

**FREDERICK/CARROLL COUNTY
RENEWABLE
WASTE-TO-ENERGY FACILITY**

**PRELIMINARY DRAFT
MATERIALS SEPARATION PLAN**

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GLOSSARY OF TERMS

Acceptable Material	<p>all municipal solid waste except source separated yard waste (grass, leaves, branches, twigs and brush), Acceptable Recyclable Material and bulk loads of construction and demolition waste and which typically includes:</p> <p>household garbage, trash, rubbish and refuse of the kinds normally generated by residential housing units and commercial establishments, including, without limitation:</p> <ul style="list-style-type: none">• large household items such as beds, mattresses, sofas, bicycles, baby carriages, small automobile parts, commingled tires, yard waste, construction, demolition and roofing wastes of the types that are generally collected by the municipal and private haulers from residential housing units located in the County, or which are delivered to drop-off locations operated by the County.• business, commercial, and light industrial waste normally generated by business, governmental, commercial and light industrial and manufacturing establishments.• residue from the Counties' Materials Resource Recovery Facilities, or Composting Facility.
Acceptable Recyclable Materials	materials accepted by the respective Counties' curbside single-stream recycling programs, drop-off recycling centers, and material recovery facilities
bulky/oversized items	large items of solid waste that, because of their size or weight, require handling other than normally used for solid waste
CFR	Code of Federal Regulations
collection	act of picking up solid waste at its point of generation or storage and placing it in a vehicle for transportation
COMAR	Code of Maryland Regulations
commercial waste	waste materials originating in business, wholesale, retail, institutional or service establishments

GLOSSARY OF TERMS

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compost	relatively stable decomposed organic material resulting from the composting process
Counties	Frederick and Carroll Counties
curbside collection	collection programs where Acceptable Material or Acceptable Recyclable Material are collected at the curb, often using special containers, to be brought to various processing and disposal facilities
disposal	the orderly processing and placement of solid waste including, but not limited to transfer station, incineration, and landfill
drop-off facility	method of collecting recyclable or compostable materials in which the materials are taken by individuals to collection sites and deposited into designated containers
DUSWM	Division of Utilities and Solid Waste Management, Frederick County
EAC	Environmental Advisory Council, Carroll County
FCCRWTE	Frederick/Carroll County Renewable Waste-To-Energy
generator	one who produces waste materials
grasscycling	recycling grass clippings through use of mulching mowers or leaving clippings on the lawn
hauler	one engaged in the act of collection of solid waste and or transporting such waste between solid waste facilities
HHW	household hazardous waste—refuse, sludge, or other waste material generated in a residential household (exempt from the regulations governing hazardous waste due to the relatively small volume of generation) that, because of its quantity, concentrations, or chemical, physical, or infectious characteristics, as defined in 40 CFR 261, may pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed

GLOSSARY OF TERMS

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landfill	facility at which solid waste is deposited on or into the land as fill for the purpose of complete and ultimate disposal and which has received all necessary permits
MDE	Maryland Department of the Environment
MES	Maryland Environmental Service
MOU	memorandum of understanding
MRA	Maryland Recycling Act
MRF	material recovery facility—a processing facility designed, operated, and permitted to process a nonhazardous source separated material waste stream by using manual and/or mechanical methods to separate from the incoming material stream categories of useful, reusable, or recyclable material for reprocessing and reuse
MSP	materials separation plan
MSW	municipal solid waste—garbage, refuse, rubbish, trash, and other solid waste from residential, commercial, industrial, and community generators that is collected in aggregate, but does not include special handling wastes, hazardous waste, HHW, source separated recyclables, residual waste, automobile hulks, ash, non-combustible construction and demolition debris, mining wastes, industrial sludge, agricultural wastes, tires, and other materials collected, processed, and disposed of as separate waste streams
NEA	Northeast Maryland Waste Disposal Authority
NSPS	New Source Performance Standards as defined by the U.S. Environmental Protection Agency
Processible solid waste	Waste that was not recycled and is available to process at the WTE facility
recyclables	materials that can be separated from the waste stream and can be converted into raw materials from which new products can be manufactured

GLOSSARY OF TERMS

(Continued, Page 4 of 4)

recyclable white goods	large appliances (i.e., generally weighing more than 50 pounds) including, but not necessarily limited to the following: air conditioners, clothes washing and drying machines, dish washers, hot water heaters, refrigerators and freezers, or stoves and ovens
solid waste	garbage, refuse, residue, sludge, and other non-liquid discarded materials resulting from personal, residential, community, mining, agricultural, industrial, or commercial activity
SWMP	solid waste management plan; county plans developed as required by MDE regulations (COMAR 26.03.03)
tpd	ton(s) per day
tpy	ton(s) per year
transfer station	intermediate waste facility at which mixed MSW or other materials are temporarily deposited before being transported to a processing facility
waste diversion rate	The MRA recycling rate plus the MDE source reduction credit.
waste-to-energy	conversion of solid waste into energy to produce steam and/or electricity
WTE	waste-to-energy
WTI	Wheelabrator Technologies, Inc.
white goods	refrigerators, stoves, washing machines, air conditioners, hot water heaters, etc.
yard waste	materials normally generated in the maintenance of gardens, yards, lawns, or landscaped areas, whether residential, commercial, or public, including leaves, grass clippings, plants, shrubs, prunings, and trimmings

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this preliminary draft Materials Separation Plan (MSP) is to identify the goals and approaches for separating certain components of the Municipal Solid Waste (MSW) stream in the Frederick and Carroll Counties' (the "Counties") service areas in order to make the separated materials available for recycling. The non-recycled Acceptable Material will be processed at the Northeast Maryland Waste Disposal Authority's (NEA) Frederick/Carroll County Renewable Waste-to-Energy (FCCRWTE) facility. The facility will also accept tires under a Scrap Tire Acceptance Permit and sewage sludge under a Sewage Sludge Utilization Permit. Both Counties have contractually designated the FCCRWTE facility as the central solid waste acceptance facility for the disposal of non-recycled Acceptable Material generated in their respective county.

This preliminary draft MSP fulfills one of the requirements of Title 40 of the Code of Federal Regulations (CFR), Part 60, Subpart Eb, New Source Performance Standards (NSPS) (40 CFR 60.57b) for the FCCRWTE facility.

The standard also prescribes a specific process that must be followed to ensure the opportunity for public review and comment on the preliminary draft MSP. The process consists of the following:

- Preparation and issuance of a preliminary draft MSP for public comment.
- Notification of a public meeting for accepting oral and written comments on the preliminary draft MSP.
- Acceptance of written comments on the preliminary draft MSP.
- Preparation of written responses to any public comments.
- Identification of the location(s) where written responses to public comment on the preliminary draft MSP will be available for inspection.
- Preparation of a final draft MSP, considering the public comments
- Submission of the following to the Maryland Department of the Environment (MDE) as part of the facility's application for a construction permit:

- Copy of the notification of the public meeting.
- Transcript of the public meeting.
- Document summarizing responses to public comments.
- Copies of both the preliminary draft and final draft MSPs.

1.2 BACKGROUND

NEA was created by the State of Maryland to assist its member jurisdictions with their integrated solid waste needs. The NEA's member jurisdictions include seven Maryland counties and the city of Baltimore. The Counties are both members of NEA and have entered into a Memorandum of Understanding (MOU) by and among Frederick County, Carroll County, and NEA for the development of a regional energy recovery facility (July 2009). This MOU describes the site location in Frederick County; the ownership, design, and capacity of the facility; as well as the responsibilities of NEA, the Counties, and the Vendor, Wheelabrator Technologies, Inc. (WTI).

WTI has entered into a service contract with NEA for the design, construction, and operation of a 1,500-tons-per-day (tpd) nominal regional waste-to-energy (WTE) facility in Frederick County, Maryland. The facility will serve the long-term solid waste disposal needs of Frederick and Carroll Counties, as well as produce for sale approximately 45 megawatts of electricity to meet the Counties' governmental energy needs. The FCCRWTE facility will be owned by NEA.

Each county in Maryland is required to have a county Solid Waste Management Plan (SWMP) in accordance with the Code of Maryland Regulations (COMAR), Title 26.03.03. Both Counties have approved SWMPs. Carroll County's most recent SWMP (Carroll County, Maryland Ten Year Solid Waste Management Plan 2002 – 2012 [Updated 2006]) was approved in 2007. Frederick County's most recent SWMP (Frederick County, Maryland Division of Utilities and Solid Waste Management Solid Waste Management Plan 1998 – 2017) was most recently revised and approved in 2005. Frederick County's plan is in the process of being revised and a draft of the revision has been presented to the Frederick County Board of County Commissioners.

This preliminary draft MSP has been prepared to satisfy the federal air permit application requirements (40 CFR 60.57b). The NEA is acting on behalf of the Counties in seeking the permits for the WTE facility and, as such, has incorporated aspects of the Counties' current approved SWMPs and currently planned revisions in this MSP. Table 1-1 identifies specific goals of the Counties' plans.

Table 1-1. Frederick and Carroll Counties' SWMP Goals

County	Goal
Frederick ¹	<ul style="list-style-type: none"> • Protect the health and welfare of citizens and the environment • Conserve natural resources • Be financially self-sufficient • Develop multijurisdictional solutions for solid waste management • Educate the public about solid waste management and planning issues • Maintain the solid waste program
Carroll ²	<ul style="list-style-type: none"> • Provide for facilities that are adequate to treat, recover, or dispose of solid waste in a manner that is consistent with the applicable state, federal, and local laws and regulations that relate to air pollution, water pollution, and land use • The effective implementation of an integrated system of solid waste management and recycling that allows sufficient flexibility to react to changes in regulation, technology, and market conditions

Sources: 1) Frederick County SWMP, 1998-2017 (updated 2005). Ordinance 05-28-389.
 2) Carroll County Ten Year SWMP, 2002-2012 (updated 2006). Resolution 693-07 (February 22, 2007).

Each of the Counties' SWMPs and recycling programs strive to reduce the amount of materials entering the MSW stream, thus reducing the amount of wastes needing to be transported either out of state for disposal or to a local landfill. In general, the recognized benefits of reducing the MSW stream through recycling include a reduction in transportation costs, a reduction in the amount of disposal fees to the citizens due to reduced volumes, and an increase in the longevity of the life of the local landfills. Most importantly, by actively supporting recycling efforts, the Counties and NEA are preserving valuable resources. In addition, the SWMPs act as guidance documents to assure that the Counties meet and exceed the state of Maryland's mandatory 20-percent recycling goal for each county and the voluntary statewide waste diversion goal of 40 percent (MD Code Ann., Env. Art. §9-1705-).

The NEA through its contractor WTI will achieve additional recycling at the FCCRWTE facility with the recovery of recyclable metals (ferrous and non-ferrous) from the waste stream both before and after processing. Large bulky metal items will be recovered on the tipping floor while other metals will be collected in the Facility's ferrous and non-ferrous metal recovery systems. Recovered metals will be recycled.

2.0 SOLID WASTE MANAGEMENT SYSTEM

2.1 SERVICE AREAS

The service areas for the MSP described in this document include all residential, business, industrial, institutional, and commercial waste generators of Frederick and Carroll Counties, Maryland. The FCCRWTE facility has been sized to meet the needs of the Counties over the planned life of the facility and, therefore, is sized to accommodate growth. Additional waste from outside of the primary service area will be accepted to enable the FCCRWTE facility to operate at its designed capacity.

2.2 FACILITIES AND COMPONENTS

2.2.1 FREDERICK COUNTY

2.2.1.1 Collection

The City of Frederick provides collection of MSW using municipal employees and equipment. The remainder of the incorporated municipalities contract directly with private haulers.

Citizens not living within an incorporated area of Frederick County may have the collection of MSW provided by their home owners association via contract (if applicable), are free to contract with a private hauler or may take their waste directly to the Reichs Ford Road Landfill (see Table 2-1).

Commercial and institutional establishments in unincorporated areas of Frederick County and certain incorporated portions of the County may also contract directly with private haulers or self-haul directly to the landfill.

2.2.1.2 Collection Agreements

Frederick County entered into an agreement with BFI Waste Services LLC, designating them as Frederick County's private hauler for the residential single-stream recyclable program.

Table 2-1. Collection Activities by Municipality for Frederick County

Municipality	Residential Solid Waste Collection	Collection of Recyclables
Brunswick	Private by Municipal Contract	Private by County Contract
Burkittsville	Private by Municipal Contract	Private by County Contract
Emmitsburg	Private by Municipal Contract	Private by County Contract
Mount Airy	Private by Municipal Contract	Private by County Contract
Middletown	Private by Municipal Contract	Private by County Contract
Myersville	Private by Municipal Contract	Private by County Contract
New Market	Private by Municipal Contract	Private by County Contract
Rosemont	Private by Municipal Contract	Private by County Contract
Thurmont	Private by Municipal Contract	Private by County Contract
Walkersville	Private by Municipal Contract	Private by County Contract
Woodsboro	Private by Municipal Contract	Private by County Contract
City of Frederick	Municipal Employees	Private by County Contract

Source: Frederick County, Page 3-22, Draft 2009 SWMP.

2.2.1.3 Recycling Drop-Off Facilities

Only County residents may use any of the 11 recycling drop-off locations in Frederick County for single-stream recycling. Schools, businesses, churches, organized groups, or commercial entities must contract with a solid waste management contractor for recycling services. The locations of the recycling drop-off facilities are:

- 214 13th Avenue, Brunswick.
- 3612 Buckeystown Pike, Buckeystown.
- 1200 North East Street, Frederick.
- 1820 Rosemount Avenue, Frederick.
- 9031 Reichs Ford Road, Frederick (also a landfill).

- 4606 Lander Road, Jefferson.
- 7628 Coblenz Road, Middletown.
- 8098 Crum Road, Mt. Pleasant.
- 30 Eyley Road, Thurmont.
- 3604 Urbana Pike, Frederick.
- 8948 Indian Springs Road, Frederick.

In addition to residential single-stream recycling collection, the Reichs Ford Road Facility accepts commercial single-stream recycling, bulky/oversized rigid plastic items, textiles, scrap metal, motor oil, flexible foam, white goods, lead acid batteries, antifreeze, tires, and electronics. Residential and commercial single-stream recyclables are sent to the Recycle America Material Recovery Facility (MRF) in Elkridge, Maryland.

Unbagged or paper bagged (only) leaves, grass clippings, brush trimmings and limbs (no longer than 8 feet [ft] and 6 inches in diameter) can be left by residents at two County locations: Reichs Ford Road Yard Trimmings/Mulch and Compost Site and Walkersville Heritage Farm Park (drop-off only). There is currently no cost to drop off these materials. This program currently produces two grades of mulch: premium double-ground and basic single-ground. The program also produces a finished, screened compost product. These products are for sale in bulk at the Reichs Ford Road facility.

2.2.1.4 Transfer Stations

Frederick County currently has in operation a MSW transfer facility capable of accepting solid waste at no more than 720,000 tons per year (tpy) of MSW. The transfer station is located at the Reichs Ford Road Landfill site. The transfer facility provides benefits of an integrated solid waste management program by providing the following:

- Extension of the life of Reichs Ford Road Landfill by transporting MSW to out-of-county disposal facilities.
- Long-term options for recycling and/or managing non-processible waste.
- Convenient residential and commercial single-stream recyclables processing/transfer to contract MRFs.

Upon construction of the FCCRWTE facility, the transfer station may be used to transfer incoming MSW to the facility for processing

2.2.1.5 Landfills

According to the 2009 Frederick County Draft SWMP, there are several landfills in operation for waste collection and disposal purposes in Frederick County:

- The Reichs Ford Road Sanitary Landfill, Site B, is a 58-acre sanitary landfill located on 183 acres approximately 4 miles east of the city of Frederick. This landfill is owned by Frederick County and accepts wastes from residential, business, commercial, and institutional entities.
- The Fort Detrick Landfill is a sanitary landfill located on 61 acres of land in the northwest corner of the city of Frederick and owned by the U.S. Army. This landfill accepts U.S. Army bypass (unburnable) waste and incinerator ash.
- The Eastalco facility is a private 10-acre industrial waste landfill located in the southern part of Frederick County and owned by Eastalco Aluminum Company, Inc. This facility accepts Eastalco potliner brick and pollution control device debris wastes. Operations were curtailed in December 2005. Eastalco has a MDE solid waste disposal permit that expires in October 2014.
- The Eyler Land Clearing Debris Landfill is a 14-acre rubblefill located in northeastern Frederick County and owned by John C. Eyler. This landfill accepts land-clearing debris only.

2.2.2 CARROLL COUNTY

2.2.2.1 Collection

Businesses and residents in unincorporated areas of Carroll County can either self-haul their waste and recyclables to the Northern Landfill and Recycling Center or Hoods Mill Landfill convenience center, or contract for the services directly with any hauler licensed by Carroll County. Under the licensing requirements, each hauler is required to offer collection for all County-approved recyclables. Seven of the incorporated municipalities

provide waste and recycling services for their residents through contractors. Sykesville provides collection of MSW and recyclables using municipal employees and equipment. (see Table 2-2).

Table 2-2. Collection Activities by Municipality for Carroll County

Municipality	Residential Solid Waste Collection	Collection of Recyclables
Hampstead	Private by Municipal Contract	Private by Municipal Contract
Manchester	Private by Municipal Contract	Private by Municipal Contract
Mt. Airy	Private by Municipal Contract	Private by Municipal Contract
New Windsor	Private by Municipal Contract	Private by Municipal Contract
Sykesville	Municipal Employees	Municipal Employees
Taneytown	Private by Municipal Contract	Private by Municipal Contract
Union Bridge	Private by Municipal Contract	Private by Municipal Contract
Westminster	Private by Municipal Contract	Private by Municipal Contract

Source: Carroll County Web pages:

<http://ccgovernment.carr.org/ccg/recycle/res-haulers.asp> , accessed on June 29, 2010.

<http://ccgovernment.carr.org/ccg/recycle/municipal-haulers.asp> , accessed on June 29, 2010.

2.2.2.2 Collection Agreements

Although no formal agreements exist between any one hauler and Carroll County, all haulers used within the seven municipalities and/or unincorporated portions of Carroll County must secure a license from Carroll County and operate under the requirements of the Carroll County Solid Waste Ordinance (Chapter 185 Solid Waste).

2.2.2.3 Recycling Drop-Off Facilities

Businesses and residents may use both of the recycling drop-off facilities located at Carroll County’s two landfill sites. The landfill sites accept all single-stream recycling items

in addition to bulky/oversized items, textiles, scrap metal, automotive materials, motor oil, antifreeze, tires, and electronics. The locations of the recycling drop-off facilities are:

- 1400 Baltimore Boulevard, Westminster (Northern Landfill).
- 7901 Kabik Court, Woodbine (Hoods Mill Landfill).

The Recycling Center, located at the Northern Landfill, accepts all materials recycled through the Carroll County's curbside program (Acceptable Recyclable Materials) plus textiles, rigid plastics, grocery and empty clear food bags, CD/DVD cases and disks, car and truck batteries, used motor oil, antifreeze, vinyl siding, used frying oil, and kitchen grease. Aluminum can reimbursement is offered during certain times. Reimbursement rates fluctuate with the aluminum market value.

The Northern Landfill also accepts for recycling white goods/scrap metal, electronics, and has a waste exchange program through The Northern Landfill Swap Shop.

Separated yard trimmings are accepted at the yard waste area at Carroll County Landfills. The wood trimmings, grass, and leaves are mulched. The mulch is available to Carroll County residents at no charge.

Recycled Green Industries, LLC (Recycled Green) leases a parcel of the Hoods Mill Landfill for the operation of a compost/soil amendment program. The program operates by receiving food and yard waste material (generated both in and out of Carroll County), treating it, mixing it with soil, and selling it in bulk. In 2009, Recycled Green accepted a reported 34,000 tons of yard waste material.

2.2.2.4 Material Recovery Facility

A MRF began operation adjacent to the transfer station at the Northern Landfill in 1999. The MRF has a permitted capacity of 61,000 tpy of commingled recyclables (residential and commercial) although it has historically processed approximately 14,000 tpy. Containers (glass, plastic, and cans) are reloaded and sent to another facility outside Carroll County for further processing. Old corrugated cardboard and mixed paper are baled and

sent to markets. The MRF is a County-owned facility; however, the operation, transfer, and processing are contracted through a private operator.

2.2.2.5 Transfer Stations

Carroll County currently has in operation a MSW transfer facility located at the Northern Landfill site with a permitted capacity of 305,000 tpy of MSW. It has historically transferred between 66,000 and 104,000 tpy of MSW to landfills in Virginia and Pennsylvania.

The transfer facility provides benefits of an integrated solid waste management program by providing the following:

- Extension of the life of Northern Landfill by transporting MSW to out-of-county disposal facilities.
- Long-term options for recycling and/or managing non-processible waste.
- Convenient residential and commercial single-stream recyclables processing/transfer to contract MRFs.

Upon construction of the FCCRWTE facility, the transfer station may be used to transfer incoming MSW to the facility for processing

Roll-off Express is a privately owned and operated waste processing facility on Dede Road in Finksburg that is open to the public and contractors that recycles wood, cardboard, metal, and concrete. Residuals are disposed of properly permitted solid waste facilities outside of Carroll County.

2.2.2.6 Landfills

According to the Carroll County Ten Year Solid Waste Management Plan 2002 -2012 (Updated 2006), Carroll County currently has one landfill, the Northern Landfill, in operation for waste collection and disposal purposes. The Northern Landfill is located on 200 acres of land and is owned by Carroll County. The facility accepts all types of residential and commercial solid wastes.

The Hoods Mill Landfill, located on 125 acres of land and also owned by Carroll County, is no longer in operation as a landfill. This facility is now currently accepting wastes for transfer, recycling, and yard waste for mulching. The Hoods Mill facility operates as a non-commercial customer convenience drop off station on Saturdays only. All waste and recyclables are backhauled to Northern Landfill for processing. Carroll County also distributes mulch from this site.

C. J. Miller, LLC, located on Dede Road in Finksburg, is the only construction and demolition facility in Carroll County that accepts and/or processes waste for reuse or disposal. The facility accepts broken concrete and old asphalt paving which is crushed and used as aggregate in new asphalt.

2.3 SOLID WASTE DISPOSAL AGREEMENTS

To provide economical, efficient, and environmentally responsible solid waste disposal services, the Counties have entered into agreements with multiple companies for waste disposal.

2.3.1 FREDERICK COUNTY

Frederick County, in cooperation with Carroll County in July of 2009, entered into a MOU and an Energy Recovery Agreement with NEA for the development of a 1,500-tpd WTE facility to provide long-term disposal capacity for the Counties.

Frederick County entered into an agreement with NEA to develop landfill gas processing at the Reichs Ford Road Landfill for electricity generation in 2009.

The County currently has solid waste transfer and single-stream recyclables processing contracts through NEA. Frederick County uses two NEA contracts for the transportation and disposal of Acceptable Material. They also use an NEA contract for the transportation and processing of single-stream recyclables. All three contracts transfer from the Transfer Station at the Reichs Ford Road Landfill.

2.3.2 CARROLL COUNTY

Carroll County, in cooperation with Frederick County in July of 2009, entered into a MOU and Energy Recovery Agreement with NEA for the development of a 1,500-tpd WTE facility to provide long-term disposal capacity for the Counties.

Interstate Waste Services, Inc., currently has a contract to transfer at least 50,000 tpy of MSW from Northern Landfill to one of three landfills in Pennsylvania.

2.4 MUNICIPAL SOLID WASTE QUANTITIES AND PROJECTIONS

2.4.1 FREDERICK COUNTY

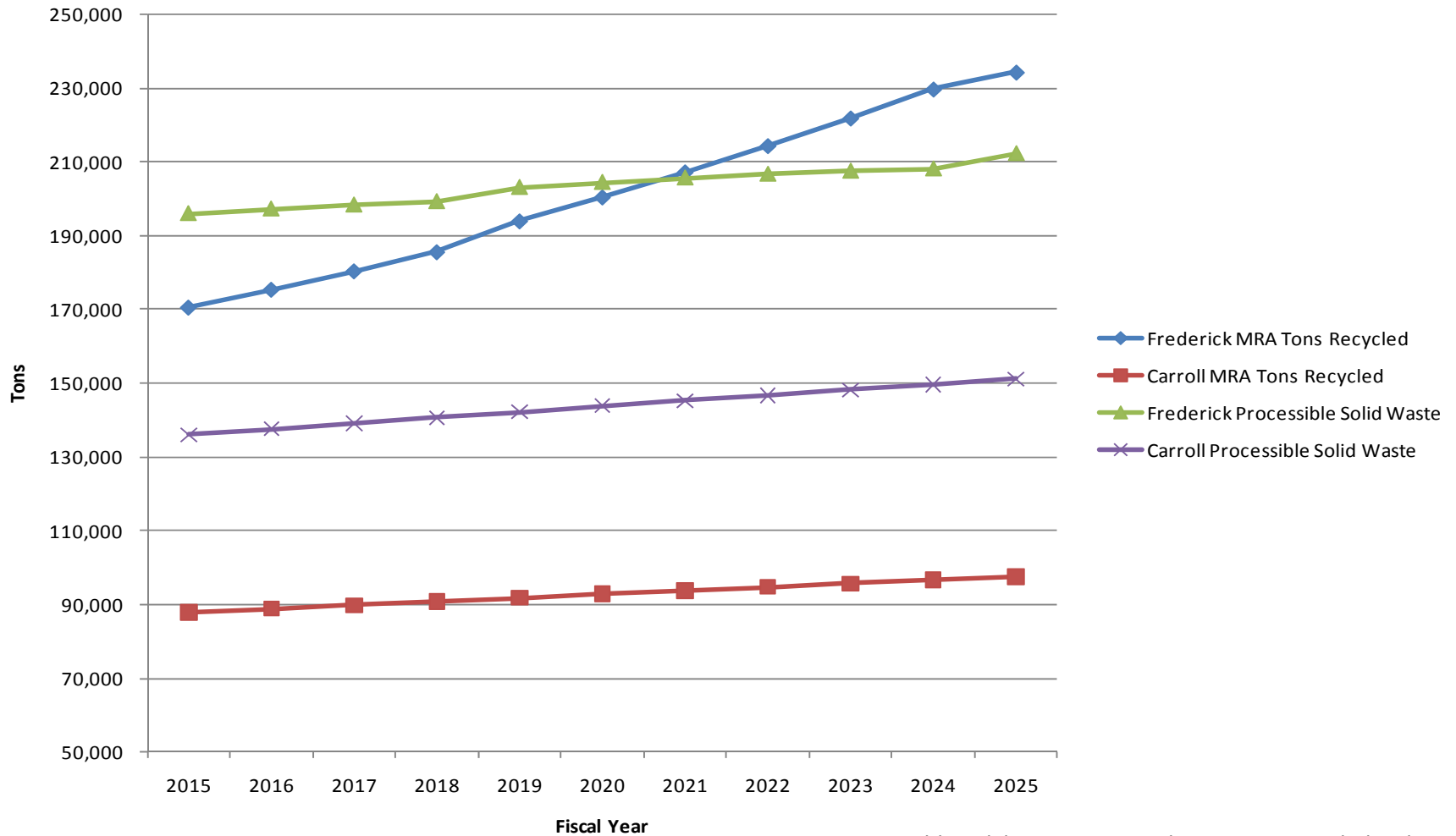
Frederick County is currently experiencing a growth in its population. Population growth is an important part of waste management planning, because it provides a base to estimate the amount of waste that will be produced based on projected population growth and waste production rates.

Waste generation projections for Frederick County were obtained from NEA's planning model. Typically, as the population increases, so does the amount of waste generated, even if the per capita waste generation rate plateaus and does not increase.

With the full implementation of the residential single-stream recycling program throughout the County, in addition to planned policies and programs, Frederick County anticipates the amount of waste materials separated for recycling to increase, along with the population and amount of municipal wastes generated. Figure 2-1 depicts the Frederick County recycling and waste tonnage projections.

2.4.2 CARROLL COUNTY

Carroll County is currently experiencing a growth in its population. Population growth is an important part of waste management planning, because it provides a base to project an estimate of the amount of waste that will be produced based on past populations and waste production rates.



Processible solid waste is waste that was not recycled and is available to process at the WTE facility.

FIGURE 2-1.

RECYCLING AND SOLID WASTE TONNAGE PROJECTIONS FOR CARROLL AND FREDERICK COUNTIES

Source: Northeast Maryland Waste Disposal Authority's Planning Model, 2010.



According to the Carroll County SWMP (updated 2006), it is also anticipated that, as the population has increased, so will the amount of wastes generated.

With the continuous implementation of the single-stream recycling program and policies in place, in addition to future policies and programs, Carroll County anticipates the amount of wastes separated for recycling to increase along with the population and amount of municipal wastes generated. Figure 2-1 depicts the Carroll County recycling and waste tonnage projections.

3.0 MATERIALS SEPARATION PLAN

3.1 OBJECTIVES/GOALS

The Maryland Recycling Act (MRA) (Annotated Code of Maryland, Environment Article § 9-1705) requires that counties with populations greater than 150,000 recycle 20 percent of their waste. Additionally, in 2000, Maryland established a voluntary statewide waste diversion goal of 40 percent by 2005. The waste diversion goal is comprised of the MRA recycling rate plus source reduction credits (maximum 5 percent) that Maryland counties earn through activities designed to reduce the amount of waste going to the waste stream. The MRA excludes from its scope certain scrap metals, land clearing debris, construction and demolition debris, sewage sludge, and hospital wastes. As part of the monitoring of recycling activity, annual collection of data is gathered from businesses that recycle all or part of their waste. Each county collects local data then submits information to MDE. Recyclable materials tracked in this annual report include:

- Compostables—Mixed yard waste, wood waste, and food waste.
- Glass—Containers, mixed glass, and fluorescent light tubes.
- Metals—Cans, scrap, and white goods.
- Paper—Corrugated cardboard, mixed paper, newspaper, books, telephone books, and shredded paper.
- Plastic—Mixed plastics, films, and containers.
- Other Materials—Laser toner cartridges, lead-acid batteries, oil filters, and wood pallets.

The Counties intend to meet and exceed these recycling goals with the cooperation of their citizens, businesses, and the FCCRWTE facility. Recycling is a crucial component of the Counties' integrated waste management systems.

3.2 FREDERICK COUNTY

3.2.1 MATERIALS SEPARATION STRATEGY

In 2008, MDE certified Frederick County's waste diversion rate (41.39 percent MRA recycling rate and 3 percent source reduction credit) as 44.39 percent. Frederick County Commissioners have established a waste diversion goal (material removed from the

waste stream through recycling, composting, and other strategies including source reduction credits) of 60 percent by the year 2025.

3.2.1.1 Education/Awareness/Outreach

Public education, awareness, and outreach are integral parts of the recycling portion of the Frederick County SWMP. Frederick County incorporates outreach and education elements into almost all of the different recycling programs. For example, a significant amount of outreach is attributed to the Contract Curbside Recycling Program and therefore assigned as a cost for that particular program and not reflected in the separate outreach program budget.

Frederick County has a Recycling Outreach Coordinator, a Commercial Recycling Program Coordinator and additional staff support (total 2.1 full time equivalents) devoted to the recycling education/outreach effort. The recycling outreach program coordinator is available for answering recycling or composting questions, providing on- or offsite educational programs, coordinate events, and provide information on recycling and waste management practices in Frederick County. The staff provides technical assistance to businesses in establishing or expanding their existing recycling and waste reduction programs. The staff is also available to provide information on available recycling resources, monitoring solid waste and recycling activities, waste reduction strategies, and other environmentally friendly tips.

The annual expenditures for recycling education/outreach during the 2010 fiscal year were \$218,904.

Frederick County maintains a recycling page on its county government website (<http://frederickcountymd.gov/index.aspx?nid=1764>). Four times a year, the Frederick County Department of Solid Waste Management issues an informative digital newsletter. This newsletter can either be viewed on the Frederick County Web page (<http://frederickcountymd.gov /index.aspx?NID=3941>) or it is available for direct e-mail upon request. The Frederick County Department of Solid Waste Management also con-

ducts direct mailing up to four times per year to all single family homes to provide updates and guidance on the curbside recycling program.

A guidebook titled *A Citizens Guide to Waste Management in Frederick County* was created to provide information on recycling and waste reduction. This booklet serves as a resource that covers topics from waste disposal programs to maps of the facilities and contact numbers. The booklet may either be downloaded from the Frederick County website (<http://frederickcountymd.gov/index.aspx?NID=4046>) or requested in a printed format.

A similar guidebook titled *Mind Your Business! Guide to Integrated Waste Management Practices for Organizations and Workplaces* was created specifically to address the needs of businesses and organizations within Frederick County. This guidebook is available for download (<http://frederickcountymd.gov/index.aspx?NID=3473>) or a printed copy by request.

3.2.1.2 Waste Generation Prevention/Reduction

Frederick County encourages waste generation prevention and source reduction as an integral part of their waste management and recycling plan. The County has a multifaceted waste reduction program using advertising, educational, and informative programs and techniques. They also offer assistance to both commercial and residential entities providing education and insight with regards to waste reduction strategies.

To encourage local business owners to create less waste, Frederick County, in cooperation with other local agencies and organizations, created a new awards program to recognize the innovative steps that forward-thinking local businesses are taking to create less waste. Participating businesses compete by using waste prevention and source reduction techniques for the annual Frederick County Source Reduction Award. This program encourages businesses to incorporate waste prevention and source reduction policies in their workplace.

3.2.2 MATERIALS SEPARATION PROGRAMS

3.2.2.1 Single-Stream Recycling

Frederick County has incorporated single-stream recycling as part of their recycling program. Because no separation of materials is necessary, single-stream recycling is easier and more appealing than traditional curbside recycling programs that require items to be placed in separate bins. Single-stream recycling is a service provided to all single-family homes in Frederick County through their curbside service at a cost of approximately \$4,033,000 (2010 fiscal year). The Department of Solid Waste Management has done some preliminary preparations on a 6-month multi-family recycling pilot program for apartments and condominiums in Frederick County. This draft pilot program has not been finalized and would be unlikely to be implemented until fiscal year 2012.

In addition, the single-stream recycling approach applies to all recycling drop-off facilities in Frederick County. Single-stream recycling for commercial and industrial facilities is provided on a case-by-case basis, by their respective contracted hauler.

The following items are accepted in Frederick County's single-stream recycling program (Citizens Guide to Waste Management in Frederick County Fall 2009; <http://frederickcountymd.gov/documents/Utilities%20&%20Solid%20Waste%20Management/Recycling/DSWM%20Residential%20Guidebook%20for%20web.PDF>):

- Magazines and catalogs, junk mail, and envelopes.
- Newspapers, including all inserts.
- Brown paper bags.
- Nonmetallic wrapping paper and craft paper.
- Paperboard boxes (cracker and cereal boxes without liners).
- Thick paper (cardstock, file folders, etc.).
- Corrugated cardboard.
- Books (paperbacks, hardbacks and telephone books).
- Clean paper products (colored and white, such as typing, fax, copy, letterhead, notebooks, etc.).
- Shredded paper.

- Milk cartons (paper or plastic) and juice boxes (not juice pouches).
- Glass food and beverage containers (jars and bottles).
- Tin and steel food and beverage containers (pet food, soup and vegetable cans).
- Aluminum food and beverage containers (clean aluminum foil and aluminum pie pans).
- Empty aerosol cans.
- Plastic bags (grocery bags, newspaper bags, and others) gathered together within one bag.
- Empty household plastic containers and lids, including narrow-neck bottles and wide-mouth containers such as peanut butter, margarine, or yogurt containers, etc.

If there is a new material added by the single stream recycling vendor, the county will add that material as well.

Business Recycling

In Frederick County, businesses, institutions, and industries account for nearly 50 percent of Frederick County's MSW; therefore, it is important that these facilities incorporate aspects of Frederick County's SWMP into their business. To ensure that companies assist in meeting the recycling goal, Frederick County recommends that businesses, institutions, and industries work together with the County and the Chamber of Commerce to continue to track recycling progress and provide literature, forums, and programs on business recycling.

While the Frederick County Department of Solid Waste Management does not provide recycling collection services for businesses or commercial properties in the County, it does offer a financial incentive for those businesses that choose to recycle. There is a tipping fee differential to encourage commercial properties to recycle single-stream; the base tipping fee for municipal solid waste is \$76, while the fee for 1 ton of single-stream recycling is \$25.

The Department also has a Commercial Recycling Program Coordinator to assist businesses in establishing or expanding existing recycling and waste reduction programs. The Program Coordinator provides general overall support for recycling program implementation through assisting with waste audits, training employees and custodial staff, providing public presentations for meetings and trainings, providing reproducible literature on recycling and waste reduction, providing templates for creating posters and newsletter information, sharing a database of service contacts and networking information, and providing a step-by-step guide to integrated waste management practices to reduce waste in the workplace.

3.2.2.2 Additional Recyclable Programs

Additional recyclable materials are accepted at the Reichs Ford Road Landfill. These include:

- **Bulky/Oversized Rigid Plastics**—Lawn furniture, toys (such as outdoor play sets), coolers, kiddie pools, plastic buckets, tubs and storage totes, plastic shelving, milk crates, laundry baskets, etc. (Not accepted: garden hoses, polyvinyl chloride [PVC] items, vinyl siding, soft flexible plastics, rubber.)
- **Flexible Foam**—Foam carpet padding, foam couch cushions, foam-only mattresses. (Not accepted: jute/fiber carpet padding, Styrofoam™.)
- **Reusable Clothing**—Clean, wearable clothing, shoes, handbags, backpacks, and coats; clean linens in good condition, such as blankets, sheets, and towels. (Not accepted: rags, damaged clothing, rugs, curtains.)
- **Appliances/Scrap Metal**—“White goods” such as refrigerators, stoves, washing machines, air conditioners, hot water heaters, etc. (Not accepted: small, nonmetal body appliances such as blenders, alarm clocks, etc.)
- **Lead Acid Batteries**

3.2.2.3 Yard Waste Composting

Ordinance No. 06-03-399 enacted on January 17, 2006, by Frederick County banned landfill disposal of yard waste from both residential and commercial entities. Residents and businesses are encouraged to dispose of and/or recycle yard waste at home using grasscycling and backyard composting practices. Curbside yard waste collection is often

available to single-family residences in Frederick County by their contracted MSW hauler.

There are two county-operated facilities currently in operation in Frederick County where yard waste may be taken for composting or mulching: (1) Walkersville Heritage Farm Park (residential use only), and (2) Reichs Ford Road Mulch and Composting Facility (residential and commercial). Mulch and/or compost products generated as part of the yard waste acceptance and composting operations are available for free at the Walkersville Farm Park and for a fee at the Reichs Ford Road Facility.

3.2.2.4 Household Hazardous Waste

Household hazardous wastes (HHWs) are not accepted as part of the Frederick County recycling program. The Division of Utilities and Solid Waste Management (DUSWM) typically hosts two residential HHW drop-off events per year to collect HHWs that residents may accumulate.

In 2008 and 2009, the HHW contractor recycled 780 and 1,113 pounds, respectively of the HHW collected. Recycled materials included batteries, mercury and mercury containing items, light tubes and bulbs.

3.2.2.5 Waste Oils/Antifreeze

Frederick County, in cooperation with Maryland Environmental Service (MES), as well as with local municipalities and businesses, offers several motor oil and antifreeze recycling locations for County residents in addition to the Frederick County-operated Landfill. County facilities have a limit of 15 gallons per resident per trip. A number of these locations are not affiliated with Frederick County but offer these services as a convenience for the public (see <http://www.menv.com/usedoilcollectionlocations.shtml> for Used Motor Oil and Antifreeze Collection centers).

In 2008 and 2009 Frederick County residents recycled 48,214 and 57,806 gallons of oil and 3,307 and 4,228 gallons of antifreeze, respectively.

3.2.2.6 Tires

The disposal of scrap tires has been banned in Maryland landfills since 1994. Tires are accepted for recycling and disposal at the Reichs Ford Road Landfill Facility, for a fee of \$3.80 per 100 pounds for residential (limit 5 annually) and \$8.00 per 100 pounds for commercial.

DUSWM has a scrap tire disposal policy that includes specific requirements for segregation, delivery, and disposal of tires. Conformance with this policy ensures compliance with the DUSWM's Solid Waste Disposal Permit and Secondary Scrap Tire Collection Facility License (2008-RSC-00280).

In 2008 and 2009 5,097 and 4,445 tires, respectively were recycled as part of this program.

Upon completion of construction of the FCCRWTE facility, scrap tires delivered to landfill may be transported to the Facility to process for energy and metals recovery.

3.2.2.7 Electronics

Electronics are accepted at the Reichs Ford Road Landfill Facility for a fee for every 100 pounds of electronics. Acceptable electronic items include laptops, computer monitors/mice, cell phones, circuit boards, power supplies, computer batteries, computer/electronics cables, computer chips/cards, printers, central processing unit (CPU) towers, scanners, televisions and keyboards.

3.2.2.8 Scrap Metals/Recyclable White Goods/Ash Recovery

Scrap metal/recyclable white goods are accepted at the Reichs Ford Road Landfill. Acceptable scrap metal and recyclable white goods items include metal shelving, cabinets, bicycles, fencing, lawn mowers, wire coat hangers, grills, swing sets, aluminum lawn chairs, appliances, etc.

When the FCCRWTE facility becomes operational, Acceptable Material will be brought to the WTE facility where they will be processed. Following combustion, bottom ash will

be passed through a screen to separate large metal materials; a magnetic separator will remove additional ferrous metals. An eddy current separator will remove nonferrous metals. All metals recovered at the FCCRWTE facility will be recycled contractually.

A percentage of ash recovered from the FCCRWTE facility will be taken to the Reichs Ford Road Landfill Facility, where it will be used as daily cover in place of soil materials from other sources. The NEA in cooperation with Frederick County will investigate other ash recycling options.

3.3 CARROLL COUNTY

3.3.1 MATERIALS SEPARATION STRATEGY

For calendar year 2008, MDE certified Carroll County's waste diversion rate (32.85 percent MRA recycling rate and 5 percent source reduction credit) as 37.85 percent. Carroll County Commissioners have established a waste diversion goal (materials removed from the waste stream through recycling, composting, and other strategies) of 40 percent recycling and a 5 percent source reduction credit by 2015.

3.3.2 EDUCATION/AWARENESS/OUTREACH

Carroll County recognizes the importance of public education, awareness, and outreach as part of the recycling portion of the Carroll County SWMP. Carroll County has one employee (Recycling Manager) devoted full time to the recycling effort, and part-time administrative support. The annual budget for recycling during the 2010 fiscal year was \$274,300. The Recycling Manager participates in many educational opportunities and has an array of volunteers that include the Master Gardeners Association, school groups, and environmental activists.

Carroll County maintains a recycling page on its county government website (<http://ccgovernment.carr.org/ccg/recycle/default.asp>). The Carroll County Office of Recycling has a Facebook page to inform the public of events and activities of their program.

The Carroll County Board of Commissioners established the Carroll County Environmental Advisory Council (EAC) in 2003 to provide for public input with regard to environmental concerns. The focus of the EAC has been to provide information on issues of environmental concerns (i.e., solid waste management) to the citizens of Carroll County. The existence of the EAC also serves at an outreach to the community; providing the opportunity for citizens to be involved in, question, and comment on the environmental processes of Carroll County.

Carroll County has produced a video promoting waste prevention, reuse, and recycling, which is available at County libraries. The video is also widely used by County personnel during recycling presentations.

Carroll County has provided a mail-out of their Waste Management and Recycling Handbook, which incorporates the waste management hierarchy and summarizes all County waste management programs.

3.3.3 WASTE PREVENTION/REDUCTION

Carroll County regards waste prevention and reduction as one of its main objectives in its SWMP. Carroll County anticipates implementing waste reduction throughout the County using a combination of internal policies and citizen education programs. The County uses the following techniques and procedures in an effort to meet its waste prevention and reduction goals:

- Make a waste reduction education and information package available for public and private use.
- Provide waste reduction information and tips on the Carroll County website.
- Include a segment on waste management as part of all presentations of waste management given within Carroll County.
- Provide technical assistance to homeowners and small businesses on the subject of waste reduction.

- Provide technical assistance to municipal governments, schools, and quasi-public institutions assisting them in implementing local waste reduction programs.
- Provide technical assistance to homeowners and residential developers promoting and assisting in the implementation of composting and mulching programs.
- Implement in-house purchasing procedures that encourage the purchase of materials that have a reuse value and the purchase of materials made from recycled material.

3.3.4 MATERIALS SEPARATION PROGRAMS

3.3.4.1 Single-Stream Recycling

The single-stream recycling approach has been generally accepted countywide and is used by nearly all residential and commercial entities of Carroll County. Single-stream recyclables can be recycled through curbside pickup or brought to one of the two designated recycling facilities in Carroll County.

The following items are accepted in Carroll County’s single-stream recycling program (Carroll County Single-Stream Recycling Program Acceptable Items; <http://ccgovernment.carr.org/ccg/recycle/docs/acceptable.pdf>):

- Plastic:
 - Wide-mouth containers (*Empty* peanut butter, margarine/butter, yogurt, cottage cheese, sour cream, mayonnaise, whipped topping, and prescription medicine containers).
 - Narrow-neck empty plastic containers (with plastic resin identification code 1 through 7).
- Metal:
 - *Empty* metal food and beverage containers (aluminum or other metals).
 - Aluminum foil and aluminum pie pans.
 - *Empty* aerosol cans.
 - Glass (*empty* jars and bottles, all colors accepted).

- Paper:
 - Juice and broth boxes.
 - Milk and juice containers (gable-top cartons).
 - Cardboard and paperboard boxes (cereal boxes without liners).
 - Office paper (typing, fax, copy, letterhead, NCR).
 - Envelopes.
 - Newspapers (including all inserts).
 - Magazines and catalogs.
 - Junk mail.
 - Books (paperbacks, textbooks, and hardbacks).
 - Brown paper bags (craft paper).
 - Corrugated boxes.
 - Telephone books.
 - Nonmetallic wrapping paper.
 - Computer printouts.

If there is a new material added by the single stream recycling vendors, the county will add that material as well.

Curbside Recycling

Curbside recycling is available to all residents and business of Carroll County through County-licensed and approved haulers. Single-stream recycling is collected from all county and school facilities. Seven of the eight incorporated municipalities of Carroll County provide residential curbside recycling through contracted haulers selected through a specific municipal bid process. Sykesville operates its own MSW collection and recycling program using municipal employees and equipment.

Business Recycling

Businesses and industries in Carroll County account for approximately 50 percent of the county's waste stream. Business and industry in Carroll County rely on either private waste management companies that offer full service hauling and disposal or commercial haulers and government disposal facilities. The County does not provide services related to collection of recyclables from businesses.

3.3.4.2 Additional Recyclable Programs

Additional recyclable materials are accepted at the Northern and Hoods Mill Landfill:

- Car batteries.
- Concrete/asphalt smaller than 6 inches in diameter.
- Fluorescent bulbs and tubes (must be wrapped in paper and placed in a plastic bag).
- Latex paint cans (residual paint must be hardened or dry).
- Rigid plastic, grocery and empty clear food bags, DVD/CD cases and disks.
- Appliances: “white goods” such as scrap metal, washers, dryers, hot water heaters, etc. (not accepted: freezers, refrigerators, and air conditioners).

Additional recyclable materials are accepted only at the Northern Landfill:

- Appliances: “white goods” such as freezers, refrigerators, and air conditioners.
- Textiles, including clean, dry and odor free clothes, linens, drapes, hats, paired shoes and socks, etc.
- Aluminum beverage cans.

3.3.4.3 Yard Waste Mulching

In May of 1994, Carroll County banned yard trimmings from both residential and commercial entities from being landfilled. Residents and businesses are encouraged to dispose of and/or recycle yard waste at home using grasscycling and backyard composting practices. The eight incorporated municipalities of Carroll County provide residences with curbside collection and drop-off sites for yard trimmings through their licensed and contracted haulers. Residents and businesses located in unincorporated areas of Carroll County may contract with a licensed hauler for yard waste pick-up for recycling.

County haulers, municipalities, businesses, and residents may deliver acceptable yard waste to the Northern Landfill and Hoods Mill Landfill at no charge. The mulch generat-

ed from the yard waste is available to Carroll County residents and businesses at no charge.

3.3.4.4 Household Hazardous Waste

HHWs are not accepted as part of the Carroll County recycling program. Carroll County offers HHW events twice yearly. The events include HHW collection, prescription drug turn in, and paper shredding.

In 2009 and 2010, the HHW contractor recycled 608 and 853 pounds, respectively of the HHW collected. Recycled materials included batteries, mercury and mercury containing items, propane cylinders, light tubes, and bulbs.

3.3.4.5 Waste Oils/Antifreeze

Carroll County, in cooperation with MES, as well as with local municipalities and businesses, offers several motor oil and antifreeze recycling locations for County residents. Used oils and antifreeze for recycling are received at the Northern Landfill, the Hoods Mill Landfill, and the Town Maintenance Garages in Hampstead and Sykesville. Used oil only may be dropped off at Westminster's Public Works Facility, Manchester Garage, and Taneytown Memorial Park, in addition to the facilities listed above. There is a drop-off limit of 5 gallons per week per resident. A number of these locations are not affiliated with Carroll County but offer these services as a convenience for the public (see <http://www.menv.com/usedoilcollectionlocations.shtml> for Used Motor Oil and Antifreeze Collection centers).

In 2008 and 2009 Carroll County residents and commercial businesses recycled 35,039 and 37,738 gallons of oil and 1,777 and 2,627 gallons of antifreeze, respectively.

3.3.4.6 Tires

The disposal of scrap tires has been banned in Maryland landfills since 1994. Tires are accepted for recycling and disposal at the Northern Landfill and the Hoods Landfill facilities at a limit of five tires per year per household.

In 2008 and 2009 1,357 and 1,368 tires, respectively were recycled as part of this program.

Upon completion of construction of the FCCRWTE facility, in accordance with the contract, scrap tires generated in Carroll County will be transported to the facility to process for energy and metals recovery.

3.3.4.7 Electronics

Residents may drop off electronics for recycling at the Northern Landfill Facility free of charge. Acceptable items include computer monitors, computer speakers, televisions (no consoles), CPUs, computer mice, keyboards, cell phones, PDAs, printers, power supplies, laptop computers, scanners, computer cables and cords, and miscellaneous circuit boards, chips, and cards.

3.3.4.8 Scrap Metals/Recyclable White Goods/Ash Recovery

Scrap metals/recyclable white goods are accepted for recycling at the Northern Landfill and Hoods Mill Landfill facilities.

When the FCCRWTE facility becomes operational, Acceptable Material will be brought to the WTE facility where they will be processed. Following combustion, bottom ash will be passed through a screen to separate large metal materials; a magnetic separator will remove additional ferrous metals. An eddy current separator will remove non-ferrous metals. All metals recovered at the FCCRWTE facility will be recycled contractually.

A percentage of the ash recovered from the FCCRWTE facility will be taken to the Northern Landfill where it will be used as daily cover. The NEA in cooperation with Carroll County will investigate other ash recycling options.

4.0 ALTERNATE DISPOSAL OPTIONS

4.1 FREDERICK COUNTY

Frederick County in 2005 identified the following as alternate solid waste disposal options:

- The continuation of the current long-haul transfer to disposal facilities located outside of Frederick County.
- The investigation of alternative conversion technologies that show potential in converting the MSW stream to energy products (waste to ethanol, waste gasification, and plastics to oil).
- The construction of a County-only WTE facility sized to meet the waste disposal needs of just Frederick County.
- The construction of a regional WTE facility sized to meet the waste disposal needs of Frederick County and other public entities in the area.
- Construct a solid waste composting facility and have all process residues long-hauled out of Frederick County for disposal.

To preserve disposal capacity at the Reichs Ford Road Landfill, Frederick County is pursuing the construction and operation of the FCCRWTE facility. The landfill will continue in operation at a reduced tonnage acceptance rate to serve as a buffer to transfer operations and as an alternative waste management option in the event that conditions develop that preclude solid waste transfer to the FCCRWTE facility or another disposal site.

4.2 CARROLL COUNTY

Carroll County in 2005 identified the following as alternate solid waste disposal options:

- The continuation of the transfer, transportation, and disposal of County waste at disposal facilities located outside Carroll County.
- The investigation of alternative conversion technologies that show potential in converting the MSW stream to energy products (waste to ethanol, waste gasification, and plastics to oil).

- The construction of a County-only WTE facility sized to meet the waste disposal needs of just Carroll County.
- The construction of a regional WTE facility sized to meet the waste disposal needs of Carroll County and other public entities in the area.
- Construct a solid waste composting facility and have all process residues long-hauled out of Carroll County for disposal.
- Co-composting of MSW with sewage sludge at the landfill was explored but rejected for a variety of logistical reasons.

To preserve disposal capacity at the Northern Landfill, Carroll County is pursuing the construction and operation of the FCCRWTE facility. The landfill will continue in operation at a reduced tonnage acceptance rate to serve as a buffer to transfer operations and as an alternative waste management option in the event that conditions develop that preclude solid waste transfer to the FCCRWTE facility or another disposal site.

5.0 SUMMARY

Both Frederick and Carroll Counties have developed and updated SWMPs that provide the framework for implementation of solid waste management decisions in their respective counties. The SWMPs incorporate source reduction, reuse, and recycling programs that demonstrate achievement of the state of Maryland's waste diversion goals. Both Counties have comprehensive and successful material separation and recycling programs that have been in place for a number of years.

As a result of long-range planning investigations with NEA, both Counties entered into an MOU by and among Frederick County, Carroll County, and NEA for the development of a regional WTE facility (July 2009). This MOU described the site location in Frederick County; the ownership, design, and capacity of the facility; as well as the responsibilities of NEA, the Counties, and the Vendor.

Through the reduction, reuse, and recycling strategies described herein a considerable amount of materials will be separated, reused, and recovered for recycling purposes prior to entering the MSW stream and being processed at the FCCRWTE facility. The non-recycled MSW that remains will be processed at the FCCRWTE facility, where it will be used to generate clean, renewable electricity for potential use at the government facilities of Frederick and Carroll Counties. Ferrous and nonferrous metals will be recovered from the ash as part of the FCCRWTE operations.

NEA believes the reduction, reuse, and recycling strategies described in this document will ensure the Counties will continue to meet and exceed the state of Maryland's waste diversion goal of 20 percent, the voluntary statewide waste diversion goal of 40 percent and assist the Counties in achieving their recycling and diversion goals.