

Section 2 OVERVIEW OF THE SYSTEM

2.1 Introduction

The County estimates that the System currently provides solid waste management services to approximately 72 percent of the residential households in the County. The County reports that of the total 59,000 households in the County, approximately 42,200 households use the System. The balance of the households, estimated by the County to be approximately 16,800, are located in towns and the residents of the towns use private haulers to collect and dispose their waste.

At the present time, the major components of the System include the following:

1. A maximum 1,000 ton per day (“TPD”) transfer station (the “Transfer Station”) owned by the County and operated by a subsidiary of Waste Management Inc. (“WMI”) pursuant to the terms and conditions of the disposal agreement dated March 4, 2004 between WMI and the County (the “WMI Agreement”).
2. A maximum 500 TPD sanitary landfill (the “County Landfill”) owned and operated by the County. Based on the current method of operation, of the System and the quantity of waste currently being landfilled, the County estimates the Landfill has approximately 50 years of useful remaining life.
3. A wood waste processing facility (the “WWPF”) owned and operated by the County.

Presented below is a discussion of the major components of the System.

2.2 Transfer Station

Description

The County began transferring waste from the face of the County Landfill in July 1997 pursuant to the terms and conditions of the WMI Agreement. At the same time, the County began negotiations with a contractor for the construction of the Transfer Station at the Northern Landfill. The County-owned, privately-operated Transfer Station began operating on December 1, 1998. The Transfer Station accepts solid waste from residents and businesses located in the County. The transfer station is operated six days per week, and is closed on Sundays and on six County-recognized holidays. The Transfer Station consists of a 100-foot by 200-foot pre-engineered metal building. Approximately one-third of the Transfer Station is used for recycling. The Transfer Station is permitted to accept not more than 305,000 tons of waste per year, or approximately 1,000 tons per operating day.

The Transfer Station utilizes open-top trailers. Waste is deposited in trailers from above and compacted using a stationary grapple, or knuckleboom, crane.

Daily Capacity

During calendar year 2004, the Transfer Station accepted 100,048 tons of MSW, or an average of approximately 325 tons per day. MSW accepted at the Transfer Station includes all transferable residential and commercial waste generated in the County, including household waste, large household items (such as mattresses and sofas), commercial and light industrial waste, construction and demolition debris, and residue from the Material Recycling Facility (the “MRF”). The types of solid waste not accepted at the transfer station include sewage sludge and construction and demolition material. The County is currently transferring, for out of state disposal, about 90 percent of the total waste received by the System. The County has selected long-haul transfer in order to conserve landfill space and defer cell construction.

The waste accepted at the Transfer Station is transferred to several out-of-state landfills and disposal facilities. Approximately 20 trailers are loaded daily. Table 2-1 identifies the disposal facilities, their location and tonnages for calendar years 2003 and 2004.

Table 2-1
Waste Transfer Disposal Locations and Tonnages
for Calendar Years 2003 and 2004⁽¹⁾

Disposal Facility	Location	2003 Tonnage	2004 Tonnage
Atlantic Waste Landfill	Waverly, VA	39,394	74,388
Middle Peninsula Landfill	Glens, VA	5,647	19,647
King George County Landfill	King George, VA	11,669	5,751
Annapolis Junction	Jessup, MD	1,736	---
BRESKO	Baltimore, MD	42	---
Harford Waste-to-Energy	Joppa, MD	786	---
Modern Landfill	York, PA	9,844	101
York County Waste-to Energy	York, PA	31,231	---
Mountain View	Greencastle, PA	2,609	---
American Re-Fuel Co.	Chester, PA	21	---
Charles City Landfill	Charles City, VA	---	162
Total Transferred Tonnage		102,979	99,887

(1) Source: The County

Operating and Maintenance Expenses

Under the terms of the WMI Agreement, dated March 4, 2004 between the County and WMI, the County is responsible for maintaining the transfer station, including all associated facility buildings, access roads, scales, parking areas, and other yard areas at its expense. Operating and maintenance expenses may include building maintenance and repair, new construction, snow and ice removal, landscape maintenance, maintenance of signs, calibration of scales, janitorial services, electricity, parts and supplies, and off-site refuse disposal. The County is required to maintain the Transfer Station without interfering with WMI's operation of the Transfer Station. The County is not responsible to repair any damage to the Transfer Station caused by WMI as a result of misuse or negligence.

In accordance with the WMI Agreement, WMI is responsible for the cost of personnel and equipment required to operate the Transfer Station.

The County's actual operating cost of the Transfer Station for FY 2004 was \$4,578,387. Over 99 percent of the operating budget was associated with the cost of off-site disposal of the waste by WMI. The operating budget for FY 2005 is \$4,950,655. The proposed operating budget for FY 2006 is \$4,885,900. The budget decrease is due to waste projections and contract pricing for disposal through WMI.

Future Capital Improvements – Potential Expansion

The County has no plan at this time to expand the Transfer Station. The Transfer Station has the ability to accept and handle about three times the current waste tonnages being delivered by the County.

Summary/Conclusions

The Transfer Station is currently accepting approximately 100,000 tons of MSW per year, which is about one third of its maximum permitted capacity. As a result, the County has no plans for immediate expansion nor do they anticipate any changes in facility operation during the term of the WMI Agreement.

2.3 Wood Waste Processing Facility

Description

As a result of the yard trimming ban in 1994, the County developed and operates a wood waste processing facility ("WWPF") which is located at the Northern Landfill. The WWPF consists of a 87,120 square foot uncovered, asphalt-paved pad. The WWPF accepts yard waste, including leaves, grass, shrubs and tree trimmings. Residents are allowed to dispose of yard trimmings at no charge; commercial businesses currently are charged \$15 per ton. The County estimates it receives approximately 10,000 to 12,000 tons per year ("TPY") of yard waste but receives a tipping fee for approximately 2,500 TPY.

The wood waste is processed through a tub grinder into mulch. Grass clippings and other yard trimmings are laid in windrows and composted. The end products are available throughout the year to County residents for free. Residents are required to self-load the materials.

Daily Capacity

The WWPF currently receives about 2,500 tons of wood waste per year from commercial customers. The County estimates that the total amount of wood waste received by the WWPF, including material from residents, is estimated to be 12,000 TPY.

Projected Capacity

The County has no plans to expand the capacity of the WWPF and would like to reduce the quantity of materials accepted for processing at the WWPF.

Operating and Maintenance Expenses

Operating and maintenance expenses for the WWPF are included in the landfill budget.

The County reports that the WWPF generated revenues of about \$38,000 last year. The County reports that the estimated operating cost of the WWPF is about \$100,000 per year. The apparent net operating loss does not factor in the value of the landfill airspace preserved for disposal of non-transferable wastes.

Summary/Conclusions

The WWPF is capable of processing the quantity of wood waste currently received at the Northern Landfill. In addition, the County is promoting, through public education programs, ways for residents to manage their yard trimmings at home as a way to reduce the quantity of material received at the Northern Landfill.

The estimated amount of air space that is currently being saved by the continued operation of the WWPF will depend on how the wood waste is processed before being disposed at the Landfill. For example, if the WWPF accepted 12,000 TPY of unprocessed wood waste, the disposal of such material could require approximately 60,000 to 80,000 cubic yards of air space (not including cover material). If, however, the wood waste was chipped before being disposed, the amount of required air space could be reduced to approximately 30,000 cubic yards. Further, if the processed wood waste was approved by the State as an Alternative Daily Cover, the capacity of the Landfill would not be impacted by the disposal of such material.

2.4 Landfills

Current and Future Cells

The Northern Landfill (the “Landfill”) is presently the only County-operated landfill within Carroll County. The Landfill is located on 220 acres of County-owned property southeast of the City of Westminster. Sixty-five (65) acres are permitted for use as a sanitary landfill with the remaining acreage preserved for a buffer zone. The Landfill is being developed in a series of five cells, designated SW-1 through SW-4 and a capping cell. Currently, the County is landfilling in Cell SW-2. The first 13-acre cell was opened in December of 1988. The Landfill was designed with a double 60-mil HDPE liner and a leachate collection and management system. The Landfill was originally projected to have a life of 15 to 20 years based on a disposal rate of 200 tons per day at inception with projected growth to 500 tons per day.

The County also owns the Hoods Mill Landfill located near the Howard County border, three miles west of Sykesville. Originally opened in 1981, the 30-acre landfill accepted about 100 tons per day. The Hoods Mill Landfill was closed in 1994 and capped in 1997. An additional 15 acres has been permitted as sanitary landfill; however, that disposal capacity has not been developed by the County. The Hoods Mill Landfill continues to serve as a drop-off site for residents on Saturday’s only. The waste is transferred to the Transfer Station.

The County also manages five closed landfills that are in post-closure care.

The County has developed a planning estimate of the total number of residents in the County who deliver solid waste directly to the Landfill, rather than have their solid waste collected curbside. Of the total 59,000 households in the County, the County estimates that approximately 16,800 households are located in the incorporated towns. Of the remaining 42,400 households in the unincorporated area, the County estimates that approximately 39,300 households receive curbside collection service. Based on this information, the County estimates that approximately 2,900 households in the unincorporated area of the County deliver solid waste directly to the Landfill.

Current and Future Capacity

As of December 31, 2004, the County reports that the remaining developed capacity at the Landfill (through Cell SW-2) is approximately 48,000 cubic yards. During the 2004 calendar year, approximately 15,000 cubic yards of waste was disposed in the Landfill. Based on the County’s current projection for waste disposal, including a forecasted waste growth of two percent, additional disposal capacity would be required in 2007. The County currently is conserving the remaining airspace by disposing only non-transferable waste such as construction and demolition debris, sewage sludge from the wastewater treatment plant, and asbestos.

Two additional cells have been permitted but are yet to be developed. The County estimates the 18-acre Cell SW-3 will provide about 343,000 cubic yards of airspace and the 22-acre Cell SW-4 will provide about 732,000 cubic yards of airspace. As

currently proposed, the fifth and final cell will require very little, if any, construction. The capping cell will provide additional capacity by placing waste over Cells SW-1 through SW-4, increasing the maximum elevation of the Landfill. The County estimates the capping cell will provide approximately 1.4 million cubic yards of airspace.

Although the County currently has no intent on developing the permitted 15-acres at the Hoods Mill Landfill, the County estimates it could provide about 960,000 cubic yards of disposal capacity.

Useful Remaining Life

The Landfill is reported to have approximately 2.5 million cubic yards of capacity remaining. Based on the types of waste accepted and current rate of disposal, it is estimated that the Landfill would be able to serve the County for nearly another 50 years.

If the permitted 15 acres of the Hoods Mill Landfill is developed for landfilling, the County estimates it would provide an additional four years of capacity if it accepted all the waste being delivered to the System and a significantly longer life based on the current rate of use of landfill capacity, based on the current rate of disposal.

Operating and Maintenance Expenses

Landfill operating and maintenance expenses are divided into personnel and operating costs. Personnel costs include salaries, overtime, and benefits for all landfill staff. The landfill is currently staffed with 16 full time equivalents (“FTEs”). The current staff mix includes:

- Solid Waste Foreman (2)
- Heavy Equipment Mechanic (1)
- Landfill Equipment Operator II (7)
- Landfill Superintendent (1)
- Office Associate IV (1)
- Weightmaster II (1)
- Weightmaster I (4)

For FY 2004, personnel costs for the Landfill were \$648,304. For FY 2005, the personnel budget was \$662,090. The County plans to add a full-time Maintenance Technician in FY 2006. As a result, the personnel budget for FY 2006 is \$746,290 and includes increases in fringe benefit costs and salary adjustments. Landfill personnel support all facilities on site, including the Transfer Station and recycling operations, but are included as part of the Landfill’s operating budget. Operating costs include, but are not limited to, equipment and facility maintenance and repair, site maintenance, utility costs, gasoline and diesel fuel, employee training, vehicle and equipment rental, parts and supplies, and tools. For FY 2004, the operating costs were

\$457,911. For FY 2005, the operating budget was \$355,410. The operating budget for FY 2006 is increased to \$443,860 due to the increased quantity of leachate removal and the rise in fuel prices.

Future Capital Improvements

The County has proposed several capital improvement expenditures to the System over the next six years (i.e., 2006-2011) as part of its Capital Improvement Program (“CIP”). The total proposed value of the capital improvements is \$1,984,000.

The majority of the capital improvements are for equipment replacement and construction activities associated with Cell 3 and projects related to the closed landfills. The County’s capital improvements program also includes a maintenance building at the Landfill proposed for FY 2006 which has been budgeted for \$321,000. All of the capital improvements associated with the Landfill are identified in Table 2-2 by year planned for the expenditure to occur.

Table 2-2
Operating Budget – Capital Outlay

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Equipment						
Tub Grinder	\$350,000					
Service Truck	\$75,000					
Refuse Truck		\$180,000				
Pick-Up Truck		\$35,000				
Roll-Off Truck		\$135,000			\$145,000	
Boyd Tank			\$40,000			
Dozer (Used)			\$250,000			
Pick-Up Truck with Snow Plow and Salt Spreader			\$35,000		\$38,000	
Rubber Tired Loader (Used)				\$275,000		
Riding Mower					\$6,000	
Track Loader						\$420,000
Subtotal Equipment	\$425,000	\$350,000	\$325,000	\$275,000	\$189,000	\$420,000

The development of Cell SW-3 is also in the CIP; however, it is an older project that has not yet been executed and therefore does not appear in Table 2-2 as part of the six-year CIP (2006-2011). The County reports that the development of Cell SW-3 is funded at \$5,000,000 with construction likely to begin in late Autumn 2005. The County anticipates that Cell SW-3 will be ready to accept waste within 12 to 15 months from the date of this Report.

Leachate Treatment

The County currently stores leachate on site in one 20,000 gallon tank (associated with Cell SW-1) and two ponds (with a capacity of about 1.5 million gallons associated with Cell SW-2). The County anticipates that no additional on-site leachate storage capacity will be required for Cell SW-3; however, this must be approved by the appropriate state regulatory agency.

The current refuse disposal permit allows for leachate to be discharged to the sanitary sewer system or an approved wastewater treatment plant. The County hauls leachate in tanker trucks to the Westminster Septage Facility approximately 8.75 miles from the Northern Landfill. There are no specific pretreatment requirements and the County is currently not limited to the amount of leachate disposed.

Summary/Conclusions

The County is preserving valuable landfill capacity and deferring the cost of construction of new cells by landfilling only the non-transferable wastes received at its facilities. Based on the current and projected future rates of disposal of non-transferable wastes, the County estimates it has approximately 50 years of useful life remaining in the Northern Landfill. Assuming no changes in disposal methods, no planning is required at this time to secure additional landfill capacity. The County may want to consider developing smaller landfill cells as a way to further defer costs of construction, especially if the capacity of waste disposed is not anticipated to increase significantly in the near term.

2.5 Recycling System

The current recycling system operating in the County consists of four major components: drop-off recycling locations, curbside collection, the operation of a material recovery facility (“MRF”), and recycling outreach and education. Each of these components is described in more detail below.

Drop-off Recycling

The County operates two recycling drop-off centers for County residents and businesses. The recycling center at the Northern Landfill site is open Monday through Friday, 9:00 AM to 4:00 PM and Saturday from 8:00 AM to 3:00 PM. The center at the Hoods Mill Landfill (which is only open on Saturdays, and accepts waste from residential vehicles, not commercial haulers) serves the residents located in the southern portion of the County. It is open on Saturdays only from 7:00 AM to 3:00 PM.

The types of materials received at the recycling centers include:

Fiber

- Newspaper;
- Junk mail;
- Magazines;
- Paperback, hardback and telephone books;
- Corrugated cardboard;
- Paper bags;
- Wrapping paper (non-metallic);
- Computer print-outs; and
- Carbonless paper.

Containers

- Aluminum cans;
- Bi-metal cans;
- Plastic bottles (narrow mouth, #1-7); and
- Glass food and beverage jars and bottles (all colors).

A number of additional materials are also accepted at the drop-off facilities, with specific constraints/specifications. Some of the items are received at no charge and some require payment of a fee. These materials included:

- Motor oil and anti-freeze (waste oil is also accepted at several municipalities' maintenance garages);
- Tires;
- Yard waste;
- White goods/appliances;
- Concrete/asphalt (smaller than 6" in diameter);
- Rotted railroad ties;
- Paint cans (residue dry); and
- Wooden skids/pallets.

Additionally, residents may pick up, at no charge, compost or mulch products that are produced on-site.

Additional materials accepted at only the Northern Landfill Recycling Center include:

- Textiles (clothing, drapes); and
- Car lead-acid batteries.

In addition, the Northern Landfill Recycling Center offers a no-charge Swap Shop (waste exchange) for materials ranging from building materials/components to baby items.

Curbside Recycling

The County government is not directly involved in the curbside collection of recyclables. Curbside collection of recyclables (fiber and containers, as listed above) throughout the County is performed in a decentralized manner, and is provided in two different ways. In the unincorporated areas, residents and businesses can select the waste hauler of their choice. This is referred to as an “open system” or “subscription service.” Alternatively, residents may choose to self-haul their waste to the Landfill. As mentioned above, there is a drop-off recycling center for recyclables located at the Landfill. The eight municipalities within the County also provide curbside collection services. Seven of the municipalities provide this service indirectly, contracting with private hauling firms. One town (Sykesville) provides this service directly, using Town crews.

Hauler Licensing

All haulers operating in the County must be licensed by the County. There are currently six private haulers and one municipality licensed to serve residential customers. There are nine haulers licensed to serve commercial customers. A condition of securing a license to collect refuse in the County is that all haulers must offer weekly curbside collection of separated recyclable materials to their residential and commercial customers. Residents and businesses, however, decide whether they will select recycling services, and such services are offered at an additional charge.

Table 2-3 summarizes the hauling situation for the residents in the municipalities and unincorporated areas of the County.

Table 2-3
Summary of Haulers Serving Areas of Carroll County

Area of County	Hauler	Number of Households ⁽¹⁾	% of Households ⁽²⁾
Hampstead	BFI Waste Systems	2,202	4%
Manchester	Hughes Trash Removal	1,513	3%
Mount Airy	Key Sanitation	1,540 ⁽²⁾	3%
New Windsor	Hughes Trash Removal	532	1%
Sykesville	Sykesville Public Works	1,474	3%
Taneytown	BFI Waste Systems	2,187	4%
Union Bridge	Hughes Trash Removal	395	1%
Westminster	BFI Waste Systems	<u>6,836</u>	<u>12%</u>
Total Incorporated Area	As Indicated Above	16,679	28%
Unincorporated Area	Open System	<u>42,032</u>	<u>72%</u>
County Total		58,711	100%

(1) Source: County Planning Department
 (2) Portion of households in Carroll County

As Table 2-3 indicates, most of the households in Carroll County, 72 percent, do not have managed collection (e.g., collection provided either directly by a municipality, or indirectly by a municipality through a contract with a private hauler). Thus, most households in the County have subscription-based service, or self-haul their refuse, and recyclables if they choose to do so, to the Landfill and/or drop-off recycling centers.

Material Recovery Facility

The County owns a material recovery facility (“MRF”) that is operated for the County under a contract with Recycle America Alliance, LLC. The contract has an initial five-year term that will expire in 2008, with two additional five-year extensions possible.

The MRF processes approximately 30 tons of recyclable fiber materials per day from the drop-off and curbside programs in the County. Commingled containers are delivered to the MRF and transferred by the MRF contractor, at no additional charge to the County, to other facilities for processing and shipment to market. Only fiber materials are processed at the MRF.

The agreement between Recycle America and the County for the processing of materials stipulates that the County will:

- Pay \$17.50/ton to process commingled containers;
- Receive \$10.00 for each ton of mixed paper delivered; and
- Share revenue from the sale of corrugated cardboard based upon a formula tied to published market prices, with a \$5.00 per ton price floor.

For the past eleven months, this pricing arrangement has resulted in revenues exceeding recyclables processing expenses by slightly more than \$100,000 for the period.

County-licensed haulers are not charged a tip fee for delivering recyclables to the MRF. By special arrangement, the MRF will accept materials from other sources.

Education

The County has dedicated a portion of its web site to promoting recycling and waste reduction, as well as informing residents about the programs available. In particular, the web site:

- Informs residents who their hauler is and provides hauler contact information;
- Informs residents about the licensing requirement that haulers must offer recycling;
- Informs residents what can be recycled at the drop-off sites;
- Provides general information regarding the importance of waste reduction and recycling;
- Informs residents about the disposal ban on yard waste, and how to properly manage yard waste;
- Provides information about backyard composting; and
- Provides information about the importance of “closing the loop” by buying recycled products.

The County also has developed informational tri-fold brochures that:

- Inform residents about the Northern County Landfill, its hours, rates, and what can be recycled at the on-site Recycling Center;
- Encourage backyard composting and “grasscycling;” and
- Teach children about the importance of recycling and waste reduction in general.

The County has one employee, the recycling coordinator, who performs all County recycling education/outreach functions, including submitting MRA reports on an annual basis to the Maryland Department of the Environment and speaking to school groups.

Recycling Results

The County has been successful in exceeding the 20 percent recycling rate set by the Maryland Department of the Environment for the past several years. The tonnages for materials to be included in calculating recycling rates according to the Maryland Recycling Act (“MRA Materials”) recycled during the years 2002-2004 are summarized below in Table 2-4. It should be noted that the recycled quantities for 2002 and 2003 include provision for scrap metal and residue ash which was recovered by the York County Resource Recovery Center when the County waste was being

delivered to that facility. In 2004 and thereafter, the County waste was delivered for disposal at landfills in Virginia.

Table 2-4
 Carroll County Recycling Quantities, 2002 – 2004
 (Tons) ⁽¹⁾

Year	Residential Curbside	Residential Drop-off ⁽³⁾	Residential Sub-Total	Commercial	Total Amount Recycled	MRA % Achieved ⁽⁴⁾
2002	7,768.14	30,320.19	38,088.33	49,519.84	87,608.17 ⁽²⁾	48%
2003	8,524.50	18,245.05	26,769.55	56,821.78	87,231.33 ⁽⁵⁾	41%
2004	8,819.99	18,356.84	27,176.83	34,513.93	61,690.76	32%

(1) Source: Derived from MRA Tonnage Reporting forms and additional data supplied by V. Legge, Carroll County Recycling Office

(2) Recycling rate includes 18,374 tons of ash and 3,018 tons of scrap metal recovered at the York County Resource Recovery Center.

(3) In addition to fiber and containers, drop-offs also receive significant quantities of yard waste and white goods, among a variety of other materials.

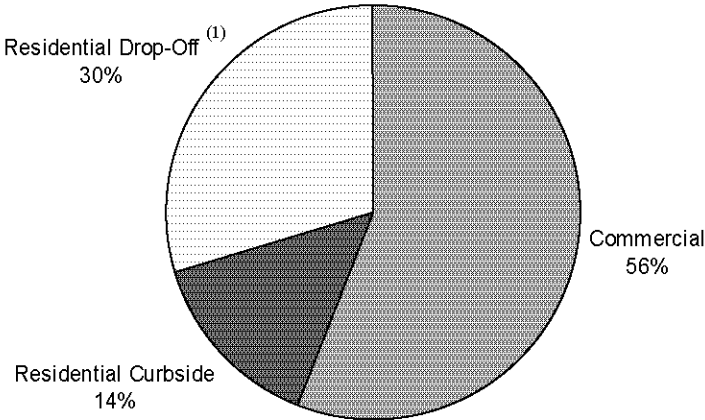
(4) As defined in the Maryland Recycling Act Tonnage Reporting System Guidelines, including source reduction credit.

(5) The 2003 Total Amount Recycled includes an additional 3,640 tons of scrap metal and MSW ash recycled that the state includes in the overall recycling rate calculation.

The data presented in Table 2-4 indicate that total recycling in the County is reported to have declined since 2002 because the County’s waste is no longer being disposed at the York County Resource Recovery Center and the County is no longer receiving credit for scrap metal and residue ash that was being recovered at that facility.

In 2004 the County’s recycling rate for MRA materials was 32 percent. Approximately 44 percent of these recyclables are attributable to the residential sector, and 56 percent are attributable to the commercial sector. Figure 2-1 shows, by weight, the amount of recyclables collected from the commercial, residential curbside, and residential drop-off sectors.

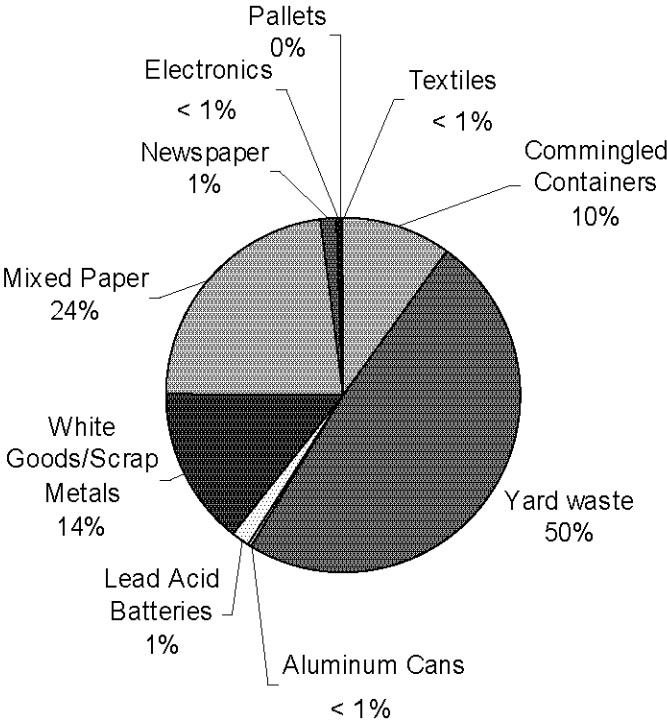
Figure 2-1
Sources of Recyclables in Carroll County



(1) Includes yard waste, scrap metal, textile and car batteries.

Figure 2-2 shows the MRA materials recycled by the residential sector.

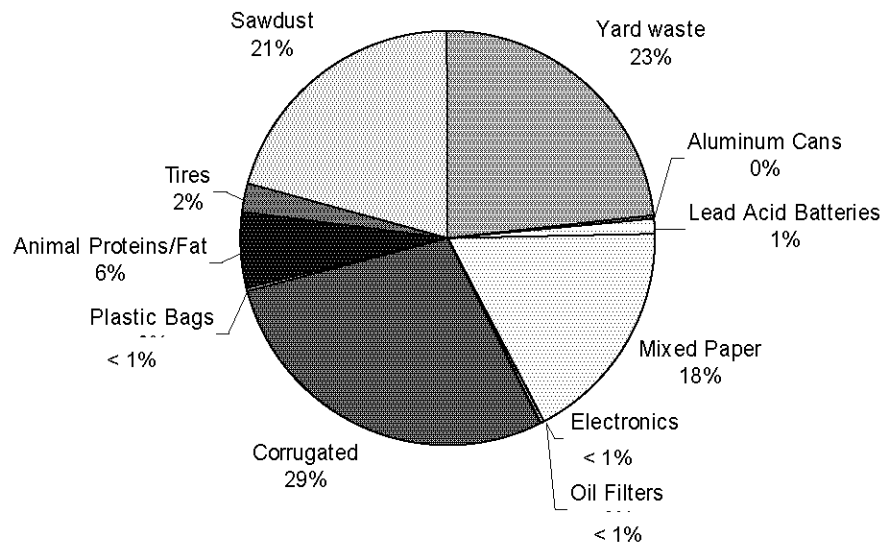
Figure 2-2
2004 Carroll County Recyclables Recovered by the Residential Sector



As Figure 2-2 indicates, recovery of yard waste is the single largest recycled item by weight. Newspaper comprises a surprisingly low portion of the waste stream, however this is likely because most newspaper is included in the “mixed paper” category. Aluminum cans also appear to represent a very small portion of the recovered materials, however this is likely due to the fact that most aluminum cans that are recovered are part of the “commingled containers” category.

Figure 2-3 shows the breakout of recyclables attributed by the commercial sector.

Figure 2-3
2004 Carroll County Recyclables Recovered by the Commercial Sector



As Figure 2-3 shows, corrugated cardboard is the most prevalent recyclable material from the commercial sector, comprising 29 percent of the MRA stream by weight. Yard waste is a significant material, as is sawdust.

County Recycling Program Budget

The data furnished by the County indicates the FY 2004 budget for the County’s recycling operations is \$204,286 and \$216,450 for FY 2005. This budget covers the cost of the Recycling Manager, MRF contract, public information program/advertising, general office and program support costs, and supplemental staffing of the Recycling Center. The County does not specifically identify the full cost of operating the drop-off sites, as the costs of operating these facilities appear to be integrated within the budget for solid waste management services. If the 2005 recycling budget were allocated to all MRA tons recovered, this would be analogous to \$3.31 per ton. This number would indicate an extremely cost-effective program, however all costs for recycling these tons are not included – only County costs.