

CHAPTER 3

EXISTING SOLID WASTE MANAGEMENT SYSTEM

IN CARROLL COUNTY

3.0 THE EXISTING SOLID WASTE MANAGEMENT SYSTEM IN CARROLL COUNTY

3.1 EXISTING AND PROJECTED WASTE GENERATION, BY CATEGORY

Carroll County was not developing accurate data on Municipal Solid Waste (MSW) until 1990 when landfill scales were put into operation. Since that time, the management-information needs have added new categories of waste. This actual data and projections are shown in various tables at the end of this chapter.

Total MSW tonnages include landfilled and recycled materials such as household waste, rubble, white goods, commercial, industrial, and institutional solid waste, yard trimmings, scrap tires, and landfilled sewage sludge. Other wastes such as controlled hazardous substances, dead animals, liquid wastes, septage, and medical wastes are addressed separately. Where records for the various wastes do not exist, estimates are provided, if possible.

The Code of Maryland Regulations (COMAR) Section 26.03.03.03D requires this Plan to identify and quantify 12 specific categories of waste:

- 1) Residential (household, domestic) wastes;
- 2) Commercial wastes;
- 3) Industrial (non-hazardous) solids, liquids and sewage sludge wastes;
- 4) Institutional (schools, hospitals, government buildings);
- 5) Land clearing and demolition debris (rubble);
- 6) Controlled hazardous substances;
- 7) Dead animals;
- 8) Bulky or special wastes (automobiles, large appliances, etc.);
- 9) Scrap Tires;
- 10) Wastewater treatment plant sludge;
- 11) Septage; and
- 12) Other wastes, i.e., grease, that may be potentially generated in significant volumes, would necessitate specialized handling as a result of their character.

3.1.1 WASTE GENERATED IN CARROLL COUNTY

3.1.1.1 RESIDENTIAL WASTE GENERATION

Due to a variety of waste counts and characterizations, only approximations of Carroll County's residential waste generation can be made. Paragraph 3.1.2 indicates about 145,000 tons (excluding rubble and sewage sludge) of MSW either comes to the landfill for transfer, or is taken directly out of County. We believe that roughly 50% of this waste is residential. As the Countywide demographic data indicates an average of three persons per household, the true residential generation rate is just over one ton (2,262 lbs. per year) per household. For purposes of overall projection (Table 3-3), all categories of waste have been combined and then allocated to the residential and commercial categories.

3.1.1.2 COMMERCIAL WASTE GENERATION

Commercial wastes in Carroll County are those generated by business, industry, apartment and condominium complexes and delivered by front loader trucks or in roll-off containers. Due to the lack of regulatory authority to require waste discrimination, industrial and institutional wastes, with the exception of biohazardous medical wastes, are also included in the commercial figures.

Based on data compiled from landfill weigh records, the County's waste stream, residential vs. commercial, is approximately 50%-50% split. The County's largest private sector employers include Random House, General Dynamic Robotic Systems, Northrop Grumman, Jos. A. Bank Clothiers, Marada Industries and Flowserve Corporation.

3.1.1.3 INDUSTRIAL (NON-HAZARDOUS) SOLID, LIQUID AND SEWAGE SLUDGE WASTE GENERATION

Carroll County has limited industrial facilities within its boundaries. Only a few of those could be classified as light to medium industry, the most prevalent type being service and construction related (see Table 3-1).

Random House Publishers in Westminster has operated incinerators in the past for volume reduction. 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. All industrial solid wastes brought to County facilities by commercial haulers are included in the commercial tonnages. Limited figures exist for contract hauling out of Carroll County to independent processing, treatment or disposal facilities.

Industrial waste is both homogeneous and heterogeneous, depending on the generators. Of the major categories of waste generators listed in Table 3-1, construction industry wastes, i.e., demolition debris and construction wastes (rubble) are reflected in the commercial tonnages and are also discussed in Section 3.1.1.5. Most of the County's industrial plants are in the business of manufacturing by assembling and warehousing.

As most of the County's industrial facilities are located near or within the boundary of one of the incorporated towns, most are serviced by municipal sewer. Therefore, non-hazardous liquid wastes are discharged into those sewer systems and directed to associated treatment plants. These plants (see Section 3.1.1.10) are located in the towns of Westminster, Manchester, Hampstead, Union Bridge, New Windsor, Taneytown and Mount Airy as well as near the Town of Sykesville in the Freedom district. No data is available for liquid waste that is discharged by industrial plants directly into sewer systems. Industrial facilities that are not serviced by public sewer have their own septic systems. These facilities are prohibited from discharging controlled hazardous substances, including hazardous wastes, into those systems. Processed wastewater is generally recycled, if possible, and discharged through an NPDES permitted discharge (see Figure 3-1). As with solid wastes, industry is generally attempting to limit waste as every gallon that is discharged carries with it a cost.

Carroll County has no unique industrial wastes. Most industrial waste is indiscriminate as to its composition from most commercial waste, no attempt has

been made to segregate industrial (non-hazardous) from commercial when recording tonnages. All non-hazardous industrial solid wastes brought to County facilities are recorded as commercial and are projected with the total commercial waste stream.

3.1.1.4 INSTITUTIONAL WASTES

Institutional wastes are inclusive of those generated in government offices, schools, hospitals, clinics and other similar facilities. Just as with industrial waste, all non-hazardous, non-medical institutional waste is included in the total tonnages listed as commercial, (see Section 3.1.1.2). Removal, treatment and disposal of medical (biohazard) wastes generated in hospitals and clinics are contracted with independent licensed collectors and removed for treatment to the Baltimore Regional Medical Waste Incinerator special medical waste-incinerator in Baltimore. Specific quantities are not available.

3.1.1.5 CONSTRUCTION AND DEMOLITION DEBRIS

Construction and demolition (C&D) debris is material generated as a by-product of building demolition, construction and renovation, site clearance, excavation and roadwork. C&D materials vary greatly depending on the project, although certain components are found in each construction category.

Building Demolition	Mixed rubble, concrete, metal, pipes, bricks, timber, with some other waste from fixtures and fittings and soil.
Construction/Renovation	Waste includes wood, roofing, fixtures, wallboard, insulation materials, pieces of ducts and pipes and carpet remnants.
Site Clearance	Trees, brush, stumps, soil, and potential for mixed concrete, rubble, together with some extraneous paper, plastics, and other waste materials.
Excavation	Mostly earth, soil, stones (sometimes contaminated with site clearance wood waste and buried pipes).
Roadwork	Mostly asphalt, concrete (with/without reinforcing bar) and soil.

A relatively large volume of land clearing debris is common in a developing area such as Carroll County. Historically, most contractors traditionally buried such materials on the job site. Changes in Maryland regulations now prohibit that act. Construction and land clearing debris must be disposed of in a licensed landfill or it can be processed and recycled. Other options, such as controlled burning of debris, are still permitted; however, a permit is required through the Carroll County Health Department (burning is prohibited from June 1 through August 31). Conditions relative to alternatives to on-site disposal have become increasingly restrictive as well as expensive. Carroll County has traditionally received numerous complaints concerning buried debris dump sites and is now prohibiting on-site disposal of land clearing debris. Due to the existence of karst topography, Carroll County maintains a sinkhole registry and assists landowners with repairs. Many of the sinkholes reported are not from the solution of limestone by water, but rather are the result of the burying and

subsequent decomposition of organic land clearing debris (stumps, logs, brush, etc.) in recently established residential developments, i.e., less than 25 years old. Residents generally encounter extreme difficulties in filling such sinkholes due to the relatively slow and persistent rate of organic decomposition.

Current regulations require contractors to secure off-site disposal locations for land clearing and demolition debris.

There are categories of material that are not accepted at the County landfill, i.e., stumps (see Appendix "C", Solid Waste Ordinance).

About 12,000 tons of this type of material makes its way to the County landfill each year. The Northern Landfill included two rubble cells (Cells R-1 and R-2) in its design. The cells were filled in numerical order. Cell R-1 opened in 1988 and reached capacity in 1992, and was capped in 1994. Cell R-2 opened in 1992, reached capacity in 1996, and was capped in 1998. Total capacity for both cells was 93,350 C.Y. Since 1996, acceptable rubble is being placed in the lined cell of the Northern Landfill.

The County is currently segregating roofing shingles and delivering them to Asphalt Roof Recycling Center, Inc., in Mt. Airy, MD, where they are recycled into a road base material. For Calendar Year 2005, the County sent 143 tons of shingles to be recycled.

Material, such as removed roadbed material, masonry and stone debris, is often taken to the one commercial recycling facility located in Carroll County, C. J. Miller, LLC in Finksburg. C. J. Miller crushes and then reuses such material as aggregate. Contractors are encouraged to take clean, segregated concrete, asphalt, stone and masonry debris material to C. J. Miller. Often, however, the material is mixed with soil and other debris making it difficult to recycle. In such cases, the resultant material is disposed of in the landfill cell.

3.1.1.6 CONTROLLED HAZARDOUS SUBSTANCES

The total of Controlled Hazardous Substances, as defined in COMAR, is not limited to waste. No data on volume is available for such substances in Carroll County. A map showing the location of the RCRA Notifiers/Handlers is shown on Figure 3-2. This reflects the numbers of facilities that store such materials on-site. Most of the controlled substances are used in the facilities processes. There is always some residual and, in the case of substances such as solvents used for tool and machine cleaning, contractors are generally employed that supply both the usable solvent and remove the used solvent.

3.1.1.7 DEAD ANIMALS

Dead farm stock is a large part of the dead animal issue in Carroll County. In 1983, four rendering plants were in operation in central Maryland: 1) the Carroll E. Braun Company in Howard County, 2) Kavanaugh Products in Baltimore County, 3) Tolzman and Sons in Harford County and 4) the Liedy Reduction Plant in Carroll County. In addition, another operated in southern Pennsylvania that also serviced central Maryland. As of 1991, however, two of the four Maryland plants (those in Carroll and Harford Counties) closed. The two remaining Maryland facilities are now operated by Valley Proteins, Inc.

These plants accept dead stock, as well as bones and fat, from slaughterhouse operations and restaurants.

Carroll County farmers often bury dead stock on the field; however, disposal options such as rendering plants are always necessary, especially when numbers of stock are affected. Table 3-2 illustrates the quantities of dead stock generated in Carroll County.

The County landfill sometimes accepts dead stock as an emergency. These animals are disposed of in separate areas and are limed when buried to enhance decomposition. The landfill has been directed by Animal Control officials to accept both sheep and goats.

In addition to dead stock, road kills of wild animals must also be managed. Road kills picked up by County road crews are brought to the County landfill.

3.1.1.8 BULKY OR SPECIAL WASTES (AUTOMOBILES, APPLIANCES, ETC.)

Scrap automobiles in Carroll County are handled through private industry (see Figure 3-3). Carroll County facilities do not accept whole scrap automobiles or automobile parts as per the Solid Waste Ordinance. Individuals contract with private dealers for removal, recycling and disposal of automobile wastes. Some tonnages are available through recycling reports. The automotive recycling industry is a complex one that is highly variable. Some recyclers only deal with the acceptance, dismantling and recycling of vehicles, (one such dealer reports handling 400 to 500 vehicles per year, while others mix vehicle tonnages with other scrap metals. Several other of those operations accept aluminum and bimetal cans and a variety of other recyclable metal products with materials from scrap vehicles. All of these operations, however, do have other non-metallic wastes as residuals. Those wastes are accepted at the County facility and are reflected in the total commercial waste tonnages.

Bulky wastes like appliances ("white goods"), are accepted at County facilities at no charge. All of the accepted "white goods" are recycled through a contractor. All items containing chlorofluorocarbons (CFCs) and other coolants are appropriately purged, documented and crushed. Carroll recycled 2,845 tons of "white goods" in 2005. This represents approximately 1.0% of the total waste stream. Projections have been based on that data and are listed in Table 3-3.

3.1.1.9 SCRAP TIRES

Carroll County operated a scrap tire shredding and landfill disposal program until the early 1990's. Large off-road scrap tires that could not be shredded, approximately 100 per year, were anchored and placed in Rubble Cell #1 at the Northern Landfill.

Currently, all acceptable scrap tires are handled through a contractor to be hauled off site.

3.1.1.10 WASTEWATER TREATMENT PLANT SLUDGE

Treatment for the removal of pollutants results in the production of sewage sludge and, as standards become tighter, sewage sludge production also increases. The predominant method of sewage sludge management has traditionally been land application. As Carroll is a county of traditional agricultural use, many farm owners are solicited to accept sewage sludge for land application (see Figure 3-4). Regulations do not allow sewage sludge to be applied on fields where crops are grown for direct human consumption, such as vegetables; however, sewage sludge can be applied on fields where live stock feed is grown.

There are eight publicly-owned community water supplies and sewerage systems in Carroll County, and 27% of Carroll's population live within incorporated towns. In all cases, the planned service areas extend beyond the towns' limits. However, except for the Westminster system, all other towns require that the property be within their corporate limits or the property must be annexed in order to receive public water and sewer. Forty percent of the County's population has the benefit of a public water supply while 38% have sewer service.

Carroll County owns or operates five wastewater treatment plants. These plants service the Hampstead and Freedom areas as well as South Carroll High School, Runnymede Elementary School, and Pleasant Valley. Hampstead is operated by County personnel while Freedom is operated under contract by the Maryland Environmental Service (MES). In 2005, the Hampstead plant generated 963 wet tons of sewage sludge while the Freedom plant generated 3,454 wet tons. The sewage sludge generated from Hampstead is dried and landfilled. The sewage sludge produced from the Freedom plant is landfilled. Sewage sludge volumes are illustrated on Table 3-4.

There are six other publicly owned sewage treatment plants located within Carroll County's towns: Manchester, Mount Airy, New Windsor, Taneytown, Union Bridge and Westminster. Each of these is operated by the incorporated town that they service. Tonnages for these plants are illustrated in Table 3-4. Four of the towns, Mount Airy, Taneytown, Union Bridge and Westminster, have contracts for land application of sewage sludge. That application is accomplished under a permit from the Maryland Department of the Environment. All of Manchester's sewage sludge is landfilled and in the winter all of the plants may use landfill disposal as land application is not possible. New Windsor has not generated sufficient sewage sludge to necessitate dredging of their lagoon.

There are three privately owned and operated treatment plants in Carroll County: Bowling Brook School, Pheasant Ridge Estate and Hampstead Industrial Center.

As landfill disposal is often necessary, special conditions have been established. Section 3.4.3, § 185-4-D of the Carroll County Solid Waste Ordinance (Appendix "C"), requires that sewage sludge only be accepted at County landfills under specific circumstances. Sewage sludge disposal must first be approved by the Maryland Department of the Environment (MDE) and the County. Sewage sludge must be dewatered, exhibit no liquid phase, and be tested as specified in Section D(a) of the Solid Waste Ordinance. The County also reserves the right to request additional testing to ensure the sewage sludge does not exhibit any hazardous characteristics. Sewage sludge may not be mixed with any other material.

Sewage sludge generated within Carroll County is not the only concern. As Carroll

County is traditionally agricultural, many farmers are solicited to accept sewage sludge generated in other areas for land application. That sewage sludge cannot always be immediately applied and storage is sometimes necessary. Under Carroll County Code §223-26, Sewage Sludge Storage, (see Appendix “D”) sewage sludge can only be stored at publicly owned sewage treatment plants. Sewage sludge storage is defined as an interim measure prior to either land application or landfill disposal. Currently there are no licensed sewage sludge storage facilities in Carroll County.

3.1.1.11 SEPTAGE

Septage is the residual material collected from individual residential septic systems. Most of Carroll County's homes have systems such as this and contract for septage collection and disposal. It is estimated that residential septage generation in Carroll County is from 6.5 to 7.5 million gallons per year. Traditionally, septage has been either disposed of through wastewater treatment plants or land applied.

Recent Federal and State regulations have limited septage management options. Direct application of septage to land is now prohibited. In response, a treatment system has been added at the Westminster Wastewater Treatment Plant that is dedicated to the disposal and treatment of septage. The plant has a peak design flow of 39,000 gallons per day (gpd) with an average daily flow of up to 26,000 gpd. The facility is being operated by the City of Westminster under an agreement (No. 477) with the County. The septage is pre-treated and the resultant liquid phase sent through the wastewater treatment plant. The residual sewage sludge is then removed for landfill disposal. Sewage sludge volumes are included in the sewage sludge management section.

There are 20 independent septage contractors operating in Carroll County. County residents rely on their service; of course, regular maintenance of individual septic systems is imperative to uninterrupted system operation and environmental protection.

3.1.1.12 OTHER WASTES

3.1.1.12.1 RECYCLING

In 1988, the State of Maryland passed the Maryland Recycling Act (MRA) requiring each jurisdiction to develop and implement recycling programs. Under the act, each county with a population greater than 150,000 has to reduce its solid waste stream by 20% through recycling. Counties with lower populations must recycle 15%. The mandate had to be met by January 1, 1994.

Carroll County, with a population under 150,000, was initially required to recycle 15% of its waste stream by 1994. In 1993, the County achieved a 22% recycling rate, surpassing the 15% required by the Act. As of October 1998, the County's population surpassed the 150,000 mark requiring the County to achieve the 20% recycling rate. In 2004, the County recycled 29% and received 3% source reduction credits for a total diversion rate of 32%.

3.1.1.12.2 YARD TRIM

Yard trim includes grass clippings, brush and leaves, resulting from residential or commercial yard and garden maintenance. All eight of Carroll County's incorporated towns provide residents with curbside collection or drop-off sites for yard trimmings. The City of Westminster has organized leaf and yard trim collection programs. It is anticipated that most of the towns continue to use the

County compost yard.

In May of 1994, Carroll County banned yard trimmings from being landfilled. State law also bans source separated yard waste. County haulers, municipalities, businesses and residents may deliver acceptable yard trimmings, loose or in clear bags, to the Northern landfill at no charge. A portion of closed Cell #1 of the landfill has been paved for the acceptance and processing of the materials. The woody materials are processed by a grinder into a mulch product. The grass, leaves and other yard trimmings are laid into windrows and turned as needed by a compost turner. The County uses a power screen to screen the compost. The mulch and compost are made available at no charge to County residents and businesses to be used on their property. In 2005, 12,559 tons of yard trimmings were delivered and processed at the Northern Landfill.

3.1.1.12.3 ELECTRONICS

From 2002 to 2005, the County held five, single-day, electronics recycling events. The five events resulted in the collection of 71.28 tons of electronics (See Table 3-7). Due to the success of the events, the County started a permanent residential electronics drop-off program at the Northern Landfill. The program went into effect December 1, 2005.

The County accepts a wide range of electronics including all computers and peripherals. The program is for residents only and is currently accepting the materials at no charge. The County has a contract through the Northeast Maryland Waste Disposal Authority for the transportation and recycling of the electronics. It is a one-year contract with four one-year renewal options.

3.1.1.12.4 AGRICULTURAL WASTES

Agricultural wastes consist of livestock manures and crop residuals. No estimates of such wastes exist; however, management practices are known. Manure is generally used as fertilizer, and in many cases, stored on farms, prior to field application. Crop residue is generally plowed into fields as nutrient.

3.1.1.12.5 MINING WASTES

Mining wastes consist of overburden from mining operations and residuals from crushing. Both of these wastes are either deposited at the quarry site or are hauled, as fill, to construction sites. In both cases, the material is not treated as waste. Quarry operations typically use material from overburden soil in reclamation.

3.1.1.12.6 ASBESTOS

The established disposal protective, enforced by the Carroll County Solid Waste Ordinance, involves placement in 6 mil polyethylene bags that are then contained in fiberboard drums with outside labels denoting asbestos. The containers are then segregated in the solid waste placement areas of the permitted landfills. Small amounts of asbestos have been landfilled the last three years (FY 2003 – 2.15; FY 2004 – 10.35; FY 2005 – 13.06).

3.1.1.12.7 LEACHATE

Leachate is defined as the combination of liquids and suspended particulate that have leached through or drained from solid waste. Its rate of generation is generally increased when above ground and subsurface waters, including rainfall, percolate through landfilled solid wastes.

Carroll County collected and transported for treatment, over 2 million gallons of leachate during 2005 (see Table 3–5). Sites with leachate collection systems are Hoods Mill, Bark Hill, and Northern landfills. Leachate is collected and trucked principally to the Westminster Wastewater Treatment Plant. Volumes are projected to rise at Northern while decreasing at capped sites (Bark Hill and Hoods Mill).

3.1.1.12.8 GREASE

Grease waste is produced from restaurants and commercial kitchens. New facilities are fitted with grease traps that can be cleaned regularly. Grease is considered a solid waste and can be disposed of with other commercial waste. Some grease is sent to rendering plants. No segregated tonnages exist.

3.1.2 WASTE IMPORTED AND EXPORTED

Carroll County does not accept waste generated in other jurisdictions (see Appendix “C”, Solid Waste Ordinance). However, the majority of waste generated in the County is exported. All of the waste (estimated 100,000 tons) except for sewage sludge and rubble, delivered to the County landfill, is being transported to an out-of-county landfill, through a contract with Waste Management, Inc. This contract was renewed for the first 5 year extension in 2003. Additional 5-year extensions are possible. Another estimated 45,000+ tons of waste were transported to other various facilities through private contracts with other municipalities or commercial businesses.

3.1.3 SOLID WASTE ENTERING CARROLL COUNTY FOR RECOVERY AND PROCESSING

C. J. Miller, LLC., of Finksburg accepts petroleum-contaminated soils for processing. In fact, processed soil material had been used for daily cover at Northern Landfill. The plant on Dede Road in Finksburg is also accepting and crushing broken concrete and asphalt into a usable aggregate for road building. No figures on tons processed at either of the C. J. Miller, LLC operations are available.

Roll-off Express, also located on Dede Road, is a solid waste processing facility licensed to process 750 tons per day. They are currently processing C&D, commercial, industrial, land clearing, bulky, recreational wastes and scrap tires; recovering: OCC, paper, scrap metal, UBC (used beverage containers), clean wood, plastics, drywall and other reusable materials. BFI is also proposing to construct a C&D processing facility on Dede Road.

3.2 REFUSE COLLECTION SYSTEMS IN CARROLL COUNTY

Carroll County has been given broad legal authority by the Maryland General Assembly regarding solid waste management (Public Local Laws of Maryland, Article 7, Sections 15A–1 through 15A–10) (see Appendix “E”). Through this law, Carroll County officials gained the authority to:

- Control the waste stream throughout the jurisdiction;
- Procure and finance, through revenue bonds, future solid waste disposal facilities;

- Enter into public/private joint ventures to construct and operate waste disposal facilities.

This legislation gives Carroll County flexibility in solid waste management decisions and allows a variety of financing approaches for future solid waste facility development.

Within the unincorporated area of Carroll County, that is the areas outside of any incorporated town limits, an "open-ended" method of residential refuse pick-up exists. An "open-ended" system refers to one in which one or more waste haulers operate without control or regulation in a given area. Those haulers contract on an individual basis with homeowners and commercial establishments. An undetermined number of individuals also self-hauls to the County landfill. Currently, the only provisions of drop-off areas in the unincorporated sections of the County are at the Northern and Hoods Mill landfill sites. There is also no system for providing bulky trash pick-up to these areas.

The eight incorporated municipalities in Carroll County have all taken responsibility for administering their own waste collection and additional disposal services, with varying degrees of expenditure in terms of dedicated personnel and equipment (see Table 3–6). All of these towns have a closed-end waste pick-up system. The term "closed-end" means that only one hauler or the town personnel operate the residential trash pick-up within that municipal area so described. In all cases, the routes are controlled by a bid process. At present, all of the county municipalities contract with a single hauler.

Bulky item collection services vary widely in terms of frequency of pick-up, ranging from once-a-year "spring cleaning" service, to once-a-week collection. The City of Westminster and the Town of Sykesville provide on-call service for bulk pick-up. Hamsptead, Manchester, New Windsor and Taneytown provide seasonal pick-up service through their contracted hauler. Mt. Airy's Jaycee's organization provides a drop-off site twice a year for their residents. Residents of Union Bridge are responsible for their own disposal of bulky items.

The Town of Sykesville budgets and administers its own personnel and equipment for waste collection. They provide once-a-week collection for waste and recycling. Table 3–6 shows a breakdown of current municipal waste management services provided by municipalities in Carroll County.

3.3 EXISTING SOLID WASTE ACCEPTANCE FACILITIES

Carroll County's public waste handling and disposal facilities are located at Northern Landfill. All types of residential and commercial solid wastes are currently accepted, including white goods, scrap tires, construction rubble, and yard trimmings. Figure 3–5 shows the location of County waste disposal facilities.

3.3.1 COUNTY-OWNED AND OPERATED FACILITIES

3.3.1.1 NORTHERN LANDFILL

The County's Northern Landfill comprises 220 acres located on Maryland Route 140 southeast of the City of Westminster. It opened in December of 1988, as a state-of-the-art secured sanitary landfill, with a double 60 mil HDPE liner, leachate collection and management system, and a computerized scalehouse. Northern Landfill accepts only County generated waste.

The cost of developing the first 12.7-acre cell of Northern Landfill was approximately \$3.9 million and included landfill site development, lining, and the leachate management system. Additional costs included \$600,000 to acquire the land and

approximately \$400,000 to provide ancillary site development such as fencing, roads, and buffers. Cell 2, a 13 acre cell with a capacity of 668,205 cubic yards, began accepting waste February 18, 1993. It is expected to reach capacity early 2007. Cell 3 will be constructed in 2006. It is a 17.7 acre cell with volume capacity of 342,844 cubic yards.

The designed life was originally estimated at 15 to 20 years, based on 200 tons per day (TPD) of delivery at inception and growth to 500 TPD. Chapter 5.0 includes recalculated projections for the Northern Landfill.

NORTHERN LANDFILL

(Sanitary Landfill, Rubble Landfill, Recycling, Composting, Transfer Station)

- Located at 1400 Baltimore Blvd., Westminster, MD
- Grid Coordinates
 - Latitude N 39° 32' 58"
 - Longitude W 76° 56' 29"
- MD State Coordinates (1983)
 - East 1,328,790
 - North 687,432
- It comprises 220 acres, 65 of which are sanitary cells.
- Municipal solid waste and rubble are landfilled. Scrap metal is marketed and yard wastes are processed into mulch/compost.
- Owned and operated by Carroll County Government, MD
- The permit was originally issued in June 1986. The current permit was issued August 10, 2005 and expires August 9, 2010.

3.3.1.2 HOODS MILL LANDFILL

Historically serving the southern half of Carroll County, Hoods Mill Landfill is located adjacent to the Howard County border, three miles west of Sykesville. It opened in 1981 with a 20-year life projected and 60 acres available for landfill deposits. Only 30 acres (the eastern cell) were used for landfill deposits. The east cell closed in mid-1994 and capped in 1997. The west side can be developed as a landfill, but is currently being leased to a private mulch/composting operation.

HOODS MILL LANDFILL

(Sanitary landfill, recycling, composting, and scrap tire shredding)

Hoods Mill Landfill is currently open

- Located at 7901 Kabik Court, Woodbine, MD
- Grid Coordinates
 - Latitude N 39° 21' 28"

<p>on Saturdays only, for residential drop-off for waste, recycling and yard trimmings. The collected materials are transferred to the Northern Landfill.</p>	<ul style="list-style-type: none"> • Longitude W 77° 1' 26" - MD State Coordinates (1983) <ul style="list-style-type: none"> • East 1,305,480 • North 615,559 - Total size is 125 acres (east and west segments) - Was accepting approximately 100 tons of MSW on a daily basis; scrap automobile and truck tires were also shredded and landfilled; metal crushed. - The site is owned and operated by Carroll County Government, MD - The permit was originally issued in August, 1981.
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3.3.2 PRIVATE FACILITIES

This section includes private facilities located in Carroll County that accept and/or process waste for reuse or disposal. Included are **known** incinerators, transfer stations, composting sites, sanitary and rubble landfills, resource recovery facilities, CHS facilities, injection wells, and industrial waste liquid holding impoundments. They are as follows:

3.3.2.1 C. J. MILLER, LLC (RUBBLE RECYCLING)

C. J. Miller, LLC, has operations listed as Miller Asphalt Products in various locations in Carroll and Frederick Counties. It primarily engaged in heavy construction, including land clearing, road building, excavation, asphalt paving and plant operations, storm drain installation, bridge construction, and related operations.

The facility accepts clean rubble that is crushed and used as aggregate in new asphalt.

<p>C. J. MILLER, LLC. Rubble Recycling</p>	<ul style="list-style-type: none"> - Located on Dede Road, Finksburg, MD (Route 140 – near the intersection of Route 91) - Grid coordinates <ul style="list-style-type: none"> • Latitude N 39° 29' 37" • Longitude W 76° 52' 57" - MD State Coordinates (1983) <ul style="list-style-type: none"> • East 1,345,780 • North 665,853 - The processing facility occupies approximately 6 acres of a 21-
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acre site.

- Broken concrete and old asphalt paving are accepted from the Central Maryland Region; Baltimore City, Baltimore County, Carroll County, Southern Pennsylvania and processed into usable aggregates.
- Air Operating Permit Number 013-00102 expires September 30, 2007.

3.3.2.2 ROLL-OFF EXPRESS

Roll-off Express is a privately-owned and operated processing facility. The materials are sorted and marketed. Residuals are disposed of properly permitted solid waste facilities outside of Carroll County.

Roll-Off Express

- Located on Dede Road, Finksburg, MD
- Grid Coordinates
 - Latitude N 39° 29' 30"
 - Longitude W 77° 50' 50"
- MD State Coordinates (1983)
 - East 1,344,831
 - North 665,425
 - Processing Facility Permit #2002-WPF-0159
 - Permit issued January 13, 2003 (5-year permit).

3.3.2.3 ALLIED WASTE SERVICES INDUSTRIES

Allied Waste Services Industries is proposing a C&D recycling facility. The materials will be sorted, marketed and residuals disposed of at a licensed, fully-approved landfill.

ALLIED WASTE SERVICES INDUSTRIES

- Located on Dede Road, Finksburg, MD
- Grid Coordinates

- Latitude N 39° 29' 35"
- Longitude W 26° 53' 08"
- MD State Coordinates
 - East 1,344,626
 - North 665,260
- Processing Facility Permit – Pending

**3.3.2.4 INTERNATIONAL MINERALS AND RAW MATERIALS, INC.
(SOIL, AGGREGATE, CONSTRUCTION AND DEMOLITION
DEBRIS RECLAMATION)**

International Minerals and Raw Materials, Inc., is proposing a C&D facility and is currently engaged in the recycling and reclamation of aggregates, soils, and Construction & Demolition debris in various locations in Baltimore and Harford Counties.

International Minerals and Raw Materials, Inc., is scheduled to begin soil-blending operations prior to modifying the present facility for the reclamation of Construction & Demolition debris. The facility will accept construction waste and select demolition materials from general contractors and the public provided that the materials are recyclable and are not contaminated with unacceptable materials.

- | | |
|---|--|
| International Minerals
and Raw Materials, Inc. | <ul style="list-style-type: none">- Location: 1221 Bruceville Road, Keymar, MD- Grid Coordinates<ul style="list-style-type: none">• Latitude N 39° 36' 28"• Longitude W 77° 14' 03"- MD State Coordinates (1983)<ul style="list-style-type: none">• East 1,246,418• North 706,748• The processing facility will utilize 6 acres of a 17-acre site.• C&D debris will be accepted from Carroll, Frederick, Howard and Montgomery Counties and Adams and Franklin Counties, PA.- MDE Waste Management Administration:<ul style="list-style-type: none">▪ Pending issuance of Solid Waste Processing Facility permit.▪ Pending submittal of Stormwater Discharge Permit Application.- It is anticipated it will last 20-30 years.- Ownership – Charles U. Mehring. |
|---|--|

3.3.2.5 LEHIGH CEMENT COMPANY

Lehigh Portland Cement in Union Bridge, Maryland received approval from

Maryland Department of the Environment (MDE) to burn scrap tires as a fuel. However, this practice was discontinued August, 2001, as a result of the construction of the new kiln. The company will continue to maintain the permit so that at some time in the future they may resume the activity.

**LEHIGH CEMENT
COMPANY**

- Union Bridge, MD
- Grid Coordinates
 - Latitude N 39° 33' 50"
 - Longitude W 77° 10' 30"
- MD State Coordinates (1983)
 - East 1,262,617
 - North 690,296
- The unit was in operation from 1995 to 2001.
- Air Quality Permit issued in 2004.
- Tire Recycling Facility Permit issued in 2004.

3.3.3 CLOSED COUNTY FACILITIES

3.3.3.1 BARK HILL LANDFILL

Bark Hill Landfill, a 10-acre facility, one mile west of Uniontown in the western part of the County, was closed in 1981. The site originally began operation as a dump in 1892 and was taken over and operated by the County as a landfill in 1972. The site is now part of the County's open-space program; capping was completed during 1991. The site is being monitored.

BARK HILL LANDFILL

- Located on Raywell Avenue, near Middleburg Road, Uniontown, MD.
- Grid Coordinates
 - Latitude N 39° 34' 26"
 - Longitude W 77° 08' 40"
- MD State Coordinates (1983)
 - East 1,271,420
 - North 702,298
- 12 acres of a 20+ acre site was used as a landfill and closed in late 1981. Design closure was approved and completed in 1981

at cost of \$250,000.

- This site was retrofitted with a cap liner as per MDE approved regulations. Work was completed in October of 1991 at a cost of \$1,900,000
- The site is owned by Carroll County Government, MD.

3.3.3.2 BACHMAN VALLEY ROAD TIRE FACILITY

This site was operated from the 1970's to 1985 for the disposal of demolition debris and scrap tires. The County installed a cover over the facility in 1992. The County has not accepted scrap tires at this site since 1985.

BACHMAN VALLEY TIRE FACILITY

- Located on the southeast side of Bachman Valley Road (Route 496 at Saw Mill Road), MD.
- Grid Coordinates
 - Latitude 39° 50' 08"
 - Longitude 76° 58' 15"
- MD State Coordinates (1983)
 - East 1,320,549
 - North 721,581
- The site comprises 2 acres of a 6-acre parcel.
- Whole scrap tires were accepted at this site and filled in an old quarry.
- The site was owned by the Lippy Brothers, Inc., and was leased by Carroll County Government, MD. It began operations in the late 1970's and was closed in September 1985. It is now owned by Carroll County, MD.

3.3.3.3 HODGES LANDFILL

Hodges Landfill (32 acres), located one mile north of Eldersburg, in southeastern Carroll County, was in operation until 1981. Like the Bark Hill site, it is also part of the County's open-space program as a park is proposed as a future park site. The site was capped in 1991.

HODGES LANDFILL

- Located on the west side of Hodges Road, 250 yards north of the intersection with Bartholow Road, MD.
- Grid Coordinates
 - Latitude N 39° 25' 16"
 - Longitude W 76° 57' 24"
- MD State Coordinates (1983)
 - East 1,324,433
 - North 639,033
- Approximately 32 acres.
- MSW was accepted at the site until it closed in 1981 at which time design closure and earth cover were completed.
- The site was retrofitted with a membrane-lined cap in 1991 at a cost of \$2,500,000.

3.3.3.4 JOHN OWINGS LANDFILL

John Owings Landfill, located on the east side of Route 97, approximately 3 miles north of Westminster, covers approximately 88 acres, of which 35.7 acres was used for waste, and was owned and operated by a private hauling firm until the County took possession of the property in 1973. Capping was completed in 1997.

JOHN OWINGS LANDFILL

- Located on the north side of John Owings Road, west of Bear Branch, ½ mile west of the intersection with Route 97, MD.
- Grid Coordinates
 - Latitude N 39° 38' 41"
 - Longitude W 76° 59' 43"
- MD State Coordinates (1983)
 - East 1,312,926
 - North 720,222
- The site has been closed since November 1988. In the last year of its life it served as a transfer station only for homeowners, using automobiles and pick-up trucks.
- Capped in 1997 at a cost of \$4,019,071.

3.3.3.5 KATE WAGNER LANDFILL

Kate Wagner Landfill is located south of Westminster in Carroll County, southeast of the intersection of Chapel Road and Old Westminster Road and south of the intersection of Old Westminster Road and Kate Wagner Road.

The current owner is Alfred E. Barnes. The property has belonged to the Barnes family since 1899 and is believed to have been used primarily for farm and grazing purposes until January 2, 1965, when Francis and Rosina Barnes leased a portion of the estate to Carroll County for the purpose of disposing of non-toxic waste materials. Prior to the signing of the lease with Carroll County; however, it was known that "G. L. Cabbage" operated the site as a repository for refuse for the area, including the City of Westminster.

The Kate Wagner Landfill was never permitted by the State of Maryland and does not utilize any type of containment system. Records indicate, however, that Carroll County leased the land to be used as a landfill and other individuals and companies were known to have used the Kate Wagner dump site prior to the lease with Carroll County.

The Kate Wagner Landfill was an unpermitted landfill from the mid 1960's until 1974 when it was closed. The landfill was listed on the Comprehensive Environmental Response, Compensation and Liability Information System because sample results from monitoring wells revealed the presence of low

levels of volatile organic compounds (VOC's). Investigation is nearly complete, and it appears that only minimal remediation will be necessary.

**KATE WAGNER
LANDFILL**

- Located just south of the intersection of Kate Wagner and Old Westminster Roads.
- Grid Coordinates
 - Latitude N 39° 32' 30"
 - Longitude W 77° 01' 15"
- MD State Coordinates (1983)
 - East 1,304,736
 - North 682,068
- Approximately 10 acres of a 40 acre parcel was used as a landfill.
- MSW and industrial wastes were accepted.
- The site is privately owned by Mr. Alfred Barnes.
- It was closed in 1974 and covered with 2' of earth.

3.3.3.6 THE RECYCLING BARN

For several years, the County worked with the Carroll County Association for Retarded Citizens (CCARC) to set up and operate a recycling drop-off and storage facility near the Carroll County Regional Airport. The facility consisted of a barn and several trailers. The facility was staffed by members of CCARC who weighed, sorted, and stored the following recyclables:

- Aluminum
- Newspaper
- Cardboard
- Mixed Glass

The facility was closed in the fall of 1993. The function has now been relocated to Northern Landfill and the facilities demolished and removed.

RECYCLING BARN

(Recycling Transfer Station)

- Was located at Route 97 at Old Bachman Valley Road (near the Carroll County Airport)
- Grid coordinates
 - Latitude N 39° 38' 53"
 - Longitude W 77° 00' 00"
- MD State Coordinates (1983)
 - East 1,312,538
 - North 704,601
- Site consisted of an old barn on five acres of land which was operated by the Carroll County Association for Retarded Citizens until July of 1990. It was then operated by Carroll County Government until closure.
- This site was operated as a temporary transfer/drop-off recycling center handling 5 to 10 tons per day of newspaper, glass, bi-metal

cans, aluminum cans and cardboard per day.

- It operated without a permit, as none was necessary.
- The site closed on September 25, 1993, and the operations transferred to Northern Landfill.