) =$	465,111	1,161,006	40.1% ***
State Recycling & Reduction Rate	$(2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW - 1 - 5 - 6) + 5.0% =$	465,111	1,161,006	45.1% ***
EPA Recycling Rate	$(2 + 3 + 4 + 9 - 10 + 11 + 14) / (CMW - 1 - 5 - 6 - 7a) =$	465,131	1,161,006	40.1% ***

Notes:

** Nonprocessibles are Construction & Demolition-type materials: not eligible for recycling credit, but are County-managed solid waste.

*** For State and EPA methods, numerator and denominator exclude motor oil

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.

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>	Requirement or Preference
<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.

IN THE CIRCUIT COURT FOR MONTGOMERY COUNTY

PETITION OF:

Joyce M. Bagley, et al.

FOR JUDICIAL REVIEW OF THE DECISION OF THE

Department of the Environment

IN THE CASE OF

Municipal Solid Waste Landfill

Montgomery County Site Two

Final Determination Re Permit No. 1995-WSF-0237-0

Denial of Request for Contested Case Hearing

* * * * *

CIVIL
ACTION
No. 186857

Stipulated Order for Dismissal

The Court has before it a Joint Stipulation for Order of Dismissal. filed by all parties to this matter. The Court finds and declares that:

1. With the filing of this case, Petitioners Joyce M. Bagley, et al. timely invoked this Court's jurisdiction to review an administrative decision of the Maryland Department of the Environment (MDE) to issue to Montgomery County Permit No. 1995-WSF-0237-0, authorizing construction of a sanitary landfill in northern Montgomery County at a location known as "Site 2".

2. Prior to issuance of the subject permit by MDE, the County secured certain contractual rights to utilize out-of-county landfill capacity, and therefore has put off indefinitely the start of construction of a sanitary landfill at Site 2.

3. By a Letter of Understanding dated April 8, 1998, a copy of which has been filed in this case, Petitioners, MDE and the County agreed that it would best serve the public interest if further prosecution of this case were stayed until such time as the County stated its intent to construct a sanitary landfill at Site 2. Accepting those

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 TH15 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 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 Mertyman, 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. Nockett, 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 Hise! 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.

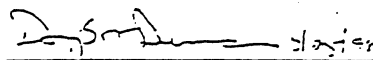
If the Maryland Department of the Environment denies the hearing request, the Refuse Disposal Permit will be issued to the County. The County has postponed, indefinitely, construction and operation of the landfill. If the citizens seek further relief from MDE's decision to deny the hearing request, the 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.

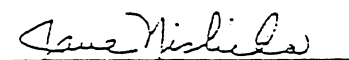
The parties agree that, under either scenario, it would be in everyone's interest to conduct further proceedings in an orderly and timely manner, should they become necessary. Accordingly, the County agrees to notify the Maryland Department of the Environment and the citizens promptly of any change in 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.

 3/19/98
Thomas A. Deming
Counsel for the Individual Protestants
in Request for Contested Case Hearing
filed June 28, 1996

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.)

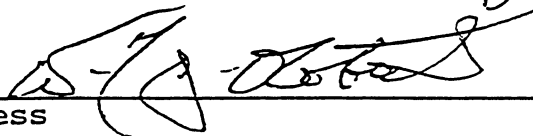
MONTGOMERY COUNTY, MARYLAND

By:  (SEAL)
DOUGLAS M. DUNCAN, County
Executive

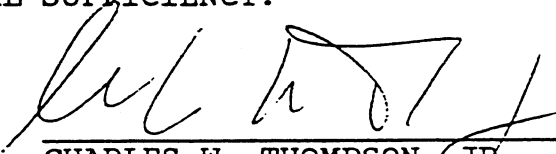

Witness

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

By Steven Charles SEAL
Steven Charles Date 1/10/81
President

William S. Jordan III SEAL
William S. Jordan III, Esq. Date 1/13/81
Counsel for Sugarloaf Citizens Association

Maryland Environmental Service

By Thomas D. McKewen SEAL
Thomas D. McKewen Date 1/14/81
Director

John B. Z. Wash SEAL
John B. Z. Wash, Esq. Date 1/13/81
Counsel for Sugarloaf Citizens Association

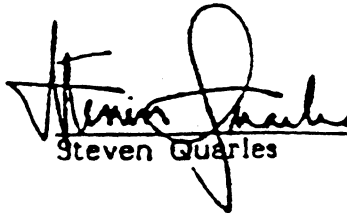
Washington Suburban Sanitary Commission


By Robert S. McGarry SEAL
Robert S. McGarry Date 16 Jan '81
General Manager

Maryland Department of Health and Mental Hygiene

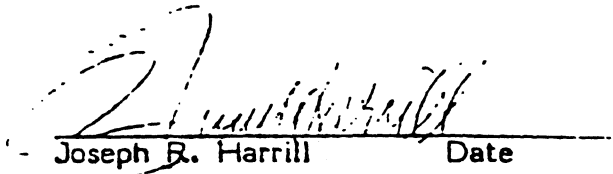
By William M. Eichbaum SEAL
William M. Eichbaum Date
Assistant Secretary for Environmental Programs

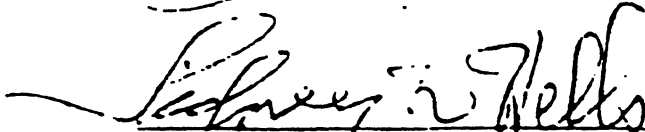
INDIVIDUAL INTERVENORS


 Steven Quarles 1/10/81 SEAL
 Date


 David Owens Scott 1/11/81 SEAL
 Date


 George J. Ersek 1/11/81 SEAL
 Date


 Joseph R. Harrill Date SEAL


 Steven D. Wells Jan 11, 1981 SEAL
 Date
 Sidney 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 & Hoq 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. 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,
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 Invalidity. 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.

[Signature]
Witness

By: Jane S. Hunter (SEAL)
JANE S. HUNTER,
Treasurer

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

Charles W. Thompson, Jr. for
CHARLES W. THOMPSON, JR.,
County Attorney

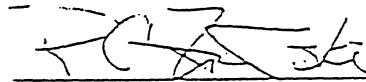
SUGARLOAF CITIZENS ASSOCIATION, INC.

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

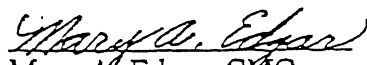
1. The County owns and operates two solid waste facilities in the Dickerson area, the Resource Recovery Facility and the Dickerson Compost Facility.
2. The County owns several properties in the Dickerson area for the Site 2 Landfill. The County has determined it is not necessary to proceed with the construction 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

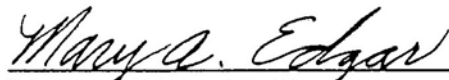
1. On October 31, 2000, the County Council received Regulation 6-99AM, Expansion of Leaf Vacuuming Collection District.
2. The Council must review the regulation under method (1) of Section 2A-15 of the County Code.
3. A regulation proposed under Method (1) is adopted when the County Council approves it by resolution. The regulation takes effect on adoption of the resolution approving it or at a later date specified in the regulation.

Action

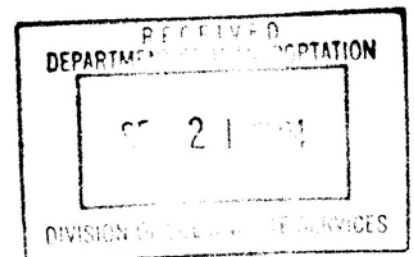
The County Council for Montgomery County, Maryland approves the following resolution:

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



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

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.



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

- 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



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Leaf Vacuuming District	Number 6-99AM
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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.



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

- (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



MONTGOMERY COUNTY EXECUTIVE REGULATION

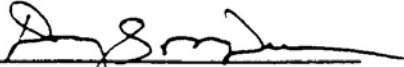
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Subject Leaf Vacuuming District	Number 6-99AM
Originating Department Department of Public Works and Transportation	Effective Date November 28, 2000

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 Eileen J. Brennan

DATE 9/29/2000

EXHIBIT A

MONTGOMERY COUNTY SUBURBAN DISTRICT

COUNTY

GEORGES

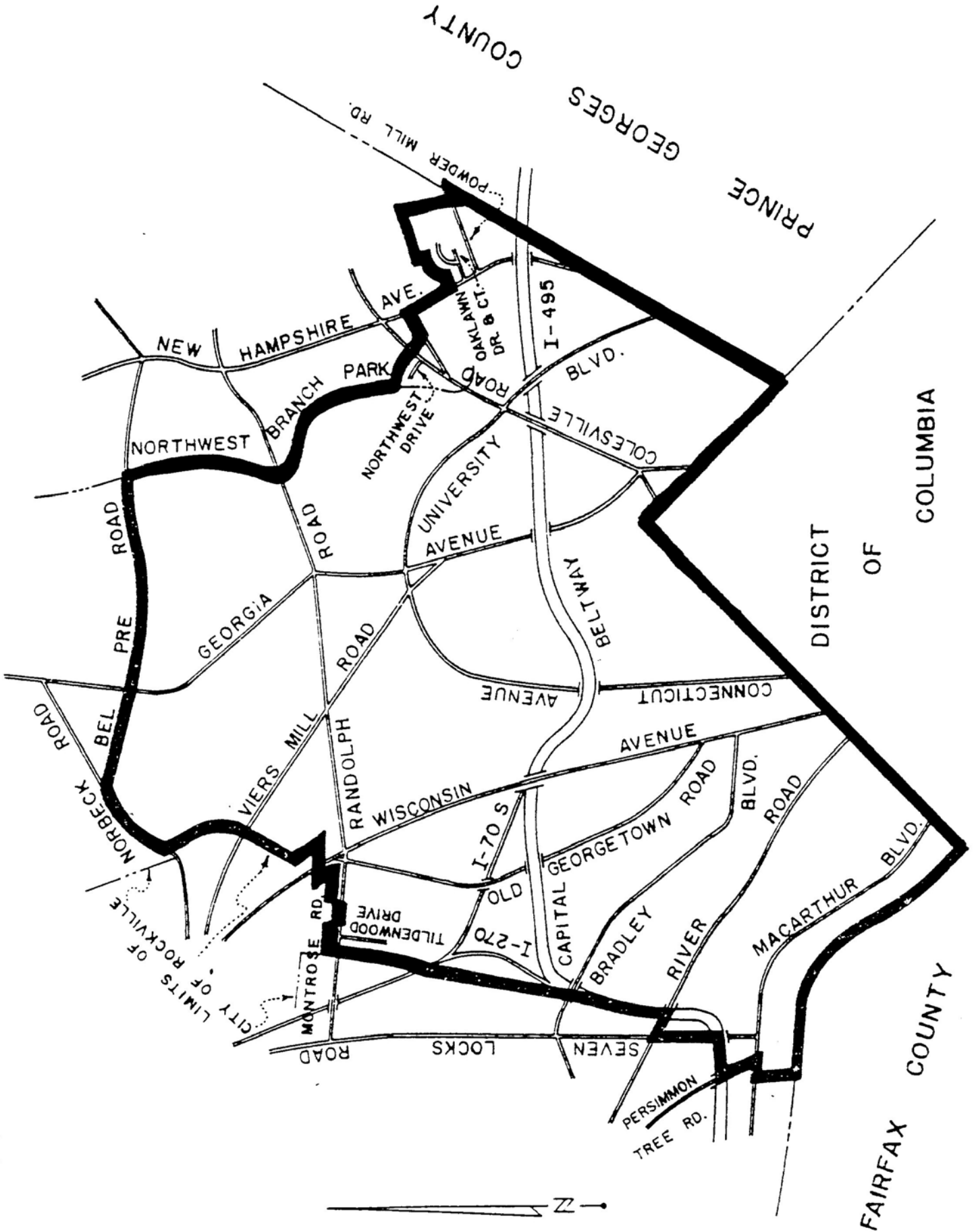
PRINCE

COLUMBIA

DISTRICT

OF

FAIRFAX COUNTY



Appendix G

**Recommendations Provided by the Maryland–National
Park and Planning Commission (M-NCPPC) and the
Washington Suburban Sanitary Commission (WSSC)**



MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

March 3, 2009

The Honorable Phil Andrews
President
Montgomery County Council
100 Maryland Avenue
Rockville, Maryland 20850

Subject: Review of Comprehensive Solid Waste Management 10 year Plan

During the Summer of 2008, Planning Board staff provided comments to the Division of Solid Waste Services for the revision of the Montgomery County Comprehensive Solid Waste Management 10 Year Plan. Based on the updated plan's response to staff's comments, we endorse the overall plan and commend Division of Solid Waste Services staff on formulating a thorough and intelligent approach to solid waste management in the County. This plan contributes significantly to protecting the environment of Montgomery County.

Regarding the proposal to relocate yard trim handling operations from the Shady Grove Transfer Station to the site of the closed Gude Landfill: The Board has serious concerns about the continuing leaching of contaminants from the Gude Drive landfill into the surrounding groundwater and surface waters. Due to these concerns, the Board cannot endorse moving the yard trim operation or establishing any other uses on the site of the Gude landfill without further analysis and a clear determination that such actions will not exacerbate the existing pollution problems. Planning Board staff will continue to monitor this proposal and expects these questions to be resolved before any mandatory referral on the re-use of the Gude Landfill is submitted to the Planning Board for review.

Attached is the staff report from our Planning Board hearing on February 26, 2009, listing the Planning Board staff comments and how the Plan update has responded to our comments. If you have any questions or comments, please direct them to Steve Findley of our Environmental Planning staff. He can be reached at (301) 495-4727.

Thank you for the opportunity to review and comment on this Plan.

Sincerely,

Royce Hanson
Chairman

RH:SF:ss
Attachment

cc: Keith Levchenko, Montgomery County Council

ENV &
ENERGY



Washington Suburban Sanitary Commission

14501 Sweitzer Lane • Laurel, Maryland 20707-5902

K/L
CC
SBF
LL

COMMISSIONERS
Joyce Starks, Chair
Gene W. Counihan, Vice Chair
Prem P. Agarwal
Hon. Adrienne A. Mandel
Dr. Juanita D. Miller
Dr. Roscoe M. Moore, Jr.

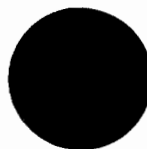
INTERIM
GENERAL MANAGER
Teresa D. Daniell

INTERIM DEPUTY
GENERAL MANAGER
Rudolph S. Chow

040542

February 12, 2009

The Honorable Phil Andrews, President
Montgomery County Council
Stella B. Werner Office Building
100 Maryland Avenue
Rockville, MD 20850



Dear Council President Andrews:

Thank you for giving us the opportunity to comment on the Comprehensive Solid Waste Management 10 Year Plan for 2007-2016 for Montgomery County. Attached are our comments for your review. If you should have any further questions, please do not hesitate to call my office at 301-206-8777.

Sincerely,

Teresa D. Daniell
Teresa D. Daniell
Interim General Manager

Attachment

RECEIVED
FEB 13 2009
OFFICE OF THE
COUNCIL PRESIDENT



WSSC Comments on the Montgomery County Comprehensive Solid Waste Management 10 Year Plan (2007 – 2016)

- Page 1-9 & 10; “In addition, WSSC is responsible for the management of biosolids from wastewater treatment plants in Montgomery County and from the Blue Plains Wastewater Treatment Facility in the District of Columbia”.

WSSC is responsible for biosolids of three of the four wastewater treatment plants in Montgomery County, but not the Poolesville treatment plant. WSSC is responsibility for approximately 45% 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 DC Water and Sewer Authority (WASA).

- Page 1-18, Table 1.2; Summary of Federal Regulations Affecting Solid Waste Management

Part 503: Standards For The Use Or Disposal Of Sewage Sludge should also be added.

- Page 2-2; While not related to WSSC, we believe that the statement “Between 1990 and 2000, minorities accounted for 125 percent of the County’s population growth...” is not clear.

Perhaps the intent of this statement was to indicate that the growth rate of minorities increased 125 percent as compared to the overall growth rate of the county during the 1990-2000 time period.

- Page 3-17, Table 3.7; The preceding paragraph lists the four WWTP facilities located in Montgomery County, however the table indicates that all biosolids are treated at WSSC facilities. WSSC is not responsible for operation of the Poolesville WWTP.
- Editorial, pages 5-44 and 5-45; Section 5.2.2 is repeated on both pages.
- Page 5-45; “Plan of Action: Seneca Wastewater Treatment Plants”. This title should read Plan of Action: Seneca Wastewater Treatment Plant.

2002 was the last full year that the old 5 mgd plant operated.

Seneca plant expansion from 20 mgd to 26 mgd is currently under design.

The sentence “However, the increased efficiency of the sludge dewatering facilities will improve future land application by reducing the number of wet tons of biosolids that will be transported and applied to agricultural land” is somewhat misleading.

Here is a comparison of 2002 and 2008 with the new plant and dewatering facility in operation:

<u>Year</u>	<u>Final Effluent Flow (avg mgd)</u>	<u>Wet Tons Hauled</u>	<u>Percent Solids</u>	<u>Dry Tons Hauled</u>
2002	6.3	11,124	11.9%	1,324
2008	15.2	23,945	26.4 %	6,206

Even though the dewatering efficiency did increase significantly, the large flow increase (plus lime addition) resulted in an overall increase in wet tons hauled.

- Potomac WFP solids are not mentioned in the report. For 2005 – 2007, about 14,000 wet tons per year were hauled from the plant, at ~28% total solids. The solids were hauled by a contractor and used in blended topsoil and mulch products.