

## CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

---

downstream aquatic life in accordance with reservoir discharge permits issued by MDE. The Middle and Little Patuxent Rivers and associated tributaries are used to a small extent by several manufacturers and institutions in Howard County. Fort Meade also withdraws water from the Little Patuxent River downstream from the Howard County line. It is expected that the Middle and Little Patuxent River and associated tributaries will be used for recreational purposes. The County has no plans to develop these sources as a potable water supply beyond the present limited industrial use. Three lakes have also been constructed in Columbia in the Little Patuxent Basin for recreational use.

Dorsey Run does not offer the potential to supply significant quantities of water for potable or industrial use in Howard County. Likewise, the County has no plans for developing a potable supply in the Deep Run watershed.

The Patapsco River is the only water course which has a potential for contributing to the public water supply in Howard County. However, natural flow alteration by the Liberty Reservoir; and withdrawals by numerous industries, institutions and towns en route limit this potential.

Siting of future solid waste facilities must take into account the potential impact on surface waters to ensure no adverse impact on potable water supplies or water quality to the streams. Likewise, location of solid waste facilities within the 100 year flood plains of County surface waters is not permissible. Minor encroachments will be considered on a case-by-case basis in accordance with County and State review procedures and regulations.

### 4.11.7 WATER QUALITY

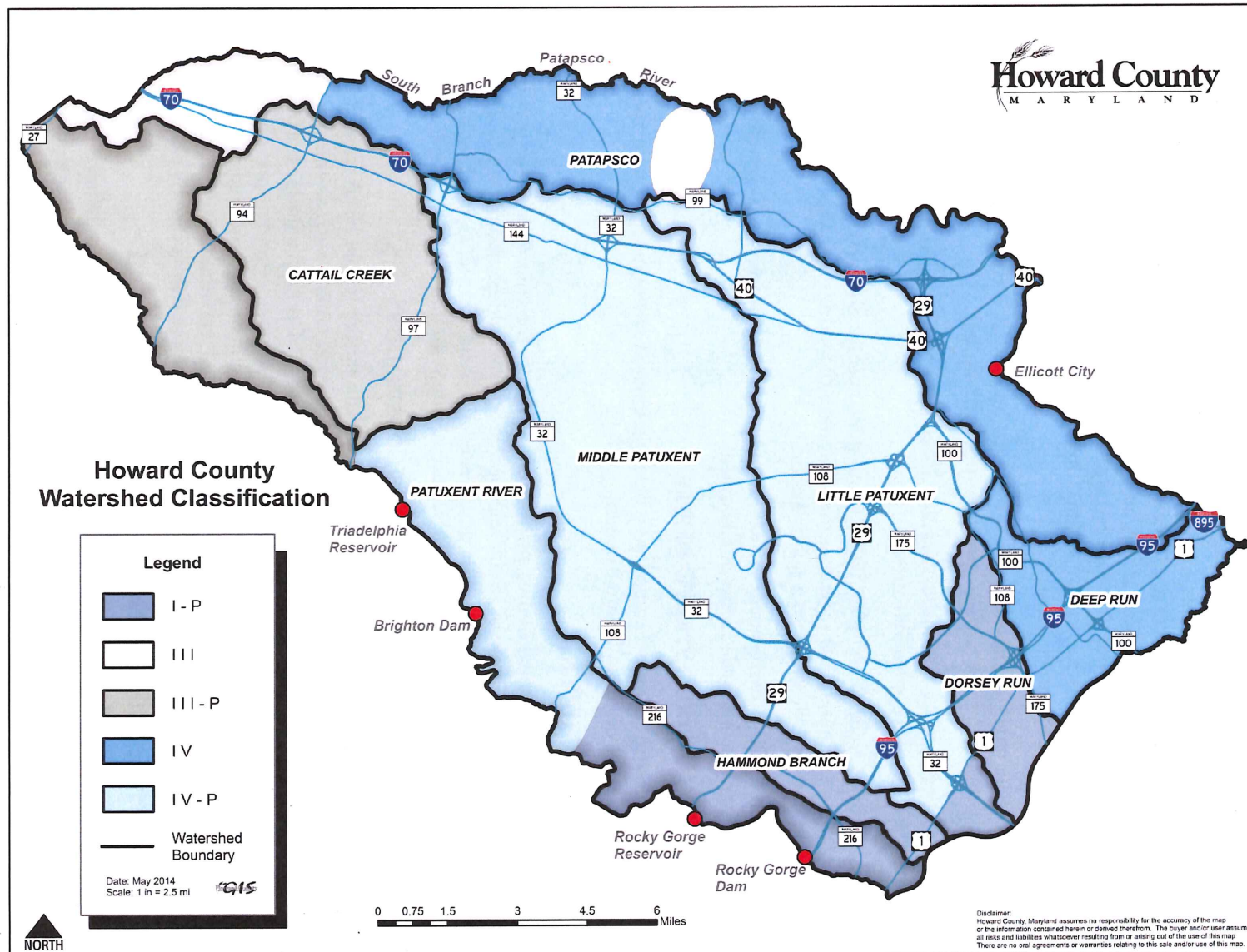
Individual surface waters in Howard County are assigned water use designations by MDE. Designated uses are based upon State regulations (COMAR 26.08.01). Waters within the County are designated as indicated in Exhibit 4-6. Each use is associated with specific enforceable water quality standards for such parameters as dissolved oxygen, pH and turbidity. Uses applicable to Howard County are described below.

Use Designation	Description
I	Water contact recreation, fishing, and protection of aquatic life and wildlife
I-P	Public water supply, water contact recreation, fishing, and protection of aquatic life and wildlife.
III	Natural trout waters.
III-P	Public water supply and natural trout waters.
IV	Recreational trout waters.
IV-P	Public water supply and recreational trout waters.

This information can be used to assess water quality protection requirements in the vicinity of proposed solid waste facilities.

## CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

Exhibit 4-6 Watershed Classification Map





## **CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM**

---

### **4.11.8 INCOMPATIBLE LAND USES/LONG TERM GROWTH**

PlanHoward 2030 and the Howard County Zoning Regulations are written to ensure that solid waste facilities generally are located in suitable areas in order to avoid adverse impacts on adjacent land uses and to ensure compatibility with long term growth patterns. The zoning regulations further define specific site development requirements, such as setbacks and buffers, and operational requirements, such as vehicle traffic controls, established to minimize impacts on neighboring development. Applicable zoning regulations are discussed further in Chapter 2. Of more specific note, the U.S. Department of Transportation, Federal Aviation Administration (FAA) Advisory Circular No. 50/5200-33 provides guidelines regarding the construction of facilities which may attract certain types of wildlife (especially birds). The guidelines recommend that:

- ◆ Waste processing and disposal facilities should not be located within 10,000 feet of any runway end (existing or proposed) to be used by a turbine-powered aircraft.
- ◆ Also, a waste processing and disposal facility should not be located within 5,000 feet of any runway end used only by piston-powered aircraft.
- ◆ FAA Advisory Circular No. 150/5200-34 provides specific guidance related to compliance with federal statutory requirements regarding the separation of landfills and airports. Landfills may not be located within a six-mile radius of a public airport.

State law (Section 9-225, Environment Article, Annotated Code of Maryland) prohibits the location of any landfill within a one half mile radius of a hospital.

### **4.11.9 AREAS OF CRITICAL STATE CONCERN**

At present, no areas in Howard County have been designated in conjunction with the Department of State Planning as Areas of Critical State Concern.

## **4.12 PUBLIC FACILITIES**

Prior to development and submission of plans and documents for consideration as part of the County's site development plan review process, a site selection process would be undertaken to identify potentially viable sites for the proposed facility. The generalized site selection steps, which could be modified to best accommodate site selection for a specific facility, are described in the following sections.

### **4.12.1 ESTABLISH FACILITY REQUIREMENTS/CONSTRAINTS**

The initial step in identifying a site for a public solid waste facility would be to identify the criteria and constraints which will define a suitable site. For example, siting criteria such as site size, access to roads or other forms of transportation, geology, slopes, proximity of public utilities, buffer needs, distance requirements from incompatible facilities and land uses, zoning requirements and regulatory/legal requirements may be applicable. Establishing applicable constraints and requirements may require meetings with local and State regulatory agencies. Defined constraints and requirements will vary depending upon the type of facility proposed and must be developed on a case by case basis.

### **4.12.2 COLLECT BASELINE INFORMATION**

Once the requirements and constraints applicable to the facility under study have been identified, it is necessary to compile information relative to the area or properties under consideration for location of the proposed facility. Pertinent information may include previous technical studies and reports related to the facility, land use and zoning maps, existing and vacant land use inventory, aerial topography, wetlands delineation and flood plain maps. As part of the compilation effort, it is anticipated that maps and other visual aids would be prepared for use in the subsequent screening effort.

## **CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM**

---

### **4.12.3 PRELIMINARY SCREENING**

The requirements and constraints applicable to a proposed facility must be compared to the information compiled for the areas where the facility may be potentially located. Areas or properties that are not compatible with facility needs would be eliminated from further consideration. Conversely, areas or properties that are compatible with facility needs would be identified and retained for further evaluation.

### **4.12.4 PUBLIC PARTICIPATION**

After completion of the preliminary screening, areas/properties which have been judged suitable for the facility will be reviewed with: impacted citizen groups, business organizations and other groups which may have an interest in a specific facility. Input obtained through public meetings, and workshops as appropriate, will be considered in subsequent site evaluation.

### **4.12.5 SITE RANKING**

Prior to this step, sites which are incompatible with facility requirements have been eliminated from consideration. As a result, remaining sites can be ranked considering both qualitative and quantitative factors such as buffers, easements, wetland impacts, water quality impacts, impact on endangered species habitat, archeological/historical site impacts, accessibility, distance from service areas and topography. It is anticipated that sites will be ranked assessing constraints, which were not previously considered, of a magnitude which would disqualify the site from consideration. The site ranking will establish a relative comparison of the superiority of sites for the proposed facility. The factors considered in establishing the ranking will depend upon the type of facility. Superior sites will be identified as preferred sites to be evaluated in greater detail. Additional public meetings may be scheduled at this time to review preferred site selections with the public and interested groups.

### **4.12.6 FINAL SITE SELECTION**

Prior to final site selection, engineering and environmental studies will be conducted to ensure that the preferred sites will meet requirements for permitting (if necessary) by MDE. Final site selection will be made working with the County Executive and the County Council.

### **4.12.7 PLANS PREPARATION/PERMITTING**

Once a facility site has been selected, preparation of a site development plan and engineering documents will be initiated. The site development plan review and approval process is essentially the same as that described below for private facilities. Solid waste management facilities may require issuance of a Refuse Disposal Permit by MDE. The permitting process, which may be multi-phased, varies depending upon the type of facility being permitted. The permitting process and submission requirements are detailed in State regulations (COMAR 26.04.07). Section 9-210(a) of the Environment Article, Annotated Code of Maryland, prohibits MDE from issuing a Refuse Disposal Permit until a county has provided, after being notified by MDE in writing of the Department's preliminary Phase I technical review of a permit application, a written statement that the proposed facility meets all applicable land use and zoning requirements and is in conformity with the Plan.

## **4.13 SITE REQUIREMENTS FOR PRIVATE FACILITIES**

Solid waste management facilities may be proposed for locations in Howard County at any time by private parties. As noted previously, such facilities must be incorporated into the Plan before site development plan approval and, where applicable, must obtain a Refuse Disposal Permit from MDE.

Section 9-210(a) of the Environmental Article, Annotated Code of Maryland prohibits MDE from issuing a Refuse Disposal Permit until a county has provided, after being notified by MDE in writing of the Department's preliminary Phase I technical review of a permit application, a written statement that

## **CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM**

---

the proposed facility meets all applicable land use and zoning requirements and is conformity with the Plan.

As noted in Chapter 2, County zoning regulations stipulate that solid waste facilities, depending upon type, may be allowed in a given zoning district as a matter of right, may require approval of a conditional use or may be approved under provisions for establishment of a Solid Waste Overlay District.

### **4.13.1 FACILITY PERMITTED AS A MATTER OF RIGHT**

The developer of a facility which is allowed to locate on a property as a matter of right in accordance with County zoning regulations must develop and submit a site development plan and related documents to the County for review and approval. The site development plan review and approval process is described in detail in the Howard County Subdivision and Land Development Regulations (Howard County Code, Title 16, Subtitle 1).

### **4.13.2 FACILITIES REQUIRING APPROVAL OF A CONDITIONAL USE**

Certain types of solid waste facilities require that the developer acquire a conditional use approval by the County Hearing Examiner. The developer must file an application for a conditional use with the Department of Planning and Zoning (DPZ). The application must include a conditional use plan and supporting documentation in conformance with the Zoning Regulations applicable to the specific type of proposed facility. The DPZ transmits the application and supporting documentation to the County Hearing Examiner and prepares a technical staff report which includes a recommendation for approval or disapproval. The Hearing Examiner holds at least one public hearing on the application in accordance with Section 2.203 of the Howard County Code and approves, disapproves, or approves with conditions, the proposed facility. Upon approval of a conditional use, the facility developer submits a site development plan for approval which conforms with the conditional use approval. The site development plan is submitted and reviewed in accordance with the Subdivision and Land Development Regulations described above.

### **4.13.3 FACILITIES REQUIRING SOLID WASTE OVERLAY DISTRICT APPROVAL**

The developer of certain solid waste facilities proposed to be located on land zoned M-1 or M-2 may need to have the property designated as a Solid Waste Overlay District. The developer petitions the County Zoning Board to approve the designation. The petition submitted must include a boundary survey, operations plan and preliminary development plan meeting the requirements specified in the Zoning Regulations for a Solid Waste Overlay District.

The Zoning Board, upon reviewing the petition and holding a public hearing may approve, disapprove or approve with modifications. Upon approval, the developer must submit a site development plan which conforms substantially to the preliminary development plan and operations plan approved by the Zoning Board. The site development plan is reviewed in accordance with the Subdivision Regulations noted previously.

## **4.14 WASTE FLOW CONTROL**

Flow control refers to legal requirement for waste collection firms to deliver waste to one or more facilities. County or municipal governments operating a waste processing facility or landfill that generates revenue exclusively by tipping fees have in the past enacted flow control ordinances to ensure the facility's economic viability.

When financing solid waste facilities, local governments have had to address solid waste from two sources. The first source is waste controlled by the local government (controllable waste). A local ordinance may provide the city or county government exclusive authority to collect this waste, or the local government may provide collection services to residents and/or businesses. Waste is collected



## CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

---

either by the municipal collection system or by private firms under contract to the city or county. Howard County uses the contracting approach for residential waste, the controllable portion of the waste stream in the County. Waste collected from businesses and institutions and disposed by private firms usually is the uncontrollable portion of the solid waste stream, as it is in Howard County.

Historically, local governments typically provided disposal capacity for both controllable and uncontrollable waste. With the introduction of federal regulations in 1991 requiring more stringent design and operational features for landfills, landfill capital and operations costs increased significantly. These high costs prompted higher tipping fees, or in some communities the initiation of tipping fees, to replace or augment previously exclusive funding from government general revenues. In addition, high capital costs prompted some communities to remove the higher capital financing requirements from the general revenue system and finance facilities with revenue (tipping fee)-backed debt. This approach was previously well-established for communities implementing WTE facilities due to their much higher (than landfill) capital costs.

A revenue-backed financing approach that required that the uncontrollable waste portion be essentially converted to controllable waste was a method to secure the revenues relied upon to pay capital and operations costs. Flow control ordinances accomplished that conversion.

In 1994 the U.S. Supreme Court ruled that provisions in flow control ordinances pertaining to restrictions on waste moving across state boundaries were invalid. The ruling was based on the interstate commerce provisions in the Constitution. Of particular note, the ruling affected waste facilities in the Mid-Atlantic region operating under a flow control ordinance, including nearly all of the WTE facilities in Maryland, Pennsylvania and Virginia. In many affected communities, waste collection firms have privately operated out-of-state landfills available to them at tipping fees that are lower than historical WTE facility tipping fees and lower than tipping fees charged by government-operated landfills. The Supreme Court ruling allowed private collection firms to use an out-of-state facility without the threat of an enforcement action under a local flow control ordinance. The ruling made it difficult or impossible for many local governments to continue to finance ever-increasing capital costs for new landfill capacity from tipping fee revenue, since this revenue could no longer be guaranteed from the uncontrolled portion of the waste stream.

For Maryland, the presence of numerous privately operated landfills in neighboring states with available capacity now and for future years promotes the export of uncontrolled waste to these facilities by private firms.

Howard County does not have, nor does it need, a flow control ordinance for residential waste since the County provides residential waste collection. The County directs firms under contract for residential waste collection to a disposal facility, which is contracted for separately by the County. Contracted collection firms are not charged a tipping fee at the contracted disposal facility and have no incentive to transport residential waste to another location. As a result this portion of the waste stream is controlled by the County without a flow control ordinance and no changes to eliminate illegal flow control are necessary.

Howard County received virtually all uncontrollable (commercial) waste generated in the County when it was economically attractive for private collection firms to use the County landfill. As described in Chapter 3, in the early 1990's uncontrolled waste delivered to the ARL began to decrease as alternative out-of-state disposal facilities become available, and as the County's landfill tipping fee increased. Commercial waste quantities received at the ARL diminished to the current level of less than ten percent of the uncontrollable waste generated in the County. The County has not historically taken steps to control this waste stream through legislation or other form of regulatory control, nor does it plan to do so during the next 20 years.

## **CHAPTER 4. ASSESSMENT OF INTEGRATED SOLID WASTE MANAGEMENT SYSTEM**

---

This page intentionally left blank.

---

## **CHAPTER 5. IMPLEMENTATION/ACTION PLAN**

---

### **5.1 INTRODUCTION**

The Howard County Solid Waste Management Plan 2014-2024 (Plan) is a planning document for the County, and is coordinated with the general plan, PlanHoward 2030. This is a dynamic document which may be amended from time to time as necessary to meet changing requirements for an integrated solid waste management program that meets the needs of the community, as well as the requirements of the State. As required by COMAR 26.03.03, this Plan will be reviewed and, if necessary, updated at least once every three years.

The Action Plan presented in this chapter responds to the County's needs for managing the various types and quantities of waste generated, and provides for system components that are technically and economically feasible for the County. As presented in previous chapters, the County manages all of the residential waste generated in the County, but less than 15 percent of the municipal solid waste (MSW) generated by commercial establishments, apartments, industry and institutional facilities.

The County's goals and objectives used to develop the action plan are presented in Chapter 1 of this Plan. Chapter 1 also summarizes the requirements of state-mandated recycling goals and all other federal, state and county regulations and laws relevant to the County's solid waste management system.

Chapters 1 through 4 include County population and population projections; the best available estimates of waste generation in the County; and the types and amounts of waste requiring management during the planning period that are within the control of the County. In addition, constraints on site selection, construction and operation of solid waste management facilities are described in these preceding chapters.

This Chapter 5 presents the plan of action for Howard County's integrated solid waste management system and components that are to be used during the planning period ending in 2024. Public and private programs and facilities for source reduction, recycling, processing and disposal are addressed as part of the County's solid waste management strategy. Other components addressed include contingency planning and funding mechanisms.

Flexibility will be incorporated into the implementation process such that the County can respond to developments and changes in materials markets, technology, available private sector services and opportunities for regional cooperation. The County will remain open to considering new approaches to solid waste management in the future.

This Plan conforms to the County's land use plan and to PlanHoward 2030. County zoning regulations providing zoning categories and requirements for siting each of the types of facilities are detailed in Chapter 2.

### **5.2 CHANGES SINCE THE 2003 PLAN**

A number of changes have occurred in Howard County since the 2003 Solid Waste Management Plan, which are reflected in this updated Plan.

#### **5.2.1 SOURCE REDUCTION AND RECYCLING**

Howard County has made significant gains in waste reduction and recycling. In 2001, the County's waste diversion rate was 44.1 percent. In Calendar Year (CY) 2011, the total diversion rate was 52.5 percent, which was derived from the County's recycling rate of 48.5 percent, plus four percentage points out of a possible five points, for source reduction activities.

The County's recycling and reduction accomplishments have consistently exceeded the State recycling requirements. The current minimum recycling requirement of the Maryland Recycling Act is 35 percent



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

recycling by December 31, 2015, with a voluntary 60 percent waste diversion goal by 2020. The County's comprehensive recycling program has been designed to meet and exceed these goals with participation by residents, schools, County government and business operators. PlanHoward 2030 has established a recycling goal for the County of 75 percent by 2030.

### **5.2.2 ALPHA RIDGE LANDFILL TONNAGE**

In July 2012, Howard County entered into a Waste Disposal Agreement with the Northeast Maryland Waste Disposal Authority (the Authority) to provide for the transfer of solid waste from the County to a private regional landfill located in King George County, Virginia. The Authority, in turn, entered into a Service Agreement with Waste Management, Inc. (WMI), the owner of the landfill. The agreement stipulates that Howard County's maximum daily tonnage is 1,500 tons and the maximum annual tonnage is 150,000 tons of waste to the Annapolis Junction Transfer Station (AJTS) in Anne Arundel County, also owned by WMI.

Howard County began delivering all residential waste collected at curbside to the AJTS in March, 1997, with the original June 1996 agreement. A substantial portion of the residential and commercial waste received at the Alpha Ridge Landfill (ARL) is also being transported to the transfer station. Due to competitively priced regional disposal facilities, the majority of non-residential waste, which is not controlled by the County, is transported out-of-county, and does not go through the County's disposal system.

For the above reasons, the life of the ARL has been substantially extended to more than 50 years. This expected operating life is dependent upon long-term implementation of waste management alternatives which continue to minimize use of the ARL. The current Waste Disposal Agreement with the Authority, described above, has a maximum term which will end in June 30, 2022. A new long-term waste disposal alternative must be in place by that time.

### **5.2.3 CHANGES IN STATE LAWS AFFECTING THIS PLAN**

In 2010, Environment Article, Annotated Code of Maryland, Title 9, Water, Ice, and Sanitary Facilities; Subtitle 17 – Office of Recycling): §9-1703 was amended to require County recycling plans to address collection, processing, marketing and disposition of recyclable materials from County public schools. The Howard County Public School Recycling Plan is described in section 4.5.9 of this Plan, and is attached as Appendix C.

§9-1703 was also amended in 2010 to require counties to develop a strategy for the collection and recycling of fluorescent and compact fluorescent lights that contain mercury. The County program to collect and recycle fluorescent and compact fluorescent lights is described in section 4.9.4 of this Plan.

Effective October 1, 2014, a new §9-1711 requires that the property owner or manager of an apartment building, and the council of unit owners of a condominium, containing ten or more dwelling units shall provide for recycling for the residents in the apartment building or condominium on or before October 1, 2014. This law also allows the County to require the property owner or manager of the apartment building or the council of unit owners of the condominium "to report to the county on recycling activities in a manner determined by the county." The County's Apartment and Condominium Recycling Plan is described in section 4.5.10 of this Plan.

Effective October 1, 2014, amendments to §9-1703 (b) and (c) and the addition of §9-1712 require the County to address the collection and recycling of recyclable materials from special events, and requires counties to include special event recycling in their recycling plans by October 1, 2015. Special Event Recycling is included in this Plan, in section 5.6.3, and will continue to evolve to assure that the maximum recycling occurs at special events held in the County.

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

### 5.2.4 COLLECTION

In Howard County, curbside residential solid waste collection is provided by the Bureau of Environmental Services to single family homes, town houses and 5,086 condominium units. Solid waste is collected from a total of 79,067 households. Recycling is collected from 79,351 households, while 63,450 households receive yard trim collection service. Apartments are considered commercial for the purpose of solid waste services.

Commercial collection service in the County is predominately provided through contracts or agreements between the generator and the hauler. A small number of businesses in the Historic District in Ellicott City, as well as County buildings and County public schools, are provided collection services by the County.

#### 5.2.4.1 Residential

Residential recyclables and solid waste are collected once per week by private haulers under contract to the County. Currently, between April and January, yard trimmings are collected separately for all but the western area of the County. The pilot food scrap collection program, which began in 2010, with food scraps collected year round in the same truck and at the same time as the yard trim, will be expanding to the entire County collection program as capacity becomes available.

The County is divided into 15 zones for collection of solid waste and recyclable material. Contractors are directed to a designated disposal or processing facility where they tip loads and the County is billed under terms of a contract for the disposal or processing cost. The current collection system has been designed to allow flexibility in redefining route boundaries so as to create new routes and keep existing routes to a manageable size. In addition, collection contracts are structured to compensate contractors for growth during the contract term. When a new residence is occupied within a collection zone, the contractor is required to immediately begin providing service to that home. Contractors are compensated based on the number of homes serviced. The County annually audits collection zones and adjusts payments to each contractor to account for growth during the previous year. This contracting mechanism, as well as the flexibility to redefine collection zone boundaries as growth occurs, ensures that the current waste and recyclables collection system will be adequate to provide required collection services during the planning period.

Recycling and yard trimmings collection payments are on a per household basis and do not increase as the quantity of materials recycled increases. When recycling quantities increase only the potential revenue rises. When waste or yard trimmings decrease, the processing or disposal cost also decrease.

Garbage disposals are not recommended as a means of disposing food scraps. The cost to dispose of food scraps handled at the County's Little Patuxent Water Reclamation Plant (LPWRP) cost County residents far more in treatment cost than landfilling. The new ENR system, at the LPWRP is further taxed by any additional loading caused by the use of garbage disposals. Composting is a far more environmental responsible way to handle food scraps. Home composting is considered to be the best and most environmental option, with the next best option being curbside food scraps collection and composting.

During the planning period, the County will continue to provide residential collection of solid waste, recyclable material and yard trim. Food scraps will continue to be collected for composting with expansion of the program as capacity becomes available. The County plans that food scrap collection will be county-wide by 2024. The residential food scraps and yard trim will ultimately be collected in lidded carts, to be delivered to the County's compost facility.

The County considered a change to the County Code to include a plastic bag ban for yard trimmings collected curbside. This change has not been made, but the County encourages the use of paper rather than plastic bags for yard trim collection.

## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

### **5.2.4.2 Commercial**

MSW and recyclables generated by businesses, industry and institutions are collected and disposed by private haulers under contracts or agreements between the generator and the hauler. Included in this group of generators are low-rise and mid-rise apartment buildings, which provide for central waste containers, typically front-load style containers or “dumpsters”. Except for a small number of businesses in the Historic District in Ellicott City, as well as County buildings and County public schools, the County does not provide collection service for these generators, a policy that will be maintained through the planning period. In partnership with the Howard County Chamber of Commerce, a business recycling coop was set up by the Chamber to make it easier for small and large businesses to recycle single-stream material.

For large facilities, a contractor often is used for internal recyclables collection and to aggregate material in central containers. The same or a different contractor collects material from the central container(s) and provides transportation, processing and marketing services. The County does not participate in nor provide these recycling activities for commercial recyclers.

Private firms provide for collection of C&D material, several of which operate in the County. Nearly all of the C&D debris generated is collected in open top, roll-off style containers that do not use compaction equipment. Collection is accomplished on an as-needed basis by trucks specially outfitted for this purpose. Howard County does not provide collection service for this type of waste. Given the availability of numerous private haulers, this system is expected to be adequate during the planning period.

### **5.3 MEETING THE GOALS AND OBJECTIVES**

This section provides a summary of how this Implementation Plan will meet the County’s solid waste management goals and objectives. Programs will be described more fully in following sections of this chapter, with a description of the steps in the action plan in Section 5-12, followed by a summary table, Exhibit 5-1.

Howard County will meet the goal of providing for environmentally sound and cost effective solid waste management, through continuing to expand programs for solid waste reduction, reuse, recycling and organics diversion.

The County will ensure that reliable options are available for solid waste processing and disposal that allow sufficient lead time for planning and construction of a new cell at the ARL, if needed, or other new facilities, or for instituting new programs.

The action plan will include the following steps:

#### **5.3.1 INCREASE SOURCE REDUCTION AND REUSE**

This will be accomplished by building on the existing public education and reuse programs to promote solid waste reduction and reuse, with the goal of further reducing solid waste generation in the County. In addition, the County plans for operation of a swap shop/reuse center.

#### **5.3.2 INCREASE RECYCLING**

Recycling programs will be expanded by including additional materials as technologies and markets become available, encouraging zero waste activities and promoting school recycling. The County will also investigate the option of Pay-As-You-Throw (PAYT) collection programs. In addition, the County will address the state-mandated special event recycling law, and will enforce the Apartment and Condo recycling law. During the period of 2015 through 2017, the County plans to take the necessary steps to open and operate an Eastern Recycling Drop-off center.



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

### **5.3.3 INCREASE ORGANICS DIVERSION**

The County plans to expand programs for food scrap recycling, as increased capacity becomes available, with the goal of county-wide collection of food scraps for composting by 2024. The County will study the feasibility of a public/private partnership for anaerobic digestion of food scraps at the Little Patuxent Water Reclamation Plant.

### **5.3.4 INCREASE RECYCLING OF TARGET MATERIALS**

As additional recyclable materials become compatible with existing collection systems and if stable, long-term, cost-effective markets exist, materials will be added to be curbside collection programs and to the recycling program at the ARL.

### **5.3.5 PLAN FOR SOLID WASTE DISPOSAL AND FUTURE LANDFILL CAPACITY**

Howard County plans to use the annual option to extend its current contract for solid waste export until 2023, as long as this is the most cost effective solution. During the contract period, regional Waste-To-Energy and other options will be explored. If necessary, landfill bans of targeted material will be considered.

#### **5.3.5.1 Alpha Ridge Transfer Station**

Howard County will monitor the need for expansion of the County transfer station at ARL to be used for Howard County's waste transport needs.

#### **5.3.5.2 Maintaining Capacity at Alpha Ridge**

The County will explore landfill mining to recover air space between 2018 and 2020. Additionally, the need for a new cell at the ARL will be evaluated on an annual basis. Approximately two years would be required to design and build a new fill cell at the Landfill. If available space is projected to drop below a two-year capacity, the County will initiate design and construction of a new cell.

### **5.3.6 REDUCE GREENHOUSE GAS (GHG) RELATED TO SOLID WASTE ACTIVITIES**

Howard County will continue to operate the landfill gas-to-energy system, and will evaluate the usage of electric vehicles and equipment powered by the landfill gas-to-energy system or by solar power. The County will also evaluate alternative technology for energy. Aerobic composting will be used to reduce methane generation and reduce landfilling of GHG-producing organics.

### **5.3.7 CONTINUE AND INCREASE EDUCATION AND OUTREACH**

Throughout the 10-year planning period, the County will continue and expand its public education and outreach programs to residents, businesses, institutions and schools. The County maintains a website at <http://www.howardcountymd.gov/departments.aspx?ID=815> with extensive solid waste and recycling information. Examples of current informational brochures are attached as Appendix D.

## **5.4 REGIONAL COORDINATION**

As several regional jurisdictions have procured long-term disposal capacity, a new regional waste disposal procurement effort has not been necessary to date. The County, however, will continue active participation in the Authority to seek regional options for solid waste management, in order to ensure that regional solutions are available for environmentally sound and cost effective solid waste management.

## **5.5 TIMING OF SOLUTIONS**

The County will ensure that reliable options exist for solid waste processing and disposal that allow a lead time of ten years for planning and construction of new facilities or development of new programs.

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

### 5.6 RECYCLING PLAN

This Plan integrates the County's recycling and waste reduction program into the overall solid waste management strategy. Howard County's recycling system includes four major elements:

- ◆ Comprehensive collection of residential recyclables, yard trim and food scraps;
- ◆ Collection of a variety of other wastes for recycling such as used motor oil, antifreeze, wood waste, electronics, carpet, roof shingles and others;
- ◆ Processing and marketing of collected materials; and
- ◆ A public education and promotion program.

Recycling, waste reduction and waste collection/disposal programs included in the Plan complement each other and are designed to provide a comprehensive approach to managing the County's waste stream.

The County's waste export contract for disposal of waste (after recyclables have been removed), results in decreases in disposal costs as residential, County government buildings, downtown Ellicott City and Public School recycling increases. Since the County compensates the disposal contractor according to actual quantities of waste received, costs will decrease whenever disposal quantities decrease due to greater recycling or waste reduction.

Howard County has been successful in exceeding the State's minimum recycling goal of 35 percent by December 31, 2015, set by Recycling Rate and Waste Diversion – Statewide Goals Act (2012). The State's voluntary waste diversion goal is 60 percent. The County's future success will be measured by reaching 75 percent recycling by 2030, as required by PlanHoward 2030, but this is dependent upon increased participation by all waste generating sectors.

In the commercial sector, the recycling program includes a regional effort to provide technical assistance to businesses, including efforts focused on regional market development.

The County's existing comprehensive recycling program is fully described in Chapters 3 and 4. The recycling program incorporates several major components including public education, recyclables processing and marketing, yard trim and food scraps management and a "buy recycled" policy.

As is presented in Exhibit 3-17, Chapter 3, quantities of materials recycled from the residential sector (not including apartments) are projected to increase from 55,572 tons collected in 2013 to about 63,850 tons projected in 2024. This is approximately a 15 percent increase during the planning period, as the result of an increase in the number of County residences, as well as an increase in the overall recyclables capture rate from 32 percent to 36 percent with a goal of 75 percent by 2030.

The County's processing contractors have the flexibility to expand their operating hours and use alternative or additional final markets when quantities delivered to them increase. Adequate private MRF capacity is currently available to the County and is projected to be available during the planning period. However, it is noted that only one recyclables processor (WM Recycle America LLC) is located within the area designated by the County as acceptable for direct delivery of recyclables by collection vehicles. New processing facilities are being considered in the area. The failure of a single vendor would be disruptive to the operation of County recycling programs. Therefore, consideration may be given to the implementation of a regional MRF operated by the Maryland Environmental Service or the Authority. Based on the result of a feasibility study, the County, in cooperation with one or more other jurisdictions in the region, may elect to pursue construction of a regional MRF during the planning period.

The Recycling Division conducts surveys of residents in the spring and summer. Survey data consistently shows 90 to 98 percent of households participate in the program at least once per month.

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

The objective is for residents to recycle more and more often. Based on Anne Arundel County and Montgomery County waste sort, approximately 50 percent of the items now in the trash are recyclable materials. Education and outreach as described in this plan will need to be continued and expanded to increase the recycling rate.

Howard County plans to continue to support the development of recycling markets through its participation in regional initiatives coordinated by the Authority. The County recognizes that converting discarded items into marketable new products is an essential element of recycling. When businesses are developed locally that use recycled materials as raw materials, greater economic value is realized due to lower costs for transportation of the recyclable material, as well as local job creation. An important element of this policy is to support local businesses that manufacture or otherwise participate as suppliers of recycled products and which serve the County's economic development objectives.

Howard County, in conjunction with the Authority and the County's Economic Development Authority, will support efforts to expand opportunities for existing and new local intermediate processors of recycled materials and manufacturing firms that use recycled (secondary) materials as feedstock. These efforts will be in cooperation with the Maryland Department of Business and Economic Development and MDE.

The Authority provides technical assistance to businesses in member jurisdictions. Staff from the Authority conduct site visits to interested businesses, offer assistance in refining existing recycling and waste reduction programs, and assist with the development of new programs. Moreover, the Authority has worked to implement regional market development programs for member jurisdictions, most notably for recycled glass. These efforts by the Authority are ongoing.

The Authority maintains a recycling website, [www.mdrecycles.org](http://www.mdrecycles.org), for businesses and residents. They also publish a quarterly newsletter, in PDF format, with editions dating from 2006 to 2014 available on their website at <http://www.nmwda.org/leadership/newsletters.shtml>.

Businesses, industry, and institutions provide for their own recycling activities, except for a portion of downtown Ellicott City, Howard County Public Schools, and County buildings. Each year the Recycling Division requests information regarding types and quantities of materials these generators recycle. Recently several of the large generators have not been cooperative in furnishing information in a timely fashion. The County will continue to evaluate whether a mandatory business reporting requirement will be enacted.

### **5.6.1 RECYCLING CONSTRUCTION, DEMOLITION AND LAND CLEARING DEBRIS (C&D)**

Like MSW, C&D is a mixture of several materials. Recycling opportunities exist for C&D, but in Howard County, and elsewhere in the mid-Atlantic region, this is dependent upon generators separating marketable materials and delivering them to markets. Ameriwave, LLC operates the only facility in the County currently accepting, separating and recycling this type of material.

Ameriwave separates and markets wood, metal, wallboard, concrete and bricks. Other materials may be recycled as markets develop. The County accepts asphalt shingles at the Residents' Convenience Center for recycling. Concrete is recycled by privately-operated crushing and screening facilities in the region. Waste asphalt generated from road and parking lot construction may be recycled under certain conditions by paving contractors. Howard County does not plan to provide recycling services for C&D during the planning period, as the private sector currently provides adequate opportunity for this material.

Existing C&D facility operators have consistently identified increased government purchases of recycled C&D products as an important way to improve the acceptance and economics of C&D recycling. Howard County will support the Authority in any efforts undertaken to expand use of C&D products in



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

government operations and projects, including road construction, and in providing business development support to C&D recyclers.

Council Bill No. 47-2007, adopted July 30, 2007 and effective July 1, 2008, established green building standards for both public and private building in Howard County. For new public funded buildings (County funding of 30 percent or more) larger than 10,000 square feet, LEED Silver rating is required. A LEED Certified rating is required for new private buildings larger than 50,000 square feet.

With the green building standards and requirements in County Code, waste reduction and recycling is increasing for building construction and remodeling. Contractors are able to source separate materials such as carpet, shingles, sheetrock, wood and metals.

### **5.6.2 FOOD SCRAPS, YARD TRIMMINGS AND WOOD WASTE**

As discussed in Chapter 3 and 4, the County designed and built a food scrap, yard trim and wood waste compost facility, which began operating in 2014. The County plans to expand this facility and to have county-wide food scraps and yard trimmings collection year round by 2024. It is planned that schools will also provide collection of food scraps for composting beginning in 2014, to be fully implemented by 2024.

The County will also study, during 2015 to 2017, the feasibility of a public/private partnership for anaerobic digestion of food scraps at the Little Patuxent Waste Water Treatment Plant. If determined feasible, an RFP for anaerobic digestion of food scraps at the Little Patuxent Plant will be issued in 2017.

Planning and zoning text amendments will be revised during the period of 2015-2017 to allow anaerobic digestion of commercial food scraps, food scraps composting and on-farm composting.

An organics education and outreach campaign will be ongoing from 2014 through 2024, which will include source reduction (buy only what you will use), encouragement of food donation and composting of food that cannot be eaten or donated.

### **5.6.3 SPECIAL EVENT RECYCLING**

County special events permits are issued by the Police Department. Starting October 1, 2015, Environmental Service staff will be added to the agency review of special events permits to determine whether special event recycling applies. Special Events Recycling will apply to any event that:

- (i) Includes temporary or periodic use of a public street, publicly owned site or facility, or public park;
- (ii) Serves food or drink; and
- (iii) Is expected to have 200 or more persons in attendance

If Special Event Recycling applies, the applicant will be made aware of the requirement at the time of permit issuance. Environmental Services staff will then contact the event organizer in writing and specify the following duties and responsibilities of the parties under the current law:

- (i) Provide a recycling receptacle immediately adjacent to each trash receptacle at the special event;
- (ii) Ensure that all recycling receptacles are clearly distinguished from trash receptacles by color or signage; and
- (iii) Ensure that all recyclable materials, such as glass, paper, cardboard, metal and plastic containers, deposited into recycling receptacles at the special event are collected for recycling.

Food scraps should be recycled to the extent feasible based on the availability of food scrap recycling services. Recyclables must be taken to a recycling facility.

At the county's discretion and within 30 days after the event, the organizer must report the amount of trash and recyclables collected at the event; and state ways to improve the amount recycled at future events. Amounts can be reported in weight or volume.

The County may inspect the recycling efforts at each event. Events that do not follow the requirements listed above are in violation of County and State law and may be subject to civil penalties not exceeding \$50 for each day on which the violation exists.

## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

### **5.6.4 PUBLIC EDUCATION AND OUTREACH**

The education outreach and information program operated by the Recycling Division of the Bureau of Environmental Services, which will continue during the planning period, is available to residential and non-residential waste generators, including County agencies, County public schools, institutions and businesses. The County has compiled this information from various organizations plus local, state and federal sources. The County's website also has a separate page for Business Recycling, which is found at <http://www.howardcountymd.gov/BusinessRecycling.htm>. Information on County Employee Recycling is available at <http://www.howardcountymd.gov/CountyEmployeeRecycling.org>. The Howard County Public School System also has a recycling webpage, mentioned above.

Materials available include lists of local service and market providers. County staff are available to visit business locations, schools and events, to conduct audits to identify recycling opportunities and to assist in identifying markets for recyclable materials. The non-residential sector thus benefits from those programs previously described for the residential sector, as well as services targeted specifically toward non-residential waste generators.

The Recycling Division manages media, community outreach and volunteer-assisted programs to promote recycling. The County will continue to provide education and outreach in as many means as possible, evaluating the best options on a regular basis. Direct mailing of postcards, or literature on the envelopes of the tax bills and in water bills, will continue as one of the ways to reach those with residential curbside recycling.

Presentations and exhibits at fairs, festivals, schools and homeowner association meetings will continue and the information and means of communicating with attendees at these events will continue to change and be developed. Hands-on samples of what is recyclable are a good visual and educational technique. Recyclable giveaways draw people to the booth or recycling event, and these will continue, especially with [www.HowardCountyRecycling.org](http://www.HowardCountyRecycling.org) imprinted on the giveaways. Various games, activities and contests will be used to educate people and get them excited about recycling, the environment and making a difference.

Some print media and advertisements will be purchased. Webpages, emails, social media and technology changes that assist in education and outreach will continue to be utilized and expanded as appropriate.

## **5.7 WASTE PROCESSING/DISPOSAL**

### **5.7.1 RESIDENTIAL MSW**

During the last ten-year planning period, between 2003 to 2013, the residential recycling tonnages increased by ten percent and the residential waste tonnages decreased due to changes in additional recyclables and changes from dual stream recycling to single-stream recycling and to County-provided recycling carts or bins, along with increased outreach and education. During this ten-year planning period, from 2014 to 2024, the increases in trash and recycling are expected to be based primarily on population increases.

As described in Chapter 4, the County currently operates one Residents' Convenience Center, at the ARL. This facility is provided for residents to dispose of bulky waste, white goods, used oil, oil filters, antifreeze, cooking oil, wet cell batteries, tires, electronics, cardboard, carpet, Christmas trees and wreaths, clothing and textiles, compressed gas tanks, mattresses and box springs, metal items, polyurethane foam, rigid plastics, roofing shingles, Styrofoam™, wood and yard trim, household trash and single-stream recycling, including glass bottles and jars, cans and aluminum foil, plastic bottles and food containers and mixed paper. Businesses are allowed to deliver recyclable materials to the Convenience Center in small quantities.

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

Building materials are accepted in the Loading Dock trailer at ARL. The Loading Dock is a nonprofit organization which serves as a clearinghouse for new and reusable building materials which are used in revitalizing low-income housing projects.

Household Hazardous Waste, including paint for re-use, is accepted at the Convenience Center on Saturdays only from April through November, and on the first Saturdays in January, February and March. In the future, off season pickups may be added.

It is projected that waste quantities delivered to the Convenience Center will increase ten percent and recyclables quantities will increase 20 percent above 2013 levels during the planning period. As waste and recyclable quantities delivered increase, operational adjustments can be made at the Residents' Convenience Center to adequately manage the materials received. Waste container sizes can be changed and the frequency of servicing containers can be increased. Considering the inherent operational flexibility, the Convenience Center will be adequate to manage waste and recyclables quantities delivered during the planning period for the north and western part of the County.

With a recycling goal of 75 percent by 2030, the County needs to provide more opportunities to recycle and more items to recycle. As the majority of the residents and businesses are in the eastern part of the County, the County plans to purchase property and design, construct and operate an Eastern Recycling Drop-off Center for residents and businesses in eastern Howard County. This drop-off center is projected to accept recyclables only.

The Eastern Recycling Drop-off Center will also provide a permanent storage, receiving and washing area for the various recycling and food scraps carts. The intent is to not accept trash or any items which would require collection of fees. With no fees, the staffing requirements are less and anyone can use the facility. With revenue producing or cost-neutral recyclables, the facility may be self-supporting. With no trash accepted, illegal dumping and other nuisances should be avoided.

With regard to other County owned waste management facilities, it would be neither cost effective nor prudent for the County to provide capacity for non-residential MSW above the 15 percent level noted above. The cost of non-residential MSW processing and disposal is covered by tipping fees paid by private waste haulers. Since the delivery of non-residential MSW to a County facility cannot be assured, the County cannot guarantee that adequate tipping fee revenues will be collected to cover capital and operating costs associated with providing capacity for the processing and disposal of non-residential MSW. Even if the County desired to control non-residential MSW disposal by legislative means, this approach is precluded by court decisions which prevent local interference with interstate commerce.

As discussed in Chapter 4, under a long-term contract between the Authority and WMI, the County will continue delivering waste to WMI's transfer station located in the Annapolis Junction area of Anne Arundel County. The contractor, a national firm, owns landfills in Virginia and Pennsylvania that could potentially be used to dispose of Howard County's waste. The contractor also operates the Wheelabrator Baltimore L.P. Waste-To-Energy facility. The contract specifies that WMI transport waste delivered to the AJTS to its King George Landfill located in King George County, Virginia, for disposal. The contract term for waste export extends until 2022, in one year renewal increments.

Under the terms of the export contract, WMI is obligated to accept a maximum of 1,500 tons per day and a maximum of 150,000 tons per year. The project waste to be exported is not expected to exceed the contract maximums during the planning period. Waste disposal for a major disaster is expected to be covered with these contract maximums.

Changes and timing to the other residential disposal and processing facilities are described in this chapter. The County Transfer Station is described below in the Contingency Plan section. The improvements to the ARL and mining are described in the ARL and Landfill Capacity section.



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

### **5.7.2 NON-RESIDENTIAL MSW**

Private haulers independently engage a processing or disposal facility, or deliver waste to the ARL. In 2013, more than 90 percent of MSW from these generators was diverted from the County's ARL to privately-operated facilities, including transfer stations, Waste-To-Energy facilities and landfills, due to the lower fees at those private facilities. Facilities available to accept non-residential waste from haulers were discussed in Chapter 4. The small quantity of MSW received from commercial haulers at the ARL is delivered by small haulers who likely do not have access to private transfer and disposal facilities, or who must pay relatively high gate prices for waste disposal at these facilities. Small haulers and businesses directly disposing of waste as an incidental activity to their primary business (e.g. – a home improvement firm disposing of renovation waste) may not be able to gain access to alternative facilities which prefer to service larger vehicles.

Distance from collection routes to private facilities effect the overall cost of disposal, so that tipping fees alone at out-of-county facilities cannot be equally compared with the County's landfill tipping fee. In the foreseeable future the combination of transportation costs and private facility tipping fees are projected to remain less than the tipping fee charged at the ARL. The County will monitor deliveries of MSW by commercial haulers, and fees charged by private facilities, and adjust its tipping fee upward should private sector fees change enough to cause quantities of non-residential waste delivered to the ARL to significantly increase over those experienced in 2013. It is projected that less than ten percent of the non-residential waste generated in the County will be directly managed by the County.

### **5.7.3 CONSTRUCTION, DEMOLITION AND LAND CLEARING DEBRIS (C&D)**

Construction, demolition and land clearing debris (C&D) results from construction activities including raising of structures, construction of new buildings or renovations and clearing of land for construction purposes. Materials in this type of waste differ from that of MSW and are for the most part managed in separate systems. A detailed description of the types of materials classified as C&D debris is given in Chapter 3.

C&D debris may be disposed of in MSW landfills or landfills permitted for C&D debris only (rubble landfills), and is allowed in the ARL. The preferred method of disposal is to separate the C&D materials either at the site or at a C&D sorting facility for recycling. While future quantities generated in the County and requiring disposal are significant, it is anticipated that private facilities will continue to be the primary receivers of C&D debris. The tip fee charged at the ARL is substantially higher than that charged by private regional C&D debris landfills. This disparity is projected to continue during the planning period. The County will monitor quantities disposed in the ARL and, if necessary, adjust the tip fee upward to divert this material away from the Landfill. It is anticipated that the ARL will continue to receive approximately 15 to 20 percent of the C&D debris generated by the County. Based on previous assessments, adequate capacity currently exists in the private sector.

The construction of a public C&D disposal facility is not anticipated during the planning period. As described in Chapter 2, the development of a private C&D landfill is permitted by special exception in the County's M-1 zoning districts. In addition, a C&D landfill can be developed on M-2 zoned property upon approval by the Zoning Board of Solid Waste Overlay District status for a property. Any C&D landfill constructed in the County will be required to include a recovery facility to maximize recycling of C&D debris. A proposed C&D landfill not incorporating a recovery facility will not be included in this Plan.

Howard County is receptive to the siting of a private C&D landfill in the County provided all requirements of applicable zoning regulations are met. State regulations require that rubble landfills be constructed with engineered leachate containment liners and leachate collection systems.



## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

Since private companies control most C&D debris disposal capacity in Maryland, it is not known what additional disposal capacity will be provided in the long term. Privately operated landfills located in the mid-Atlantic region outside of Maryland are available to compensate for a reduction, if any, in C&D capacity within Maryland. As noted in Chapter 4, the cost to use such landfills is anticipated to be competitive with in-state lined C&D landfills, although haulers will incur additional costs for long-haul transportation.

The Authority working with MDE, annually reviews C&D generation and available disposal capacity to ensure that adequate capacity remains available. If it is determined that inadequate private C&D disposal capacity will be available on a long term basis, the County will work with MDE and other counties to identify and implement opportunities for regional in-state C&D debris recovery and disposal facilities. As a last resort, the County will consider a capital project with the objective of siting and implementing a C&D debris recovery and disposal facility in the County to receive C&D debris generated in the County. Such a facility could be operated by the County, or by a private vendor under contract to the County.

### 5.7.4 OTHER WASTES

This section addresses other special wastes that are regularly generated in the County. Adequate programs and facilities exist for the management of these wastes through publicly- and privately-operated activities. Capacity exists to manage the predicted quantity increases during future years. The management system for each waste type is anticipated to be maintained during the planning period.

#### 5.7.4.1 Controlled Hazardous Substances (CHS)

Commercial and large quantity generators of hazardous substances must engage a licensed contractor for the collection, transportation, processing and disposal of these materials. The County does not provide services or facilities for these generators. CHS contractors are generally large firms with the necessary resources to direct waste materials to appropriate facilities, such as incinerators or hazardous waste landfills. These facilities are owned by the contractors or other private firms and many facilities are located out-of-state.

Residents may dispose of small quantities of hazardous waste at the Household Hazardous Waste (HHW) facility at the ARL. The facility is open each Saturday from 8:00 am to 4:00 pm from April through November each year. The County currently contracts with Clean Harbors, Inc. for operation of the HHW facility as well as for handling, transportation and processing or disposal of all materials collected.

The HHW collection facility consists of receiving, processing and storage area under roof, as well as a secure storage building designed to withstand explosions and fires. The building provides storage capacity for HHW which is not immediately removed from the collection site. Waste is shipped by the contractor to preapproved disposal facilities. During the planning period the quantity of HHW handled through this collection program is projected to increase about 15 percent from the approximately 245 tons processed in 2013 to approximately 282 tons projected in 2024. The existing program is sufficient to adequately manage the quantities of HHW projected for collection during the planning period; however, as noted in Chapter 4, the County continues to evaluate the need to provide additional HHW collection days. The contractor can provide additional personnel and increased transport frequency to handle tonnage increases. The County anticipates continuing operation of the HHW facility during the planning period as currently configured with the possibility of extra collection days during the planning period.

#### 5.7.4.2 Emergency Spill Management

The Howard County Fire and Rescue Department responds to all reported incidents of releases of hazardous substances and petroleum spills. The Department's capability is adequate for the County's needs. Assessment and needed upgrades of capability, equipment and training programs are conducted

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

on an ongoing basis. Given the adequacy of the existing emergency hazardous spill response program, as described in Chapter 4, the County does not intend to implement a separate, dedicated program to support hazardous substance response at solid waste management facilities.

With regard to petroleum or hazardous waste spills for which the County would need to provide a disposal location for contaminated materials, the County intends to utilize its existing contract with Clean Harbors, Inc. to provide for materials disposal. Under this contract, the County has approved several disposal sites, including fuel blending facilities, incinerators and landfills for hazardous waste disposal. Each facility has been approved to receive specific waste types. The designation of approved disposal sites is flexible, in that the contractor may propose new or replacement sites for County approval as conditions warrant.

### **5.7.4.3 Dead Animals**

The County Animal Control Facility and private veterinary clinics contract with private firms for the collection and processing of dead animals. The County also contracts with a private party for collection of dead animals on the roadways. Farms either bury dead animals on-site or use a private firm for collection and processing. Valley Protein, Inc., with rendering facilities in Baltimore and Winchester, Virginia, is the primary firm providing processing services to the private sector.

In addition, dead animals from farms and veterinarians are incinerated at the Maryland Department of Agriculture facility in Frederick. The County Animal Control Facility contracts with the Frederick facility for disposal of dead animals. The County anticipates continuation of these public and private operations for management of dead animals through the planning period. The existing arrangements with the Department of Agriculture are adequate to manage the projected 390 tons of dead animals generated in the County.

### **5.7.4.4 Bulky Wastes and White Goods**

The Residents' Convenience Center is for use by residents who choose to transport bulky items, or if the resident wishes to dispose of more than the curbside limit of four items per week. Contractors in the County offer bulky waste collection for a fee. However, each year the County landfill has visitors totaling nearly 20 percent of County households who use the Residential Convenience Center. Vehicle counters track the number of daily visitors to the convenience center. An average of 772 vehicles visit the Convenience Center per day, with a high of 2,300 on Saturdays.

Bulky items generated by residents that exceed the weight or dimension restrictions of the curbside collection program may be brought to the Resident Convenience Center. Residents are directed to dispose of items that are primarily ferrous metal, such as metal furniture, bicycles and similar items into a container for scrap metal recycling. Other bulky items may be placed in waste containers, which are either disposed of in the Landfill or transported off-site for export.

The County also provides curbside bulk pickup of trash, scrap metal and rigid plastic recyclables. Roll-off containers are provided to condominiums without curbside collection. The bulky waste is disposed in the ARL or delivered to the AJTS for export. The bulky scrap metal is taken to the ARL scrap metal area to be recycled with the scrap metal dropped off at ARL. The bulky rigid plastics are picked up with the curbside recycling and taken to WM Recycle America for recycling.

Residents may arrange with private parties for the transport and disposal of bulky waste items. Bulky items delivered to the ARL by contracted haulers are treated as commercial waste and are charged the landfill tipping fee, with the exception of scrap metal and white goods which can be deposited in the scrap metal container at the Residents' Convenience Center.

Scrap metal, including white goods, are received at the Residents' Convenience Center during normal landfill operating hours. Metal is accepted from both residential and commercial sources. Delivered

## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

white goods are placed in containers supplied by a contractor who purchases the material from the County (currently United Metal and Iron, LLC). White goods containing refrigerants are initially isolated in a staging area where the contractor, Rapid Recovery, removes the refrigerant prior to placement of the items in the roll-off containers.

The County received approximately 1,740 tons of bulky waste at the Convenience Center in 2013 and is projected to receive about 2,000 tons in the year 2024. The 40 or 50 cubic yard containers into which bulky waste is placed at the Convenience Center can be serviced as frequently as necessary to accommodate increased quantities delivered during the planning period. As a result of this flexibility, the Residents' Convenience Center, which was expanded to add six additional bays for roll-off containers, is adequate to provide for bulky waste disposal needs during the planning period.

### **5.7.4.5 Tires**

Residents may bring up to four tires per year to the Residents' Convenience Center. These tires are stored at the secondary tire storage facility permitted by MDE and located at the ARL Site. Storage of not more than 1,500 tires is permitted at a secondary tire storage facility in Maryland. The County contracts with a private licensed vendor (currently Auston Contracting, Inc.) for hauling and recycling of tires collected at the facility. Collection frequency can be increased as the number of tires collected increases, providing the needed flexibility for future operation. This program has provided a stable outlet for tires since the Maryland law banning their disposal in landfills first became effective in 1994. MDE licenses tire processors, storage facilities and haulers located or operating in Maryland.

Tires delivered to the landfill are estimated to be a relatively small portion of the scrap tires generated in the County, with tire dealers generating and providing for processing and recycling of the majority. Tire dealers and other businesses are not allowed to dispose of tires at the Residents' Convenience Center. The County does not anticipate the need to assume any portion of the tire management activities carried out by tire dealers and other facilities servicing tires. The County anticipates continuing the existing program of collecting a small percentage of tires generated in the County at the Residents' Convenience Center through the planning period.

In 2013 approximately 257 tons of tires were collected at the landfill scrap tire storage facility. Tire tonnage is projected to increase by to about 300 tons by the end of the planning period in 2024. The current storage area is approximately 100 ft. x 100 ft. allowing for storage of up to 1,500 tires. Tires are currently removed at a rate of about once every two weeks, and the removal frequency can be increased as the number of tires handled increases. Therefore, the existing storage site will be adequate for the planning period.

### **5.7.4.6 Wastewater Treatment Plant Sludges**

The County's Little Patuxent Water Reclamation Plant (Plant) provides for treatment of wastewater generated in the portion of Howard County roughly bordered by Maryland Route 108 to the north, Maryland Route 176 to the east, the County's Metropolitan District boundary to the west and the border with Anne Arundel County to the south. Howard County is also served by the Patapsco Wastewater Treatment Plant, which is managed by the Baltimore City Department of Public Works Bureau of Water and Wastewater.

Both the Little Patuxent Plant and the Patapsco Wastewater Treatment Plant have assigned pollution caps to meet the Chesapeake Bay Total Maximum Daily Loads (TMDLs). Both plants either have or are currently undergoing upgrades to Enhanced Nutrient Removal (ENRs). The Little Patuxent upgrade was completed in 2012, and the Patapsco upgrade is planned for completion in 2016.

Pasteurized sludge currently is land applied, but may be marketed as a Class A sludge product. Sludge is transported to spreading sites by a contractor, who is responsible for permitting land application sites, through MDE for Maryland sites, and for land applying sludge in accordance with those permits. As a



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

backup disposal method, in the event that application sites or markets are not available, sludge may be delivered to a regional landfill in accordance with the landfill's operating permit. In recent years, all sludge produced has been land applied at various sites in the region. No sludge is accepted at ARL, and the County has no plans to accept sludge at ARL during the planning period.

The Little Patuxent Plant currently generates 12,000 dry tons of treated sludge annually. This quantity is anticipated to increase to 18,000 tons per year by the end of the planning period in 2024. The current sludge management approach will be adequate to meet the County's needs during the planning period.

### **5.7.4.7 Septage**

Approximately 12 percent of homes in the County are on septic systems that require waste removal as part of periodic maintenance or repair. Private contractors provide this service through arrangements directly with homeowners. The County's Little Patuxent Water Reclamation Plant receives 11.6 million gallons per year of septage from private contractors. Contractors are charged a fee for unloading septage at the Plant. No other permitted septage facilities are located in the County.

Septage waste received at the Little Patuxent Plant is managed in accordance with the County's septage management plan, titled "Management of Hauler Waste in Howard County". Septage handling facilities at the Plant consist of a receiving station which discharges into an aerobic digester. Septage haulers weigh in at the plant scale, then discharge into an inlet which feeds into the septage digester. Plant personnel can inspect and test loads as they flow into the receiving basins. The processed septage is discharged into the headworks of the plant. Septage waste may only be disposed at permitted receiving facilities, which essentially limits acceptance to treatment plants. It is not anticipated that private sector facilities will be implemented to handle this waste. As a result, it is anticipated that all septage waste will be received at public treatment plants.

The Little Patuxent Plant has capacity for receiving greater quantities from contractors, should the need exist. The Plant facilities and contracted services will be adequate to handle the projected sludge and septage volumes produced during the planning period, and the County anticipates continuing to offer the service of receiving and treating septage through the planning period.

### **5.7.5 OTHER NON-HAZARDOUS WASTES**

#### **5.7.5.1 Non-Hazardous Contaminated Soils**

Generators of soils contaminated with chemicals or petroleum products may dispose of the soil at the ARL under certain conditions. The generator must have samples analyzed for six parameters and the samples must be found to contain less than the maximum concentrations specified in federal and Maryland regulations. If these criteria are met, the generator may dispose of the soil at the landfill after paying the applicable tipping fee. The County receives only nominal quantities of contaminated soils under this program and anticipates continuing to do so during the planning period.

#### **5.7.5.2 Asbestos**

The ARL is permitted to dispose of asbestos. Most asbestos generated from demolition or renovation activities is likely disposed in out-of-County landfills. The County anticipates continuing its practice of accepting asbestos at the ARL. The small tonnage expected to be received has no significant impact on available landfill capacity, and current practice will be adequate for the planning period.

#### **5.7.5.3 Used Oil and Antifreeze**

The County provides for the recycling of used oil and antifreeze by the public at the Residents' Convenience Center. Businesses provide for the recycling of most used oil and antifreeze quantities through contracts with private companies that collect, process and market re-refined oil and antifreeze. Approximately 107 tons of used oil and nine tons of antifreeze were received in 2013. Quantities



## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

received at the Convenience Center are not projected to increase significantly during the planning period. Increased quantities delivered to the Convenience Center can be managed by more frequent emptying of storage tanks by the County's contractor. The existing County receiving facility is adequate for the ten-year planning period.

### 5.7.5.4 Medical Waste

Most medical waste is generated by hospitals and clinics and its management is regulated by MDE. Such facilities utilize private contractors who are permitted to collect, process and dispose of this material. According to the annual report from MDE, two out-of-county facilities received a total of 368 tons of special medical waste for incineration in 2013. Small quantities of medical waste generated by County residents are disposed with residential solid waste.

The current medical waste disposal system, managed by the private sector, is adequate to meet the needs of the County. This system can respond to meet changing needs of the medical industry and the County does not anticipate the need for public processing and disposal facilities for special medical waste.

## 5.8 CONTINGENCY PLAN

Relying on waste export and disposal at private out-of-region facilities, as is the County's current practice, introduces the potential for adverse impacts which the County may not be able to control. For example, a natural disaster, accident or other catastrophe could result in the extended shutdown of a private disposal facility. Likewise, new legislation or regulations, court decisions, or regulatory enforcement actions could cause a facility to curtail or cease operations. To ensure the County's ability to adequately manage its solid waste in the event of such an occurrence, MDE requires development of a contingency plan for each county which relies on out-of-region waste export. The plan must specify the County's method of waste disposal should the contracted disposal locations become unavailable.

The likelihood that the existing waste export system would cease or substantially curtail operations is remote. The County's disposal contractor owns and operates several waste disposal facilities in the mid-Atlantic region. Several of these facilities are projected to have capacity available through the end of the planning period. Other private firms operating disposal facilities within a reasonable distance also have capacity projected to last to year 2024 or beyond. The availability of capacity at multiple facilities is reasonable assurance that the current waste export approach will be adequate for the foreseeable future.

The ARL and Alpha Ridge Transfer Station are the primary components of the County's contingency plan. The County intends to keep the ARL open and staffed with trained personnel and equipment to receive and dispose of waste and support other ongoing operations including:

- ◆ Leachate management
- ◆ The Residents' Convenience Center
- ◆ Recycling Acceptance and Delivery
- ◆ Wood waste mulching and organics (food scraps and yard trim) composting
- ◆ Topsoil manufacturing
- ◆ Scrap tire receipt and storage
- ◆ Household hazardous waste receiving and disposal
- ◆ Electronic waste receipt and storage
- ◆ Ground water monitoring and remediation
- ◆ Landfill gas collection and flaring
- ◆ Landfill gas-to-energy operations
- ◆ Transfer Station Operations

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

- ◆ Bulk Collection from other County agencies
- ◆ Landfilling and site maintenance
- ◆ Landfill mining
- ◆ Other site uses not related to waste management.

The ARL has served as the County's backup waste disposal facility since March 1997 when a contract for residential waste export and disposal by a private firm (WMI) commenced. A new contract with WMI is expected to remain in place through 2022, and the contract includes several alternative approved disposal sites with the option to review and approve additional sites. Based on historical data, during the contract period the ARL will be used for disposal of less than ten percent of the waste generated in the County. The ARL, as a contingent disposal facility, can accept up to 500 tons per day of waste, through the Alpha Ridge Transfer Station, which is projected to be sufficient capacity through 2024. Waste could be transferred directly to a disposal facility or, if no other disposal options were available, disposed in the ARL.

When operated as a backup facility under current conditions, the ARL's current active cell has over 40 years remaining capacity. The Landfill site has approximately 120 years of remaining capacity based on utilization of all acreage permitted for use as fill area. If the County returned to the option of landfilling all waste directly managed by the County, the current active cell would reach full capacity in three years. However, waste export is planned to continue during the planning period as discussed later in this chapter.

Under the contingency plan, failure of the current waste export system would necessitate that residential waste tonnage, and approximately ten to 15 percent of generated non-residential and C&D waste tonnages, (conservatively, 440 tons per day based on year 2024 waste tonnage projections) be disposed at the ARL. In the worst case scenario, disposal at the landfill would be on a relatively long-term basis pending construction of an alternative waste processing facility or development of new contractual arrangements with the private sector. It is estimated that two years would be required to design and construct a new fill cell within the permitted landfill area at the Alpha Ridge site. Therefore, in order for the ARL to remain a viable backup disposal site as identified in the contingency plan, available capacity in an existing lined fill cell must be adequate to provide for disposal of the entire residential waste stream, and approximately ten percent of the non-residential waste and C&D waste stream fraction received at the landfill for at least a two year period.

Should use of the ARL as the County's primary waste disposal location become necessary for an extended time period, the availability of adequate fill capacity for two years would allow adequate lead time for construction of a new fill cell. Presently, analysis of the existing fill cell indicates that, based on projected waste quantities requiring disposal, the existing fill cell at the ARL has adequate capacity for three years. This available capacity is evaluated annually based both on landfill scale data and aerial topography. A capital project will be initiated to design and construct a new fill cell at such time as available capacity is projected to drop below a volume adequate for two years.

As noted in Chapter 4, the County has constructed a 500-ton per day capacity transfer station at the ARL. While the Transfer Station is utilized to transfer waste received at the landfill to the AJTS for export under the County's contract with WMI, the County Transfer Station will be used on a contingency basis as the need arises. Should the AJTS become unavailable due to a natural disaster or other catastrophe, waste collected by the County can be directed to the County Transfer Station for direct transport to the King George Landfill or alternative County-approved site. Similarly, should the current waste export contract be terminated or otherwise become unusable, the Alpha Ridge Transfer Station can receive waste collected by the County for export to an alternative disposal location. Under such a contingency, it is projected that waste deliveries to the County transfer station at the end of the planning period (2024) would approximate 440 tons per day.

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

The County transfer station also can provide for emergency needs in the event that a processing component of the County's recycling plan stops receiving collected recyclables. A Materials Recovery Facility (MRF) could become unavailable due to natural disaster, catastrophe, or a contract dispute. Collected recyclables could be delivered to the Alpha Ridge Transfer Station for transport to an alternative processing facility on a short or long term basis. To prevent commingling of waste and recyclables, waste could be diverted to the landfill face for disposal, if necessary, or with the expansion of the building for composting, separation between materials can be built into the structure.

Should the acceptance and transfer of recyclables at the County Transfer Station become a long-term arrangement, the Transfer Station could be used to provide capacity for both recyclables and waste transfer. Similarly, the County Transfer Station can provide for the long-term transfer of County-collected waste should current export arrangements become permanently unavailable. In this case, the Transfer Station would be able to process the amount of commercial waste received from private haulers which would increase above the current projected ten percent fraction. The Transfer Station and materials processing building would have a capacity of handling approximately 1,000 tons per day.

### 5.9 PUBLIC AND PRIVATE FACILITIES

This Plan provides for County programs and facilities required to manage specific categories of solid waste. Facilities and programs that are part of the County system (public) will be provided by the County, by contract with private firms, or in cooperation with other local governments in the region.

County facilities and contracts with private firms are not intended to discourage participation by the private sector in solid waste management. Some public-private partnerships may be considered. Current private facilities must be in conformance with applicable zoning and other legal requirements and must be identified in this Plan.

In Howard County, all solid waste facilities must comply with County zoning requirements, the County's Comprehensive Zoning Plan, PlanHoward 2030 (Howard County's 20-year comprehensive plan update) and the County's Plan.

For a proposed private solid waste facility in Howard County to be included in the County's Plan, the following steps must be taken prior to applying for County or MDE permits:

The applicant shall submit a Business plan that includes:

- ◆ The purpose of the business;
- ◆ A description of the history, organizational hierarchy and ownership;
- ◆ General material processing information;
- ◆ A list of materials that will be processed;
- ◆ Waste disposal requirements;
- ◆ Information detailing environmental impacts of procedures and products;
- ◆ Insight into what will make the business successful;
- ◆ A schedule for placing the facility into operation;
- ◆ Closure and financial assurance information;
- ◆ Benefits to the County;
- ◆ Howard County issued Planning and Zoning reports and information; and
- ◆ Identification of any other issues that may arise; and
- ◆ A Marketing section, which shall include
  - ◆ markets for finish product;

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

---

- ◆ customers and their location;

Following the review of the above information, the County will determine if the information provided is consistent with the Plan. If the new facility is consistent with the Plan, a letter will be written to the Department of Planning and Zoning and to the applicant stating such. From that point on the firm can continue with the Planning and Zoning process and petitioning the County Council for inclusion in the Plan.

Businesses that are not yet operating six months after the projected operation date described in their business plan must update their business plan or risk being considered “not consistent”.

Several categories of waste generated in the County are projected to be processed or disposed at privately-owned facilities. Some waste types such as special medical waste and controlled hazardous substances (CHS) are managed exclusively outside the County-operated solid waste management system. Other waste types such as tires, bulky waste, C&D debris, dead animals, septage and asbestos are partially managed outside the County system. This Plan does not address the development of facilities to manage wastes diverted to private facilities by private collection operations which the County does not control.

### 5.9.1 ALPHA RIDGE LANDFILL AND LANDFILL CAPACITY

Historically, the County planned to receive and provide for disposal capacity of virtually all post-recycling MSW quantities generated by businesses, industries and institutions in the County except special medical waste and CHS. From a practical standpoint, the County has experienced a substantial decrease in the non-residential MSW being delivered to the ARL, beginning in 1990 when the tip fee was increased from \$18 to \$40 per ton. In addition, disposal alternatives available to private haulers were limited until additional private facilities became available in the 1990s, primarily privately-developed out-of-state regional landfills. By 1995 less than 25 percent of estimated quantities of non-residential MSW generated were delivered to the ARL. Deliveries to the ARL have decreased further to less than ten percent of estimated generation in 2014.

Given the availability of private facilities, notably regional landfills in Virginia and Pennsylvania, it is reasonable to assume that most non-residential MSW will continue to be disposed at these facilities rather than through the County-operated system. In fact, the County has encouraged and will continue to encourage this practice by charging disposal fees at the ARL which are higher than fees charged at the private facilities. It is unlikely that a new landfill to replace the ARL can be sited in Howard County due to the lack of an available site of suitable size in an acceptable location. Therefore, the County desires to maximize the life of the Landfill by minimizing the waste quantities disposed there.

As discussed under the Contingency Plan, Section 5.8 above, Howard County owns and operates one facility for the disposal of solid waste, the ARL. In conjunction with the waste export system utilizing the AJTS discussed previously in this chapter, it is projected that a relatively small amount of waste will continue to require disposal at the ARL. Several options for landfill capacity have been analyzed.

#### 5.9.1.1 First Option

The current planned option consists of continuing to use the waste export contract. It is assumed that all waste will be exported with the exception of approximately 10 tons per day of the non-residential waste which is unacceptable for export and is received at the landfill for burial. Under this option, the capacity will be sufficient until well past the end of the planning period.

#### 5.9.1.2 Second Option

If the current waste export contract with WMI were discontinued for some reason and the County disposed all residential waste and approximately ten percent of the non-residential waste and C&D waste generated in the County at the ARL, the remaining landfill life is estimated at 24 years. This projection



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

assumes that non-residential waste currently delivered to private facilities continues to be managed privately. Under this option, the capacity will also be sufficient until well past the end of the planning period.

### **5.9.1.3 Third Option**

If the County sent all the waste currently being exported to a WTE, buried the ash and continued the minimal landfilling of materials not acceptable at a WTE facility, the capacity will be sufficient until at least the end of the planning period. An alternative for this option, which would extend the life of the ARL, would be to send all the waste currently being exported to a WTE, with the ash landfilled at an out-of-county landfill.

### **5.9.1.4 Increasing Landfill Capacity through Food Scraps Recycling**

Food Scraps Recycling is another method of increasing landfill capacity at ARL or any facility where the waste is taken. Assuming a county-wide program with ten percent reduction in residential trash, food scraps recycling could provide additional years of capacity for option two above (all waste buried at ARL) or for option three (WTE ash either returning to ARL or landfilled in an out-of-county landfill) once the program is full scale.

## **5.9.2 LANDFILL MINING**

Landfill mining is the removal of usable soil, metal, plastics and glass for recycling or reuse. Valuable air space or landfill capacity can be gained from landfill mining. As noted previously in this Plan, it is unlikely that a new landfill will be constructed in the County due to the lack of availability of a suitable site. As a result, a major goal of this Plan is to maximize the life of the ARL. The current system minimizes the quantity of waste disposed at the landfill. To further extend the facility's useful life, the County is evaluating the feasibility of "mining" previously buried waste. The County has also studied the option of landfill mining to reclaim space in the existing fill cell.

If feasible, and after operating permit issues are resolved, excavated waste can be processed (by screening, etc.) on site to separate components for further management. It is anticipated that material acceptable for use as daily and intermediate landfill cover will be recovered and stockpiled. Specific materials (metal, glass) may be recovered for processing as recyclables. At this time and for the foreseeable future there is little demand or value for mud-covered plastic, glass and tires. Recovered wood, if not already decomposed could be removed and composted, or allowed to continue to decompose with the trash. Metal is the only recyclable material recoverable that may have value.

Remaining waste that cannot be reused or recycled may be transported for disposal, through the AJTS or the Alpha Ridge Transfer Station, to a contracted landfill, currently King George Landfill in King George County, Virginia. In the event that, in the future, Howard County contracts for disposal with one of the WTE facilities in the region, the remaining waste could be transported to that WTE facility.

Another option is to remove and recover excessive soil within the waste mass and return the waste to the landfill cell. Given the current disposal costs, transportation costs and processing costs, excavating and exporting waste would be more expensive than the tip fee recovered. Therefore, waste export is not considered a useful option at this time.

Prior to implementation of a mining operation, an operations plan detailing operating procedures, sample analysis requirements, and other considerations will be prepared, as required by MDE.

Three landfill mining options have been evaluated.

### **5.9.2.1 First Option**

This option includes removing only the excess soil cover on the Landfill. Due to various factors, excessive soil cover was used on the Landfill, and varies from 8 inches to 16 feet deep. By removing the

## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

soil and keeping the minimum required cover, 230,000 cubic yards or 126,500 tons of capacity can be obtained for an estimated \$10.68 per cubic yard, or \$19.42 per ton. The total cost is estimated to be \$2,456,000. The value of the airspace gained would be \$8,200,000. The airspace created would be about one year of disposal.

### **5.9.2.2 Second Option**

The second option includes removing all the excess soil and about half of the waste. The waste would be screened to separate the components. The material would be separated into clean cover soil (soil separated from the waste to be used as cover material), recyclables and waste to be reburied. 187,500 cubic yards or 103,100 tons of capacity can be obtained for an estimated \$23.80 per cubic yard, or \$43.30 per ton. The total cost is estimated to be \$4,470,000, and the value of the airspace would be \$6,700,000. It is estimated that this option would extend the life of the Landfill by one year.

Other mining projects in Maryland have required proper disposal of tires and other now-prohibited wastes. The value of the recovered and recycled materials (metal) is estimated to only cover the additional costs for disposal of tires and prohibited wastes.

### **5.9.2.3 Third Option**

The third option includes removing all the excess soil and all of the waste down to the initial lift. The waste would be screened as in option two. The material would be separated into clean cover soil, recyclables and waste to be reburied. 430,000 cubic yards or 236,000 tons of capacity can be obtained for an estimated \$38.28 per cubic yard, or \$66.00 per ton. The total cost is estimated to be \$15,600,000. The value of the airspace gained would be \$15,300,000. It is estimated that this third, more extensive option, would extend the life of the Landfill by two years.

As mentioned above, other mining projects in Maryland have required proper disposal of tires and other now-prohibited wastes. As in the second option, the value of the recovered and recycled materials (metal) is estimated to only cover the additional costs for disposal of tires and prohibited wastes.

### **5.9.3 ALPHA RIDGE TRANSFER STATION**

In 2005, Howard County constructed a 500 ton per day transfer station at the ARL. Waste is transferred to the AJST, and then transported to the King George Landfill in Virginia. In the event of one or more of the current facilities being unable to accept waste, the County could transfer waste directly to one of the landfills or WTE facilities in the region. (Exhibit 4-4, in Chapter 4, lists the facilities in the region with their distances from the ARL.)

### **5.9.4 ALPHA RIDGE RESIDENTS' CONVENIENCE CENTER**

The Residents' Convenience Center at the ARL accepts solid waste and recyclables at no cost to Howard County residents. Proof of Howard County residency must be shown before using the facility, however. The Convenience Center operates six days per week from 8:00 a.m. to 4:00 p.m., and, as described in Chapter 4 and above, accepts a large variety of recyclable material as well as solid waste. As more materials can be economically recycled, the County will expand the recycling opportunities at the convenience center during the planning period.

Considering the inherent operational flexibility, including the ability to utilize other County agency truck drivers on Saturdays or in emergencies to provide additional staffing and flexibility to meet the needs, the convenience area will be adequate to manage waste and recyclables quantities delivered during the planning period. However, the County will continue to monitor the center to determine if additional expansion is needed.

## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

### **5.9.5 ALPHA RIDGE COMPOSTING FACILITY**

The Howard County pilot compost facility at the Landfill began accepting yard trim and food scraps from the pilot curbside area in April 2013. In September 2013, a second collection zone was added to the program. A third zone is scheduled to begin in the fall of 2014, with the plan to eventually offer this service county-wide.

In FY 2013, the Office of Purchasing awarded Chesapeake Compost Works, Benefit, LLC a one-year contract for the acceptance, processing and marketing of food scraps and yard trim. This contract, with a value of \$60,500, has the option for three one-year renewals. This is a back-up contract to provide a contingency option in the event of the composting facility at the ARL being temporarily unable to operate.

### **5.9.6 EASTERN RECYCLING DROP-OFF CENTER**

As discussed previously, the County is planning to purchase property and to design, construct and operate an Eastern Recycling Drop-off Center during the period of 2015 through 2017. The eastern portion of the County is where a large percentage of the population and businesses are located. This drop-off center would accept recyclables only. With no trash accepted, illegal dumping and other nuisances should be avoided.

This drop-off center will provide for increased recycling in the eastern portion of the County, and will also provide more capacity for recycling in the event that recycling increases more than projected.

## **5.10 FINANCING AND FUNDING**

Howard County funds solid waste management capital and operating costs through an Environmental Services Fund (ESF). The ESF funds all administrative and operational costs for residential waste collection and waste disposal and all administrative costs for recycling processing and public outreach. The County also provides waste and recycling collection services for a small commercial area in the Ellicott City Historic District.

### **5.10.1 RESIDENTIAL REVENUE**

The primary revenue source for the ESF is the Refuse Collection Charge assessed on each improved residential real property (detached homes, town homes and condominiums) that are on public roads and some on private roads that have provided a damage waiver. All residents in the program are assessed the same annual amount for trash and recycling collection, currently \$210 per year, and an additional \$15 per year for yard trimmings and food scraps, which is billed on the property tax bill. For those private areas who wish to receive only recycling collection the charge is \$39 per year. Low income residents can contact the Department of Finance to determine if they qualify for a reduced rate.

### **5.10.2 COMMERCIAL REVENUE**

Businesses in this County collection area may select a waste collection frequency of two to four times per week. Each commercial property served pays a Refuse Collection Charge of \$210 per year for each weekly collection received. Revenue generated accrues to the ESF and costs for refuse collection and disposal for this small commercial area are paid from the ESF. The fees are established annually by resolution of the County Council based on the projected operating budget. First implemented in 1995, the Refuse Collection Charge is an adequate and stable method to cover assigned costs.

### **5.10.3 OTHER REVENUE**

Other significant revenue sources for the ESF include landfill tipping fees (currently \$65/ton); revenue from sales of recyclables; sales of various products such as mulch, topsoil, compost; and user permit fees.

## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

### **5.10.4 RECYCLING PROCESSING AND MARKETING**

As described in Chapter 4, the County contracts with private firms for processing and marketing of recyclables collected from the residential sector. Currently, Howard County contracts with WM Recycle America for processing services for the single-streams recyclables collected.

Contracts are structured on a per ton tip fee basis with no minimum or maximum tonnage commitment other than the provision that the contractor will receive all materials collected. The County receives revenue based on market value. With the current contract, no processing fee, over and above the tipping fee, is paid to the contractor. Materials are delivered to the Materials Recovery Facility (MRF) from residential collection routes, downtown Ellicott City, Public Schools, County government buildings and from the Alpha Ridge Residents' Convenience Center.

Current contractual arrangements with the MRF contractor also provide flexibility to expand the contractor's services to add additional materials, if collection by the County is deemed feasible. The cost and logistics of adding any specific new material for processing must be worked out with the contractor prior to adding it to the collection program.

### **5.10.5 CAPITAL COSTS**

General Fund revenues support most capital costs for new solid waste management facilities and improvements. Capital costs include major operating equipment for the Residents' Convenience Center and ARL; new landfill cell and cell closure construction; transfer station construction; and remediation system construction.

If the food scraps anaerobic digester moves forward, the cost will come either from the General Fund or the Utility Fund, as the Little Patuxent Water Reclamation Plant will be able to significantly reduce the amount of electricity it purchases from the electric company.

### **5.10.6 SUMMARY OF FUNDING SYSTEM**

Howard County's funding system is structured to equitably distribute costs for solid waste programs and facilities. Costs that can be completely attributed to residential property (i.e. residential waste collection and disposal) are paid by the Refuse Collection Charge. Other costs resulting from solid waste management activities of prior years (i.e., landfill cell closures and remediation systems) are paid from the County General Fund.

The County anticipates continuing the use of the combination of the General Fund and the Environmental Services Fund, as currently structured, during the planning period. These revenue sources are adequate to cover solid waste management costs. The annual refuse fee and the tipping fees may need to be revised from time to time to cover costs.

## **5.11 FACILITY CLOSINGS**

No solid waste management facilities owned or operated by Howard County are scheduled to close during the planning period. The ARL, which began operation in 1981, is projected to remain open well beyond the end of the planning period.

## **5.12 DESCRIPTION OF ACTION PLAN**

### **5.12.1 INCREASE SOURCE REDUCTION AND REUSE**

In order to increase source reduction and reuse in Howard County, source reduction outreach campaigns directed at consumers and businesses will be conducted. The County plans to continue to provide compost bins to residents and to promote their use. The current paint reuse programs are very successful, and the County will continue with these programs.



## **CHAPTER 5: IMPLEMENTATION/ACTION PLAN**

---

Beginning in 2017 the County plans to explore opening a swap shop/reuse center, which should further reduce the amount of usable items being landfilled.

### **5.12.2 INCREASE RECYCLING**

New programs required by State law, including special event recycling and apartment and condo recycling, should significantly increase the commercial recycling rate. Business recycling reporting will be increased either voluntarily or through mandate. This will assist in more accurate reporting, but should also encourage the businesses to recycle more. Working with Planning and Zoning to require designated recycling areas in new construction projects will make recycling more convenient in those new buildings.

When the Eastern Recycling Drop-off Center is operating, this will also increase commercial recycling, as the businesses and apartments in the eastern portion of the County will have a more convenient place to take recyclables. Both residents and businesses will have the opportunity to recycle more as markets for new materials develop.

The County plans to promote recycling opportunities in Public Schools and to encourage all residents and businesses to participate in zero waste activities. The County will also investigate Pay-As-You-Throw (PAYT) collection systems to determine whether or not implementation of PAYT would increase residential recycling.

### **5.12.3 INCREASE ORGANICS DIVERSION**

Between 2014 and 2020, the County will phase-in the expansion of the residential food scraps residential collection county-wide with year round collections. In order to have the capacity for a full county-wide program, during the same time period, the County will design, construct and operate an aerobic organic composting processing facility including food scraps, yard trimmings and wood waste for residential use at ARL.

In order to collect the large amount of commercial food scraps generated, between 2015 and 2017 the County will study the feasibility of a public/private partnership for anaerobic digestion of food scraps at the Little Patuxent Water Reclamation Plant (LPWRP). If found feasible, in 2017 an RFP will be issued for anaerobic digestion of food scraps at the LPWRP.

To remove any barriers to food scrap composting, the County plans to revise planning and zoning text amendments to allow commercial food scraps anaerobic digestion, food scraps composting and on-farm composting.

The County will conduct an organics education and outreach campaign, including encouraging food donation. Public school food scraps collection and composting is also anticipated.

### **5.12.4 INCREASE RECYCLING OF TARGET MATERIALS**

To increase the recycling of target materials, the County will add materials to the curbside recycling program as markets and technology develops, provided collection is compatible with the existing collection systems and if stable, long-term and cost-effective markets exist. The County will also continue to accept additional recyclable material at the ARL, as stable, long-term and cost-effective markets develop.

### **5.12.5 SOLID WASTE DISPOSAL**

The current practice of exporting the majority of the waste generated within the County will continue. Landfill mining will be pursued in order to recover air space and extend the life of the landfill. As necessary, the Alpha Ridge Transfer Station will be expanded to handle an increase in daily tons. The County will also continue to evaluate the regional WTE options.

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

If it is determined that less than three years of life remain in the active cell at ARL, the County will design and construct the next landfill cell. The County will also consider a landfill ban of targeted recycling material.

### 5.12.6 ENERGY AND GREENHOUSE GAS (GHG) REDUCTIONS

During the planning period, the County will continue to operate the landfill gas-to-energy system, and will evaluate the use of electric vehicles and equipment powered by the landfill gas-to-energy system or by solar power. The County will also evaluate alternative technology for energy.

As landfilling of organics generates methane and produces GHG, the County has begun a program of aerobic composting of organics at the ARL. This program reduces landfilling of organics and, thus, reduces methane generation. This program will continue, and will be expanded during the planning period.

### 5.12.7 EDUCATION AND OUTREACH

The County will continue and expand the public education currently provided. This will include outreach campaigns:

- ◆ to residents on the importance of reducing Greenhouse Gases and reducing waste disposed,
- ◆ to businesses on the importance of reducing Greenhouse Gases and reducing waste disposed, and
- ◆ to residents to promote the reduction of plastic bags for yard trim.

The County will conduct education and outreach programs in schools, and will conduct business waste audits, as well as reduction/recycling education for businesses. The County will also develop a business recycling recognition program to encourage recycling competition among businesses.

A summary of the action steps to be taken during the planning period are listed in Exhibit 5-1. This action plan is designed to move Howard County to 75 percent recycling by 2030, as specified in PlanHoward 2030.

**Exhibit 5-1 Summary of Solid Waste Management Action Steps**

Action Step	Timeframe
<b>Action Step 1 – Increase Source Reduction and Reuse</b>	
Conduct a source reduction outreach campaign directed at consumers	2014 - 2024
Conduct a source reduction outreach campaign directed at businesses	2014 - 2024
Explore the operation of a swap shop/reuse center	2017 - 2024
Continue to give away compost bins and promote their use	2014 - 2024
Continue paint reuse programs	2014 - 2024
<b>Action Step 2 – Increase Recycling</b>	
Investigate Pay-As-You-Throw (PAYT)	2014 - 2024
Address state mandated special event recycling law	2014
Enforce Apartment and Condo recycling law	2014 - 2024
Increase organics collection and separation	2014 - 2024
Purchase property, design, construct and operate an Eastern Recycling Drop-off Center	2015 - 2017

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

Action Step	Timeframe
Expand recycling drop-off opportunities as markets for new materials develop	2014 - 2024
Business recycling reporting increased by voluntary or mandated means	2014 - 2024
Promote school recycling opportunities	2014 - 2024
Encourage zero waste activities	2014 - 2024
Work with Planning and Zoning for designated recycling areas in new construction projects	2015 - 2024
<b>Action Step 3 – Increase Organics Diversion</b>	
Phase-in the expansion of the residential food scraps residential collection county-wide with year round collections	2014 - 2020
Design, construct and operate, at Alpha Ridge Landfill, aerobic organic composting processing facility including food scraps, yard trimmings and wood waste	2014 - 2020
Study feasibility of a public/private partnership for anaerobic digestion of food scraps in Howard County	2015 - 2017
If determined feasible, RFP for anaerobic digestion of food scraps in Howard County	2017
Revise planning and zoning text amendments allowing commercial food scraps anaerobic digestion, food scraps composting and on-farm composting	2015 - 2017
Public schools to provide food scraps collection and composting	2014 - 2020
Encourage food donation	2014 - 2024
Conduct an organics composting education and outreach campaign	2014 - 2024
<b>Action Step 4 – Increase Recycling of Target Materials</b>	
Add materials to the curbside recycling program if collection is compatible with existing collection systems and stable, long-term, cost-effective markets exist	2014 - 2024
Continue to add acceptance of additional recyclable material at the ARL as stable, long-term and cost-effective markets develop	2014 - 2024
<b>Action Step 5 – Solid Waste Disposal</b>	
Continue waste exporting	2014 - 2024
Landfill mining to recover air space	2016 - 2018
Continue to evaluate the WTE regional options	2014 - 2024
Continue to assess the capacity of Alpha Ridge Transfer Station to handle daily tons as required	2014 - 2024
Continue to assess the capacity of the current landfill cell	2014 - 2024
Design and construct new landfill cell when 16.5 percent of the current cell is left	2023

## CHAPTER 5: IMPLEMENTATION/ACTION PLAN

Action Step	Timeframe
Assess landfill ban of targeted recycling material	2014 - 2024
Action Step 6 – Energy and Greenhouse Gas Reductions	
Continue to operate the landfill gas-to-energy system	2014 - 2024
Electric vehicles and equipment powered by the landfill gas-to-energy system or by solar power will be evaluated for usage	2014 - 2024
Aerobic composting to reduce methane generation and reduce landfilling of organics which produces GHG	2017 - 2024
Evaluation of alternative technology for energy	2014 - 2024
Action Step 7 – Education and Outreach	
Outreach campaign to residents on importance of reducing Greenhouse gases and reducing waste disposed	2014 - 2024
Outreach campaign to businesses on importance of reducing Greenhouse gases and reducing waste disposed	2014 - 2024
Outreach campaign for the reduction of plastic bags for yard trim	2014 - 2024
Conduct business waste audits and reduction/recycling education	2014 - 2024
Establish a business recycling recognition program	2014 - 2024
Conduct education and outreach programs in schools	2014 - 2024



This page intentionally left blank.

---

---

## **APPENDIX A**

### **ACRONYMS AND DEFINITIONS**

---

## Acronyms and Abbreviations

ARL	Howard County's Alpha Ridge Landfill
AJTS	Annapolis Junction Transfer Station
C&D	Construction, Demolition and Land Clearing debris
CHS	Controlled Hazardous Substance
DPZ	Department of Planning and Zoning
EPA	United States Environmental Protection Agency
GHG	Greenhouse Gas
HCC	Howard County Community College
HCG	Howard County Government
HCPSS	Howard County Public School System
LEED	Leadership in Energy and Environmental Design
MDE	Maryland Department of the Environment
MES	Maryland Environmental Service
MRA	Maryland Recycling Act
MSW	Municipal Solid Waste
Plan	Howard County Solid Waste Management Plan 2014-2024
The Authority	Northeast Maryland Waste Disposal Authority
U.S.	United States
USBEA	U.S. Bureau of Economic Analysis
WMI	Waste Management, Inc.

## Landfill Definitions

- (a) *Cell* means compacted solid wastes that are enclosed by natural soil or cover material in a land disposal site.
- (b) *Cover material* means other suitable material that is used to cover compacted solid wastes in a land disposal site.

- (c) *Daily cover* means cover material that is spread and compacted on the top and side slopes of compact solid waste (to densities averaging 593 kilograms/cubic meter (1,000 pounds/cubic yard)) at the end of each operating day in order to control vectors, fire, moisture and erosion and to assure an aesthetic appearance.
- (d) *Director* means the Director of the Howard County Department of Public Works or designee.
- (e) *Final cover* means cover material that serves the same functions as daily cover but, in addition, is permanently exposed on the surface of the disposal area.
- (f) *Free moisture* means liquid that will drain freely by gravity from solid materials.
- (g) *Groundwater* means water present in the saturated zone of the soil; water within the earth that supplies wells and springs.
- (h) *Leachate* means liquid that has percolated or seeped through solid waste and has extracted dissolved or suspended materials from it.
- (i) *Open burning* means burning of solid wastes in the open.
- (j) *Plans* means reports and drawings, including a narrative operating description, prepared to describe the land disposal site and its proposed operation.
- (k) *Runoff* means the portion of precipitation that drains from an area as surface flow.
- (l) *Operating area* means the area where construction of refuse cells is performed within the land disposal site.
- (m) *Salvaging* means the controlled removal of waste materials for utilization in a manner approved in writing by the Director.
- (n) *Sanitary landfill* means a land disposal site permitted by the Maryland Department of the Environment and employing an engineered method of disposing of solid wastes on land in a manner that minimizes environmental hazards by spreading the solid wastes in thin layers, compacting the solid wastes to the smallest practical volume, and applying and compacting cover material at the end of each operating day.
- (o) *Scavenging* means unauthorized removal of solid waste materials.
- (p) *Solid wastes* means garbage, refuse, sludges, and other discarded solid materials resulting from residential, industrial and commercial operations and from other activities of the community.
- (q) *Site* means the entire property, including buffer and operating area, on which the land disposal operation is located.
- (r) *Vector* means a carrier, such as an insect or rodent, that is capable of transmitting a disease-causing agent from one organism to another.
- (s) *Water table* means the highest elevation of saturated groundwater.
- (t) *Working face* means that portion of the land disposal site where solid wastes are discharged and are spread and compacted prior to the placement of cover material.

## **Solid Waste Definitions**

- (a) *Construction Debris* means structural building materials including cement, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation, shingles, floor, wall and ceiling tile, pipes, glass, wires, carpet, wallpaper, roofing, felt, or other structural fabrics. It includes paper or cardboard packaging, spacing, or building materials, provided that they do not exceed ten percent by volume of the waste. It also includes paint containers, caulk containers, or glaze containers, provided that they are empty, and that any residual material is dry and further provided that this waste category does not exceed one percent by volume of the waste.



Construction debris does not include commercial, domestic, or industrial waste or byproducts, paint, tar or tar containers, caulking compounds, glazing compounds, paint thinner or other solvents or their containers, creosote or other preservatives or their containers, tile, paneling, or carpet cement or other adhesives.

- (b) *Demolition Debris* means debris associated with the razing of buildings, road, bridges, and other structures including structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation material, cement, shingles and roofing material, floor and wall tile, asphalt, pipes and wires, and other items physically attached to the structure, including appliances if they have been or will be compacted to their smallest practical volume. Demolition debris does not include industrial waste or byproducts or any waste materials contained within structure or on the grounds of the structure being demolished that are not physically part of the structure, or which are comprised of or certain materials that pose an undue risk to public health or the environment.
- (c) *Land Clearing Debris* means the following waste materials from land clearing operations: earthen material such as clay, sand, gravel, and silt; topsoil; tree stumps; root mats; brush and limbs; logs; vegetation; and rock.
- (d) *Processing Facility* means a combination of structures, machinery, or devices used to reduce or alter the volume, chemical, or physical characteristics of solid waste. A generator who processes his or her own solid waste at the site of generation and disposes of the processed solid waste off the site of generation at a disposal site permitted by the Department is not considered to be a processing facility.
- (e) *Recyclable Material* means any solid waste that is separated from the solid waste stream for collection and return to the marketplace in the form of raw materials or products. *Recyclable Material* includes paper, glass, plastic, aluminum, cardboard, and any other material included in the County's recycling program.
- (f) *Recycling* means any process by which source-separated materials, which would otherwise become solid waste, are collected, separated, or processed and returned to the economic mainstream in the form of valuable materials or products.

---

**APPENDIX B**  
**HOWARD COUNTY MULTI-FAMILY COMMUNITIES**

---

Appendix B – Apartment List

Apartment Complex Name	Street Address	City	Zip	Management Company	Street Address	City	State	Zip
Ashton Green Apts (fmr. Hobbits Grove)	5320 Cedar Ln.	Columbia	21044	Maryland Management	2613 Cabover Dr.	Hanover	MD	21076
Ashton Woods	8401 Oakton Ln.	Ellicott City	21042	Dolben	2600 Midway Branch 2nd fl.	Silver Spring	MD	20910
Autumn Crest Apts.	5664-126 Stevens Forest Rd.	Columbia	21044	Grady Management	8630 Fenton St. Suite 625	Silver Spring	MD	20910
Autumn Woods Apts.	8305 Castleford Dr./8305 Ari Ct. 1a	Jessup	21075	Storch	8930 Baltimore St.	Savage	MD	20763
Avalon at Fair Hills (Fields)	4969 Columbia Rd.	Columbia	21044	Avalon	5204 Tuckerman Ln.	Rockville	MD	20852
Avalon at Fairway Hills (Meadows) Apt.	5441 Columbia Rd.	Columbia	21044	Avalon	5204 Tuckerman Ln.	Rockville	MD	20852
Avalon at Fairway Hills (Woods) Apt.	5601-5681 Columbia Rd.	Columbia	21044	Avalon	5204 Tuckerman Ln.	Rockville	MD	20852
Beechs Farm Apts.	7260 Eden Brook Dr.	Columbia	21044	Community Realty Corp.	6305 Ivy Lane Suite 200	Greenbelt	MD	20770
Bowling Brook Farms Apts.	9000 Stebbing Way	Laurel	21043	James Knott Management Properties	One Texas Station Ct.	Timonium	MD	21043
Bluffs at Hawthorn (The)	10401 Hickory Ridge Rd.	Columbia	21044	Grady Management	8630 Fenton St. Suite 625	Silver Spring	MD	20910
Brompton House	7651-76111 Mandrake Court	Elkridge	21075	Bozzuto	7850 Walker Rd. Suite 400	Greenbelt	MD	20770
Burgess Mill Station	3050 Milltowne Dr.	Ellicott City	21043	Humphrey Management	7170 Riverwood Dr. Suite A	Columbia	MD	21046
Cedar Place Apts.	5458 Harper's Farm Rd.	Columbia	21045	Home Properties	6 Garrison View Rd.	Owings Mills	MD	21117
Charleston Place Apts.	3207 Wheaton Way	Ellicott City	21043	WPM	11433 Cronridge Dr.	Owings Mills	MD	21117
Chatham Gardens Apts.	3372 North Chatham Rd.	Ellicott City	21043	Legend Management	1355 Burgundy Rd. Suite 104	McLean	VA	22101
Chimneys at Cradlerock Apts.	6531 Quiet Hours Rd.	Columbia	21045	Aimco	6600 Rockledge Dr. Suite 500	Bethesda	MD	20817
Clarys Crossing Apts.	11311 Little Patuxent Parkway	Columbia	21044	Bainbridge Properties	7700 Wisconsin Ave.	Bethesda	MD	20814
Club Merion Apts.	12290 Green Meadow Dr., Suite 103	Columbia	21044	Southern Management	1950 Old Gallows Rd.	Vienna	VA	22180
Colt's Crossing	Corporate Court	Ellicott City	21042	Humphrey Management	7170 Riverwood Dr.	Columbia	MD	21046
Columbia Commons Apts.	7601 Woodpark Lane	Columbia	21046	Home Properties	6 Garrison View Rd.	Owings Mills	MD	21117
Columbia Landing	8905 Tamar Lane	Columbia	21045	Equity Management	8975 Guilford Rd. Suite 100	Columbia	MD	21046
Columbia Town Center	10370-10450 Swift Stream Place	Columbia	21044	Gables Residential	8280 Greensboro Dr.	McLean,	VA	22102
Country Meadows	9713 Queen Annes Lace	Laurel	21044	Storch	8930 Baltimore St.	Savage	MD	20763
Dominion at Eden Brook	7310 Eden Brook Dr.	Columbia	21044	Shelter Housing Partners	10300 Hickory Ridge Rd.	Columbia	MD	21044
Dominion Kings Place	7525 Murray Hill Road	Columbia	21075	Southern Management	1950 Old Gallows Rd.	Vienna	VA	22180
Eaves at Columbia Town Center (Avalon)	10310 Hickory Ridge Rd.	Columbia	21044	Avalon	5204 Tuckerman Ln.	Rockville	MD	20852
Ellicott Gardens	5505 Waterloo Rd.	Ellicott City	21042	Equity Management	8975 Guilford Rd. Suite 100	Columbia	MD	21046
Ellicott Grove	3005 Oak Grove Circle	Ellicott City	20763	UDR	5579 Harrington Falls Ln. Suite 1054	Alexandria	VA	22312
Ellicott Terrace	3050 Milltowne Dr.	Ellicott City	21043	Humphrey Management	7170 Riverwood Dr.	Columbia	MD	21046

Appendix B Apartment List

Apartment Complex Name	Street Address	City	Zip	Management Company	Street Address	City	State	Zip
Enclave at Emerson	8450 Upper Sky Way	Laurel	20723	Bozzuto	7850 Walker Rd. Suite 400	Greenbelt	MD	20770
Evergreens at Town Center	10101 Governor Warfield Parkway	Columbia	21045	Community Realty Company	6305 Ivy Lane Suite 200	Greenbelt	MD	20770
Fairway Courtyards	2120 Troon Overlook	Woodstock	20763	Storch	8930 Baltimore St.	Savage	MD	20763
Fenland Field Apts.	5351 Harpers Farm Rd.	Columbia	21045	Storch	8930 Baltimore St.	Savage	MD	20763
Forest Ridge Apts. (fmr. Stevens Forest)	5866 Stevens Forest Rd.	Columbia	21042	Storch	8930 Baltimore St.	Savage	MD	20763
Foxborough Estates	8542 Foxborough Dr.	Savage	20763	Klingbeil Community	10530 Linden Lake Plaza Suite 300	Manassas	VA	20109
Gateway Village Apts.	9978 Guilford Rd., Suite 102	Columbia	21046	Home Properties	6 Garrison View	Owing Mills	MD	21117
Gramercy Place	Gramercy Place	Columbia	21045	Bozzuto	7850 Walker Rd. Suite 400	Greenbelt	MD	20770
Grand Pointe Apts.	5764 Stevens Forest Rd.	Columbia	21945	Aimco	6600 Rockledge Dr. Suite 500	Bethesda	MD	20817
Greens at Columbia Apts. (The)	12215 Little Patuxent Pkwy	Columbia	21044	Home Properties	6 Garrison View	Owings Mills	MD	21117
Harper House	5495 Cedar Lane	Columbia	21045	Habitat America	180 Admiral Cochrane Dr.	Annapolis	MD	21401
Harpers Forest Apts.	5980 #4 Turnabout Ln.	Columbia	21044	The Dolben Co.	2600 Midway Branch 2nd fl.	Odenton	MD	21113
Heartlands Senior Living Village	3004 North Ridge Rd.	Ellicott City	21043	The Dolben Co.	2600 Midway Branch 2nd fl.	Odenton	MD	21113
Hickory Ridge Place	10799 Hickory Ridge Place	Columbia	21044	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Howard Hills	8800 Howard Hills Dr.	Savage	21046	Laramar Communities, LLC	30 South Wacker Suite 2750	Chicago	IL	60609
Howards Crossing	Town and Country Blvd.	Ellicott City	21044	Habitat America	180 Admiral Cochrane Dr.	Annapolis	MD	21401
Huntington Downs Apts.	9705 Clocktower Lane	Columbia	21046	Asher Investment Group	7345 S. Pierce St. Suite 100	Littleton	CO	80128
Island Club Apts.	5331 Columbia Rd.	Columbia	21046	Gables Residential	8280 Greensboro Dr.	McLean,	VA	22102
Kaiser Park Apartments	Kaiser Rd. 8120 Randolph Way	Ellicott City	21042	Henderson Webb	P.O. Box 394	Cockeysville	MD	21030
Kendall Ridge Apts.	8399 Tamar Dr.	Columbia	21045	The Shelter Group	10300 Hickory Ridge Rd.	Baltimore	MD	21044
Kings Crossing Apts.	8909 Early April Way	Columbia	21046	Gables Residential	8280 Greensboro Dr.	McLean,	VA	22102
Lakeside at Town Center	10205 Wincopin Circle	Columbia	21044	Howard Property Management	8310 Guilford Rd. Ste. B	Columbia	MD	21046
Lawyers Hill Apts.	7234 Montgomery Rd.	Elkridge	21075	Apt. Services, Inc.	P.O. Box 181	Timonium	MD	21093
Lazy Hollow Apts.	8781-21 Cloud Leap Ct.	Columbia	21045	Aimco	6600 Rockledge Dr. Suite 500	Bethesda	MD	20817
Longwoods Apts.	6150 Foreland Garth	Columbia	21046	Metro Associates Develop. Corp.	6150 Foreland Garth	Columbia	MD	21045
Mission Place	8152 Washington Blvd.	Jessup	20794	The Dolben Co.	2600 Midway Branch 2nd fl.	Odenton	MD	21113
Morningside Park	9950 Guilford Rd.	Jessup	20794	Equity Management	8975 Guilford Rd. Suite 100	Columbia	MD	21046
Orchard Club Apts.	6330 Orchard Club Dr.	Elkridge	21075	Armiger Management	5032 Dorsey Hall Dr.	Columbia	MD	21042
Orchard Crossing Apts.	4810 Circling Hunter Dr.	Columbia	21045	Humphrey Management	7170 Riverwood	Columbia	MD	21042
Orchard Meadows at North Ridge	3300 Sonia Trail	Ellicott City	21042	Armiger Management	5032 Dorsey Hall Dr.	Columbia	MD	21042



Apartment Complex Name	Street Address	City	Zip	Management Company	Street Address	City	State	Zip
Orchard Park Apts.	3113 Pine Orchard Ln.	Ellicott City	21042	Humphrey Management	7170 Riverwood	Owings Mills	MD	21117
Overlook at Monarch Mills	7570 Monarch Mills Way	Columbia	21045	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Owen Brown Place Apts.	7080 Cradlerock Way	Columbia	21045	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Paragon at Columbia Overlook	8151 Robinson Jefferson Dr.	Elkridge	21075	UDR	5579 Harrington Falls Ln. Suite 1054	Alexandria	VA	22311
Parkview at Columbia Apts.	7070 Cradlerock Way	Columbia	21045	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Parkview at Colonial Landing Apts.	6391 Rowanberry Dr.	Elkridge	21046	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Parkview at Ellicott City (1&2)	Ridge Rd.	Ellicott City	21042	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Parkview at Emerson	9895 Palace Hall Dr.	Laurel	20723	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Parkview at Snowden River	8610 Snowden River Parkway	Columbia	21046	The Shelter Group	218 N. Charles St. Suite 220	Baltimore	MD	21201
Patuxent Square	9900 Washington Blvd.	Laurel	21023	Armiger Management	5032 Dorsey Hall Dr.	Columbia	MD	21042
Penniman Park	6211 Greenfield Park	Elkridge	21075	Home Properties	6 Garrison View Rd.	Owings Mills	MD	21117
Plum Tree Apt.	3463 Plumtree Dr.	Ellicott City	21042	A&G Management	7779 New York Lane	Glen Burnie	MD	21061
Popular Glen at Clary's Forest Apts.	11670 Little Patuxent Parkway	Columbia	21045	UDR	5579 Harrington Falls Ln. Suite 1054	Alexandria	VA	22312
Reflections Apts.	12020 Little Patuxent Parkway	Columbia	21044	Associated Estates Realty Corp.	12020 Little Patuxent Pkwy	Columbia	MD	21044
River Front Apartments	8919 River Island Dr.	Savage	20763	Rolling Park Management, LLC	200 Sanderson Dr.	Sterling	VA	20164
Sherwood Crossing Apts.	6731 Old Waterloo Rd.	Elkridge	21075	Klingbeil Community	5579 Harrington Falls Ln. Suite 1054	Alexandria	VA	22312
Sierra Woods Apts.	8712 Airybrink Ln.	Columbia	21044	Habitat America	180 Admiral Cochrane Dr.	Annapolis	MD	21401
Tamar Meadows Apts.	8600 Cobblefield Dr.	Columbia	21045	UDR	5579 Harrington Falls Ln. Suite 1054	Alexandria	MD	22312
The Berkshires	5361 -3 Brook Way	Columbia	21044	Berkshires Property Advisors, LLC	7120 Samuel Morse Dr. Suite 100	Columbia	MD	21046
The Bluffs at Clary's Forest	12100 Little Patuxent Parkway	Columbia	21044	Habitat America	180 Admiral Cochrane Dr.	Annapolis	MD	21401
The Bluffs at Fairway Hills (The)	4965 Columbia Road	Columbia	21045	Habitat America	180 Admiral Cochrane Dr.	Annapolis	MD	21401
The Elms at Montjoy	4900 Walking Stick Rd.	Ellicott City	21043	Home Properties	6 Garrison View Rd.	Owings Mills	MD	21117
The Gramercy at Town Center	10601 Gramercy Place	Columbia	21044	Bozzuto	7850 Walker Rd. Suite 400	Greenbelt	MD	20770
The Seasons	9220 Old Lantern Way	Laurel	20723	Berkshires Property Advisors, LLC	7120 Samuel Morse Dr. Suite 100	Columbia	MD	21046
Verde at Howard Square	7500 Hearthside Square	Elkridge	21046	The Dolben Co.	2600 Midway Branch 2nd fl.	Odenton	MD	21113
Verona Oakland Mills Apts.	9650 White Acre Rd.	Columbia	21044	Greystar	8405 Greensboro Ste. 950	McLean	VA	21030
Waverly Gardens	10801 Endfield Ln.	Woodstock	21163	Grady Management	8630 Fenton St. Suite 625	Silver Spring	MD	20910
Windsor at Pine Ridge	7100 Ducketts Ln.	Elkridge	21044	Windsor Communities	125 Highstreet Tower 27th Fl.	Boston	MA	02115

# Appendix B – Condominium List

Property Name	Address	City	State	Zip	Management Company	Address	City	ST	Zip
Abington	6246 Wild Swan Way	Columbia	MD	21046	Simmons Management Group	8911 60 Avenue	College Park	MD	20740
Alta at Regency Crest	3305 Oak West Dr.	Ellicott City	MD	21043	Bozzuto Management	7850 Walker Dr. #400	Greenbelt	MD	20770
Bristol Green	5900-5971 Millrace Ct.	Columbia	MD	21045	Brodie Mgmt.	110 Old Padonia Rd. Suite 202	Cockeysville	MD	21030
Bryant Gardens	9957 Green Mountain Circle	Columbia	MD	21045	Howard Property Management	P.O. Box 250	Simpsonville	MD	21150
Cedar Valley	Harper's Forest	Columbia	MD	21045	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Cherry Tree Park	8460 Ice Crystal Dr.	Laurel	MD	20723	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Clarys Forest I	4 Watch Chain Way	Columbia	MD	21045	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Clary's Forest II	11400 Little Patuxent Blvd	Columbia	MD	21045	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Concord House	10850 Green Mountain Circle	Columbia	MD	21045	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Cove Condos.	10051-10113 Windstream Dr.	Columbia	MD	21045	Residential Realty	3600 Crondall Lane Suite 103	Owings Mills	MD	21117
Courtyards at Waverly Woods East	11130, 50, 85 Chambers Court	Woodstock	MD	21163	First Real Estate Management	5304 Dorsey Hall Dr.	Ellicott City	MD	21042
Cross Fox Condos.	10528 Cross Fox Ln.	Columbia	MD	21045	CVI (Condo Venture)	6300 Woodside Ct. Suite 10	Columbia	MD	21046
Deering Woods Condos.	5625-5727 Harpers Farms Rd.	Columbia	MD	21044	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Dorsey Place	4970-5006 Dorsey Hall Dr.	Ellicott City	MD	21043	Victory Management*	P.O. Box 1200	Stevensville	MD	21666
Enclave at Ellicott Hills	2530 North Ridge Rd.	Ellicott City	MD	21043	First Real Estate Management	5304 Dorsey Hall Dr.	Ellicott City	MD	21042
Gateway	9055 Gracious End Ct.	Columbia	MD	21046	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Heatherfield	4900-4956 Columbia Rd.	Columbia	MD	21044	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Hearthstone at Village Crest	Village Crest Dr./Stone Crop Dr.	Ellicott City	MD	21043	CVI (Condo. Venture Inc.)	6300 Woodside Ct. Suite 10	Columbia	MD	21046
Kings Gate	7317 Eden Brook Dr.	Columbia	MD	21046	Brodie Management	110 Old Padonia Rd. Suite 202	Cockeysville	MD	21030
Kendall Overlook (part of Snowden)	8700 Endless Ocean Way	Columbia	MD	21045	WPM Real Estate Management	11433 Cronridge Dr.	Owings Mills	MD	21117
Lakeside at Town Center	10205 Wincopin Circle	Columbia	MD	21044	Howard Property Management	P.O. Box 250	Simpsonville	MD	21150
Long Reach House	8701-8729 Hayshed Ln.	Columbia	MD	21045	WPM	11433 Cronridge Dr.	Owings Mills	MD	21117
Long Reach Knolls	8800 Spiral Cut Ln.	Columbia	MD	21045	Brodie Management	110 Old Padonia Rd. Suite 202	Cockeysville	MD	21030
Oakhurst II	9452 Birdhouse Circle	Columbia	MD	21046	First Real Estate Management	5304 Dorsey Hall Drive	Ellicott City	MD	21042
Partridge Courts	10746 Green Mountain Circle	Columbia	MD	21045	WPM	11433 Cronridge Dr.	Owings Mills	MD	21117
Pines at Dickinson	Sweet Hours/Weatherworn Way	Columbia	MD	21045	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Residences at Lake Elkhorn	9401-9527 Hickory Limb	Columbia	MD	21044	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Rockburn Commons I	5701-5735 Rowanberry Dr.	Elkridge	MD	21075	WPM Real Estate Management	11433 Cronridge Dr.	Owings Mills	MD	21117
Rockburn Commons II	6025 Rock Glen Dr.	Elkridge	MD	21075	Victory Management	P.O. Box 1200	Stevensville	MD	21666
Shadow Oaks	Thunderhill Rd.	Columbia	MD	21044	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Snowden Overlook (Villas at)	8700 Endless Ocean Way	Columbia	MD	21046	WPM Real Estate Management	11433 Cronridge Dr.	Owings Mills	MD	21117
Springleaf at Orchard Club/Elkridge TC	6215 Sandpiper Ct.	Elkridge	MD	21075	Beneficial Real Estate	6215 Sandpiper Ct.	Elkridge	MD	21076
Treover	5913 Tamar Dr.	Columbia	MD	21045	Legacy Investment and Management	10012 Old Columbia Rd. Suite B-125	Columbia	MD	21046
Vantage House	5400 Vantage Point Rd.	Columbia	MD	21044	Life Care Services LLC	Capital Square 400 Locust Suite 820	Des Moines	IA	50301
Vantage Point	5351-5356 Smooth Meadow Way	Columbia	MD	21044	Howard Property Management	5351 Smooth Meadow Way	Columbia	MD	21076
Village of Montgomery Run I & II	8500 Falls Run Rd.	Ellicott City	MD	21045	American Community Management	7484 Candlewood Rd.	Hanover	MD	21076
Watermark Place	10001 Windstream Way	Columbia	MD	21045	WPM	11433 Cronridge Dr.	Columbia	MD	21045
Whiskey Bottom North	9155 Hitching Post	Laurel	MD	20723	D.H. Bader	14435 Cherry Lane Ct. Suite 210	Laurel	MD	20707
Whiskey Bottom South	9200-9925 Bridle Path Ln.	Laurel	MD	20723	Simmons	8911 60th Ave. 2nd Fl.	College Park	MD	20740
Whiskey Bottom West	9799 Whiskey Run	Laurel	MD	20723	D.H. Bader	14435 Cherry Lane Ct. Suite 210	Laurel	MD	20707
Whiskey Bottom Square	9005-9075 North Laurel Rd.	Laurel	MD	20723	D.H. Bader	14435 Cherry Lane Ct. Suite 210	Laurel	MD	20707
Whitney at Town Center (T)	Little Patuxent Parkway	Columbia	MD	21045	WPM Real Estate Management	11433 Cronridge Dr.	Owings Mills	MD	21117
Wyndham	5832 Wyndham Circle	Columbia	MD	21044	Self Managed	5832 Wyndham Circle	Columbia	MD	21044
as at River Hill	Same, Whale, Pioneer Way	Clarksville	MD	21029	Abaris Realty	12009 Nebel St.	Rockville	MD	20852

---

**APPENDIX C**

**HOWARD COUNTY PUBLIC SCHOOL**

**RECYCLING PLAN**

---

## HOWARD COUNTY PUBLIC SCHOOL RECYCLING PLAN

Howard County Government (HCG) does not govern or make policy for the Howard County Public Schools System (HCPSS) or the Howard Community College (HCC); however, HCG does provide funding to HCPSS and HCC. Both HCPSS and HCC will collect “Single Stream” recyclables, meaning that the different materials – from aluminum cans to cardboard boxes - may all be placed in the same container for collection from the schools and are sorted by different types of materials at a materials recovery facility (MRF). This type of collection drastically increases convenience, and therefore participation. Single-stream recycling collection programs at HCPSS and HCC have been in place since 2006, although both entities established recycling collection programs prior to the introduction of single stream recycling.

HCPSS and HCC will be responsible for maintaining recycling programs at their facilities. For a detailed list of the types of materials that will be accepted in the single stream program, please see table B. HCPSS and HCC will use recycling carts and dumpsters at all their facilities. See attached table C for a list of HCPSS and HCC facilities, number of dumpsters and/or recycling carts at each facility and collection frequency.

### **Howard County Public School System:**

HCPSS will be responsible for collecting single stream recycling and adding or replacing recycling containers as needed. Recyclables will be collected from classrooms, offices and public spaces throughout the schools and support buildings. Materials will be transferred into dumpsters or wheeled carts (all schools have both) for weekly collection by the contractor. Materials collected will be taken for sorting and processing to the Waste Management Recycle America (WMRA) Materials Recovery Facility (MRF) in Elkridge, Maryland. WMRA is responsible for marketing the recyclables.

In July 2009, HCPSS combined recycling collection and processing contracts with HCG, which led to substantial cost savings for both organizations. The combined collection and processing contract means that HCPSS has the ability to recycle a broad mix of recyclables, including paper products, cardboard, glass containers, metal cans and foil, plastic bottles and containers, rigid plastics and aseptic containers. Additionally, HCPSS has a better means of tracking their recycling rate. The combined collection and processing contracts will continue based on market conditions and requirements. HCG will be responsible for bidding, awarding and maintaining the collection, sorting, processing and marketing contracts.

Each HCPSS school is free to pursue additional recycling opportunities. Some recyclables can provide additional funds to individual schools (toner cartridges, cell phones, chip bags, cookie bags, juice containers, etc). HCPSS will also have the option to pay for additional items recycled through the Alpha Ridge Landfill, items such as yard waste, tires, and carpeting. Some schools have also shown interest in food waste composting at their school site. HCG will provide technical assistance to help these schools move forward as a pilot project for others schools.



Reporting will be a joint responsibility between HCPSS and HCG. HCG will calculate HCPSS's recycling rate and amount due HCG using monthly recycling invoices received from the collections contractor. The collection contractor will mix material collected from buildings occupied by both HCG and HCPSS. The amount of recyclables generated by HCPSS will be calculated using percentages determined by HCG during composition studies. Recyclable revenues or offsets for the trash collection and disposal costs will be provided to HCPSS by HCG. To date, HCG completed two surveys of trash and recycling volumes at all the public school facilities. These surveys provide comparison information of schools' recycling volumes, indicate areas for improvement and provide a means of measuring and ensuring that recycling continues. These surveys will continue as resources are available. Starting July 1, 2011, all HCPSS schools will be requested to report types and volumes of additional recyclables beyond single stream recycling to HCG annually by March 1, 2012.

Recycling outreach and education will include on-going in-house training for HCPSS employees, presentations to students, teachers and staff, incorporating recycling and responsible environmental practices into the classroom. All HCPSS schools have the option to schedule recycling presentations and to receive technical support from HCG - Howard County Department of Public Works, Bureau of Environmental Services' Recycling Division. HCPSS will be responsible for maintaining a recycling webpage (<http://www.hcpss.org/parents/recycle.shtml>) that contains information regarding recycling and a handy list of what can be recycled. HCG and/or HCPSS will engage students in contests such as the Recycling Coloring Book contest for 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> grade to further generate interest in recycling at the schools on a periodic basis as appropriate. As requested by individual HCPSS schools, a Howard County Recycling Coordinator will make lunchroom presentations to the students to assist with recycling education as staffing allows. Custodial meetings will incorporate recycling updates and reminders to educate and motivate staff. The HCPSS custodial manager and her team will conduct site visits to make sure schools have the proper tools and setup for successful recycling. As needed, the custodial manager will meet with custodial staff to improve collection techniques and increase recycling education among employees.

The HCPSS school board's general fund will provide the financing for the school system's recycling program. The current combined contract with HCG has resulted in cost savings for collections, the possibility for revenue (based on the recycling markets) and has increased the variety of material accepted for processing.

HCG has purchasing procedures which allow the County to obtain an emergency contractor from the existing collection contractors in the County or nearby counties, as needed. If a school has issues with the recycling collection contractor, they shall notify the HCPSS Custodian Manager responsible for trash and recycling collection. HCPSS will be responsible for correcting the issue as soon as possible. If the issue cannot be resolved, HCG will meet with the schools and the contractor. Corrective actions must begin within 60 days of the issue arising.

If the recycling processing facility in ElkrIDGE (WMRA) is not able to take the recyclable materials, HCG and HCPSS are able to take materials to their Prince Georges County location, or to facilities that have

capacity. Clauses and fines in processing contracts encourage the current processor to assist in finding a replacement facility immediately, in the unlikely event that this becomes necessary.

#### **Howard County Community College:**

HCC Environmental Services staff will be responsible for collecting the recycling material from containers located in administrative offices and classrooms, as well as from outdoor containers in parking lots, public spaces and at building entrances. The college will use dumpsters and 95 gallon carts for weekly collection of recycling. The college will use a contractor for collections and processing of the recyclable materials. All material will be sent to a MRF where the material is sorted, baled and marketed by the processing contractor. In addition, HCC will continue to take advantage of capital construction projects as opportunities to collect and recycle scrap metal. HCC will provide recycling to special projects and small events on campus when possible.

HCC will promote recycling to students, staff and visitors through conveniently placed recycling collection containers near all outside trash cans and by placing recycling bins in all offices, classrooms and other public spaces. Recycling posters will be placed throughout the college. Recycling will be discussed during custodial staff meetings, at student orientation and at special events. The college will maintain a sustainability website (<http://www.howardcc.edu/Visitors/green/>), which predominately features recycling. HCC will also participate in annual events designed to heighten awareness of recycling and waste reduction.

HCC will be responsible for reporting recycling volume and types. Every two years, HCC will compile HCC's Green House Gas Footprint which includes both trash and recycling data. HCC will also enter the Recyclemania competition and compare their recycling volume and other statistics to Colleges and Universities nationwide; the findings are used as a benchmarking tool. Every Earth Day, HCC will hold a dumpster dive on campus and sort through one day's worth of discarded material. HCC students will separate the recyclables and compare amount of trash and recycling. Starting July 1, 2011, all HCC facilities will be requested to report types and volumes of recyclables to HCG annually by March 1, 2012.

The recycling program will be funded through the college's general operating fund. Due to recycling efforts, trash disposal costs have significantly decreased. The cost savings have enabled the college to expand its collection containers. HCC will evaluate the need for additional containers on a regular basis.

In the event of a problem with existing contractors, HCC will obtain new contractors. If there are issues with the recycling collection contractor, the HCC facility shall notify the HCC Facility Safety and Sustainability Manager responsible for trash and recycling collection at all HCC facilities. HCC will correct the issue as soon as possible. If the issue cannot be resolved, HCG/DPW/BES will meet with HCC to discuss options. Corrective actions must begin within 60 days of the issue arising.

<b>Roles and Responsibilities</b>			
<b><u>Task</u></b>	<b><u>HCPSS</u></b>	<b><u>HCC</u></b>	<b><u>HCG</u></b>
Implement Plan	Facility Department	Facility Renovations, Safety and Sustainability Manager	HCG assist with presentations and/or technical assistance
Management of Program	Facility Department	Environmental Services Manager	HCG Review any issues of concern from HCPSS and HCC
Education and Outreach	Facility Department	Facility Renovations, Safety and Sustainability Manager	HCG to assist with presentations at schools, poster creation, and/or contests
Recycling container purchase, placement, or rental	Facility Department or Local Schools	Environmental Services Manager	HCG will allow use of HCG contracts
Containers taken to centralized pickup location	HCPSS Staff and students at some schools	HCC Environmental Services Staff	
Centralized container collection (dumpsters or carts)	Contractor – sharing HCG collections contracts. HCPSS coordinates collection schedule.	Contractor – sharing HCG collections contract. HCC coordinates collection schedule.	HCG bids, reviews, administers contractor selection
Sorting and Processing	HCG contracted processor	HCG contracted processor	HCG bids, reviews, administers contractor selection
Marketing of Recyclables	HCG contracted processor markets recyclables.	HCG contracted processor markets recyclables.	HCG bids, reviews, administers contractor selection
Funding	60% of the HCG budget is allocated to the schools.	HCC funds are partially from HCG	HCG to provide some of the schools funding.
Bill Payment for collection processing service - monthly	Custodial manager	Environmental Services Manager, Plant operations Office	HCG to prepare invoice for HCPSS.

Roles and Responsibilities cont...			
<u>Task</u>	<u>HCPSS</u>	<u>HCC</u>	<u>HCG</u>
Monitoring	<p>Invoices reviewed monthly.</p> <p>Students, parents and staff expect recycling to be consistently available</p>	<p>Invoices reviewed monthly</p> <p>Every two years HCC compiles HCC's Green House Gas Footprint which includes both trash and recycling data.</p> <p>Yearly HCC enters the Recyclemania competition and compares weekly totals to Colleges and Universities nationwide.</p>	<p>HCG to prepare and to review monthly invoice and recycling rate of HCPSS and to review any issues submitted by either HCPSS or HCC.</p> <p>HCG will problem-solve on an as-needed basis.</p>
Compliance	Custodial manager	HCC Facility Renovations, Safety and Sustainability Manager, Plant operations Office and Environmental Services Manager	HCG to determine if HCPSS and HCC have begun the corrective action within the required time



HCPSS Service Locations			
<u>Property Name</u>	<u>Street Address</u>	<u>City</u>	<u>Zip</u>
Applications & Research Lab	10920 Rt. 108	Ellicott City	21042
Ascend One	8930 Stanford Blvd	Columbia	21045
Atholton Elementary	6700 Seneca Drive	Columbia	21046
Atholton High	6520 Freetown Rd.	Columbia	21044
Bellows Spring Elementary	8125 Old Stockbridge Dr.	Ellicott City	21043
Bollman Bridge Elementary	8200 Savage-Guilford Rd.	Jessup	20794
Bonnie Branch Middle	4979 Ilchester Rd.	Ellicott City	21043
Bryant Woods Elementary	5450 Blue Heron Land	Columbia	21044
Burleigh Manor Middle	4200 Centennial Lane	Ellicott City	21042
Bushy Park Elementary	14601 Carrs Mill Road	Glenwood	21738
Old Bushy Park Building	2670 Rt. 97	Glenwood	21738
Cedar Lane School	11630 Scaggsville Rd.	Fulton	20759
Old Cedar Lane Bldg.	5451 Beaverkill Rd.	Columbia	21044
Centennial High	4300 Centennial Lane	Ellicott City	21042
Centennial Lane Elementary	3725 Centennial Lane	Ellicott City	21042
Central Office	10910 Rt. 108	Ellicott City	21042
Clarksville Elementary	12041 Rt. 108	Clarksville	21029
Clarksville Middle	6535 S. Trotter Rd.	Clarksville	21029
Clemens Crossing Elementary	10320 Quarterstaff Rd.	Columbia	21044
Cradlerock Elementary	6700 Cradlerock Way	Columbia	21045
Dayton Oaks Elementary	4691 Ten Oaks Rd.	Dayton	21036
Deep Run Elementary	6925 Old Waterloo Rd.	Elkridge	21075
Ducketts Lane Elementary	6501 Ducketts Lane	Elkridge	21075
Dunloggin Middle	9129 Northfield Rd.	Ellicott City	21042
Elkridge Elementary	7075 Montgomery Rd.	Elkridge	21075
Elkridge Landing Middle	7085 Montgomery Rd.	Elkridge	21075
Ellicott Mills Middle	4445 Montgomery Rd.	Ellicott City	21043
Faulkner Ridge Staff Dev.	10598 Marble Fawn Ct.	Columbia	21044
Folly Quarter Middle	13400 Triadelphia Rd.	Ellicott City	21042
Forest Ridge Elementary	9550 Gorman Rd.	Laurel	20723
Fulton Elementary	11600 Scaggsville Rd.	Fulton	20759
Glenelg High	14025 Burnt Woods Rd.	Glenelg	21737
Glenwood Middle	2680 Rt. 97	Glenwood	21738
Gorman Crossing Elementary	9999 Winter Sun Rd.	Laurel	20723
Guilford Elementary	7335 Oakland Mills Rd	Columbia	21046
Hammond Elem/Middle	8110 Aladdin Dr.	Laurel	20723
Hammond High	8800 Guilford Rd.	Columbia	21046
Harper's Choice Middle	5450 Beaverkill Rd.	Columbia	21044
Harriett Tubman Center	8045 Harriett Tubman Rd.	Columbia	21044
Hollifield Station Elementary	8701 Stonehouse Dr.	Ellicott City	21043
Homewood Center	10914 Rt. 108	Ellicott City	21042
Howard High	8700 Old Annapolis Rd.	Ellicott City	21043
Ilchester Elementary	4981 Ilchester Rd.	Ellicott City	21043
Jeffers Hill Elementary	6000 Tamar Dr.	Columbia	21045

<b>HCPSS Service Locations</b>			
<b><u>Property Name</u></b>	<b><u>Street Address</u></b>	<b><u>City</u></b>	<b><u>Zip</u></b>
Lake Elkhorn Middle	6680 Cradlerock Way	Columbia	21045
Laurel Woods Elementary	9250 N. Laurel Rd.	Laurel	20723
Lime Kiln Middle	11650 Scaggsville Rd.	Fulton	20759
Lisbon Elementary	15901 Frederick Rd.	Lisbon	21797
Longfellow Elementary	5470 Hesperus Dr.	Columbia	21044
Long Reach High	6101 Old Dobbin Lane	Columbia	21045
Manor Woods Elementary	11575 Frederick Rd.	Ellicott City	21042
Marriotts Ridge High	12100 Woodford Dr.	Marriottsville	21104
Mayfield Woods Middle	7950 Red Barn Way	Elkridge	21075
Mount View Middle	12101 Woodford Dr.	Marriottsville	21104
Mount Hebron High	9440 Rt. 99	Ellicott City	21043
Mt. Hill Middle	9989 Winter Sun Rd.	Laurel	20723
Northfield Elementary	9125 Northfield Rd.	Ellicott City	21042
Oakland Mills High	9410 Kilimanjaro Rd.	Columbia	21045
Oakland Mills Middle	9540 Kilimanjaro Rd	Columbia	21045
Patapsco Middle	8885 Old Frederick Rd.	Ellicott City	21043
Patuxent Valley Middle	9151 Vollmerhausen Rd.	Jessup	20794
Phelps Luck Elementary	5370 Oldstone Ct.	Columbia	21045
Pointers Run Elementary	6600 S. Trotter Rd.	Clarksville	21029
Reservoir High	11550 Scaggsville Rd.	Fulton	20759
River Hill High	12101 Rt. 108	Clarksville	21029
Rockburn Elementary	6145 Montgomery Rd.	Elkridge	21075
Running Brook Elementary	5215 W. Running Brook	Columbia	21044
St. John's Lane Elementary	2960 St. John's Lane	Ellicott City	21042
Stevens Forest Elementary	6045 Stevens Forest Rd.	Columbia	21045
Swansfield Elementary	5610 Cedar Lane	Columbia	21044
Talbott Springs Elementary	9550 Basket Ring Rd.	Columbia	21045
Thomas Viaduct Middle	7000 Banbury Drive	Hanover	21046
Thunder Hill Elementary	9357 Mellenbrook Rd.	Columbia	21045
Triadelphia Ridge Elementary	13400 Triadelphia Rd.	Ellicott City	21042
Veterans Elementary	4355 Montgomery Rd.	Ellicott City	21043
Waterloo Elementary	5940 Waterloo Rd.	Columbia	21045
Waverly Elementary	10220 Wetherburn Rd.	Ellicott City	21042
West Friendship Elementary	12500 Frederick Rd.	West Friendship	21794
Wilde Lake High	5460 Trumpeter Rd.	Columbia	21044
Wilde Lake Middle	10481 Cross Fox Lane	Columbia	21044
Worthington Elementary	4570 Roundhill Rd.	Ellicott City	21043
HCPSS Warehouse	6655 Dobbin Rd.	Columbia	21045
HCPSS Science Resource	6655 Dobbin Rd.	Columbia	21045
Custodial/Grounds Facility	8790-8800 Ridge Rd.	Ellicott City	21043

---

**APPENDIX D**

**EXAMPLES: INFORMATIONAL BROCHURES**

---

## Also at Alpha Ridge...

### Wood and Yard Trimmings

Brush, Christmas trees, stumps, grass, leaves, pallets, untreated lumber, etc. Plastic bags are prohibited.

### Compost Demonstration Site

By observing a few simple steps, anyone can be a successful composter. Visit the ARL demo site to see hands-on composting techniques and pick-up a FREE compost bin. For a demo schedule, call 410-313-6444 or visit [www.howardcountymd.gov/composting.htm](http://www.howardcountymd.gov/composting.htm).

### Information Gazebo

Have questions? Visit the information gazebo for brochures and material.

### Goodwill Collection

Goodwill will be located by the gazebo every 2nd and 4th Saturday from 8am to 3:30pm. Goodwill accepts gently used clothes, toys, books, furniture and household items.

### Home Improvements?

Please donate reusable materials to The Loading Dock (see #9 inside). All non-reusable renovation, construction or demolition debris, including carpet, must go over the scales and tipping fee applies.

Save yourself a trip to ARL and visit [www.howardcountymd.gov/CAndD.htm](http://www.howardcountymd.gov/CAndD.htm) for pickup options.

## Welcome to Alpha Ridge Landfill

When dropping off materials for recycling or disposal, please prepare items as stated in this brochure and place items in designated areas. Trash should be a last resort. Please follow posted directions and instructions from landfill staff. Collection containers are subject to change.

Scavenging is prohibited and very dangerous.

### Proof of Residency

Proof of County residency (Driver's License) is required and must be shown to the gate attendant.

### Holiday Closings

The landfill is closed on...

New Year's Day	Labor Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

### Prohibited Materials

Ammunition	Friable Asbestos
Dead Animals	Medical Waste
Hot Ash	Radioactive Waste
Explosives	Septic Waste
Engine blocks (over 2')	

### Questions?

Call 410-313-6444  
FAX 410-313-6490  
DD 410-313-2323  
[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)

### Also Consider:

- Donating usable items to local charities.
- Exploring online classifieds.
- Recycling Batteries, CFLs and electronics through customer take back programs at Best Buy, Home Depot, Lowes, My Organic Market, Radio Shack, Staples, etc.

What happens to your recyclables? Visit our website and click on this picture.

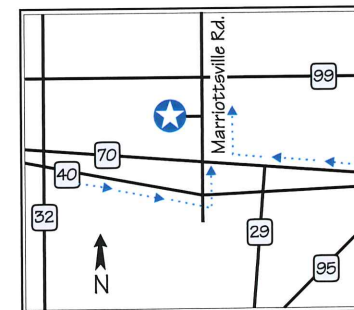


Department of Public Works  
Bureau of Environmental Services  
6751 Columbia Gateway Drive  
Suite 514  
Columbia, MD 21046  
410-313-6444  
[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## A Guide to the Residents' Convenience Center at Howard County's

## Alpha Ridge Landfill



### Location

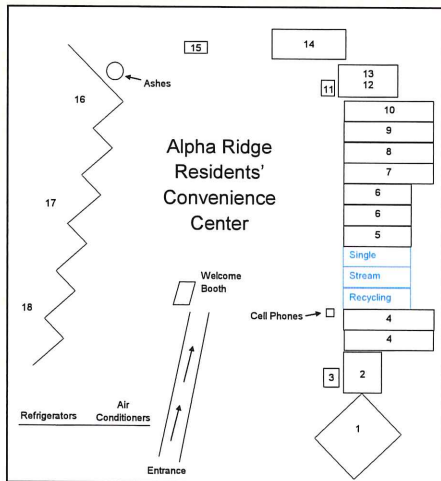
2350 Marriottsville Road  
Marriottsville, MD 21104  
410-313-6444  
[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)

### Hours

Monday - Saturday  
8:00 am - 4:00 pm



## The following materials are accepted from Howard County residents:



### 1. Household Hazardous Waste

Gasoline; rechargeable, lithium or button batteries; pesticides; insecticides; solvents; furniture strippers; degreasers; CFLs, etc.

Open April-November, Saturdays only.

### 2. Roofing Shingles

Paper and nails may be mixed with roofing shingles. Tipping fee will apply.

NO trash, wood or miscellaneous items.

### 3. Compressed Gas Tanks

Fire extinguishers, propane, helium & oxygen tanks.

### 4. Electronics

Anything with a plug that is not an appliance.

### 5. Rigid Plastic

Buckets, lawn furniture, laundry baskets, flower pots, garbage cans, etc.

NO PVC pipes, tubing, vinyl siding.

### 6. Cardboard

Please flatten.

### 7. Carpet & Padding

Wall to wall carpet and carpet padding only. No area rugs. Tipping fee applies.

### 8. Mattresses & Box Springs


Dry mattresses and box springs. 100% soft foam mattresses. Please load vertically.

### 9. Reusable Building Materials

Banisters, bathtubs, cabinets, countertops, doors, hardware, lighting fixtures, lumber, molding, plumbing fixtures, shelving, stairs, toilets, windows, etc.

Please donate reusable materials only. Tax receipts are available on the first Saturday of the month.

### 10. Styrofoam™ #6

White foam packaging, clean food trays, cups, containers and egg cartons (all colors). Items must be foam marked with .

NO foam peanuts, foam insulation, clamshells or other non-foam #6 containers.

**NOTE:** We may add or remove materials as vendors and markets change. If you have questions, please call 410-313-6444 or visit [howardcountymd.gov/ar1.htm](http://howardcountymd.gov/ar1.htm)

### 11. Cooking Oil

Used cooking oil. NO bones.

### 12. Oil & Filters

Motor oil, transmission oil and oil filters.

### 13. Antifreeze

Clean antifreeze only.

Please leave container for attendant to empty. Do not empty container yourself.

### 14. Wet Cell Batteries

Auto, boat and motorcycle. (Rechargeable and other non-alkaline batteries are accepted as Household Hazardous Waste). Alkaline batteries can be disposed of in your regular trash.

### 15. Clothing & Textiles

Clothing, curtains, sheets, blankets, towels, hats, belts, handbags, paired shoes, socks, etc.

Must be clean and dry. Items are donated to a non-profit organization.

### 16. Tires

Automobile and truck tires. Limit: 4 tires annually. NO rims. (Rims should be recycled with scrap metal).

### 17. Trash

Last Resort! Non-donatable, unrepairable, non-recyclable items only.

### 18. Metal Items

Appliances, furnaces, air conditioners, auto parts, bicycles, furniture, mowers, copper and brass items, aluminum siding, tire chains, light fixtures, tire rims, fencing, cable, etc. Drain motors of oil and fuel.

Note: Place air conditioners and refrigerators in designated area. Fee applies to contractors.

## Single Stream Recycling

Containers must be empty. Leave lids, labels and caps on.

### Paper

Milk cartons, juice boxes, newspapers, magazines, junk mail, office paper, food boxes, books, etc.

NO plasticized or food-coated paper.

### Plastic

Plastic bottles, tubs, jars and trays.

Please put large plastic items in the Rigid Plastic dumpster.

### Metal Cans & Aluminum Foil

Food and drink cans, EMPTY aerosol cans, aluminum foil and foil bakeware.

### Glass Bottles & Jars

Drink bottles, mayonnaise jars, ketchup bottles, baby food jars, etc.



HOWARD COUNTY

# Home Composting Guide



PRODUCED BY  
**Howard County Bureau of Environmental Services**  
IN COOPERATION WITH  
**The University of Maryland Cooperative Extension  
Master Gardener Program**





Photographs taken at Lake Elkhorn Community Garden  
courtesy of the Columbia Gardeners, Inc.



# What is Compost?

Compost is a dark, soil-like material that results from the decomposition of plants and other natural materials. Decomposition is carried out with the assistance of microbes and small soil organisms, moisture, heat and air.



## Composting is Easy:

You can take advantage of this natural process at home to easily produce compost at very little cost. All you need to get started is both green vegetative material and "brown" material such as sawdust, hay and leaves, etc., water, a place in your yard to make your pile or place your bin and a pitchfork or shovel to occasionally turn the material and/or dig up finished compost.

### *Did You Know That Compost Can...*

1. Increase the moisture holding capacity of soil.
2. Suppress plant diseases and pests.
3. Balance the pH level of soils.
4. Stimulate root growth which can assist in reducing soil erosion.
5. Reduce or eliminate the need for chemical fertilizers.
6. Clean contaminated soil and water.

## Why is composting important to Howard County?

Howard County government has a strong commitment to promoting recycling for the following reasons. Home Composting...

- Reduces the amount of yardwaste that is collected from homes.
- Saves money on collection and recycling costs.
- Reduces greenhouse gas emissions by decreasing the number of trucks that are needed to collect yardwaste.
- Reduces the amount of fertilizer or pesticide products that are needed which helps to protect the health of the Chesapeake Bay and its tributaries.



# How is Compost Made?

Compost is created by layering green and brown wastes such as grass, wood chips, and leaves shown in the photograph into piles, rows, or in a bin. Green materials provide nitrogen and brown materials provide carbon, essential compost elements. The layered pile is watered and turned as needed, allowing the material to fully decompose and mature into finished compost.



## Let's Get Started

A bin is not needed to compost successfully at home. However, a bin presents a neater appearance than an open pile and is useful for controlling pests. Howard County residents can obtain a free bin similar to the black plastic bins that are depicted in this guide. For more details on how to obtain a bin, please call 410-313-6444.

Before you begin composting you will need to pick the proper spot for your composting bin.

## Sun or Shade: Your Choice

Sun or Shade?	Pros and Cons	Special Considerations
<b>PARTIAL SHADE</b>	Best choice, keeps the compost from drying out too quick or overheating.	None needed.
<b>FULL SHADE</b>	Good choice, might need additional monitoring to make sure that the compost doesn't get too cold, killing soil organisms.	Add extra greens or manure when necessary to increase the heat of the pile. Bags of leaves, straw or shredded paper piled around the outside of the bin can also help to keep the pile warm.
<b>FULL SUN</b>	Good choice, might need additional monitoring to make sure that the compost doesn't dry out	May need to be watered frequently.



No matter which spot you use, remember to keep the bin within reach of a water hose.

Whether in sun or shade, pick a spot that drains well so that the pile doesn't develop odor problems due to too much standing moisture.

## Build Your Pile

Once the spot has been identified and the bin has been set up, you can begin to build your layers. Ideally your layers of green and brown material should be around three inches thick. Once you have a few layers, add a small shovel full of garden soil. This will add organisms and microbes to your layers. (Organisms, such as worms and millipedes, digest both green and brown materials and then microbes, such as bacteria and fungi digest the excretions of the organisms; another important step in the decomposition process.)

Remember to always bury food wastes to prevent rodents and other wildlife from foraging in your bin. Burying food will also eliminate some potential odors. Exposed food waste and excess standing water are the two most common sources of odors in a home composting bin.

Sprinkle the layers with water and then continue adding more layers. When you have reached the proper height, sprinkle some more garden soil on top and then create a small depression in the top. This will aid in water retention.





# What to Compost

YES	NO
<p>Cardboard egg cartons</p> <p>Coffee grounds and filters</p> <p>Dryer and vacuum cleaner lint</p> <p>Eggshells and crabshells</p> <p>Fireplace ashes</p> <p>Fruits and vegetables</p> <p>Grass clippings</p> <p>Hair and fur</p> <p>Hay and straw</p> <p>Houseplants</p> <p>Leaves</p> <p>Livestock manure</p> <p>Nut shells</p> <p>Pine needles</p> <p>Sawdust</p> <p>Shredded newspaper</p> <p>Tea bags</p> <p>Weeds</p> <p>Wood chips</p> <p>Citrus peels, corn cobs and banana peels can also go into the compost bin. However, be prepared for these items to take a long time to decompose.</p>	<p><b>Kitchen Waste</b></p> <p>Dairy products (e.g., butter, milk, sour cream, yogurt), fats, grease, lard, or oils, meat or fish (including all bones) – might create odor problems and attract pests such as rodents or flies</p> <p><b>Miscellaneous Waste</b></p> <p><b>Charcoal ash</b> – because charcoal is made from coal, it might contain substances harmful to plants</p> <p><b>Pet waste</b> (e.g., dog or cat feces, pet litter) – might contain parasites, bacteria and viruses harmful to humans</p> <p><b>Plants that are infected by disease or insects</b> – diseases might survive if the pile doesn't reach the correct temperature (approximately 140 degrees for 3 days) and could be transferred to other plants by the finished compost</p> <p><b>Grass clippings or plants that have been treated with chemical pesticides</b> – might kill beneficial soil organisms, slowing the rate of decomposition</p> <p><b>Poison Ivy, Oak and Sumac</b> – Even though these plants will decompose as easily as other types of vegetation, the oil that causes rashes in many people can take up to five years to completely degrade.</p>

# Active vs. Passive Composting



Now that you have created your pile, composting at this point can be either “*passive*” or “*active*.” Active piles are turned, passive piles are turned occasionally or sometimes not at all. This is a personal choice. Compost will happen eventually regardless of which method is chosen.

## Passive Piles

Passive piles will compost, but will take longer than a turned pile. One of the main reasons that a passive pile takes longer than an active pile is that turning a pile exposes the

decaying material to air that is needed by the soil organisms that are breaking down the pile. To create an air pocket add a layer of branches in the middle of the pile.

## Active Piles

Active piles should be turned at least once a week. An easy way to turn the pile is to pull the stakes or screws out of the ground and then remove the bin. Place the bin a few feet from the pile so that you have free access to the pile. Take a shovel or a pitchfork (a pitchfork works better than a shovel during the first few weeks) and turn over the layers. This will put air into the layers which is a vital part of the decomposition process. The pile can also be stirred instead of turned. However, to stir the pile you might need a special tool called a “compost aerator.” These can be bought through gardening catalogs or online stores. Active composting will produce finished material in two to three months.

Regardless of which method is chosen, the number one reason for slow decomposition in a compost bin is insufficient water. Materials that are being composted should feel moist to the touch, but never wringing wet. Closed top bins typically need more water added to them than open top bins. However, all piles, including non-containerized piles, need to be monitored for moisture content.



# Managing Temperature and Moisture

Make sure that the pile stays moist to the touch and that it isn't too hot or too cold and you will eventually have a finished pile of compost to use. A pile that is too hot/cold or too wet/dry will drive off or kill the organisms needed to make compost. If a pile feels cool to the touch it should be turned to introduce air which will boost the population of organisms and microbes in your pile. Additional nitrogen can also be added at the same time to raise the temperature. If the pile feels much hotter than your hand or smells like ammonia then you should add some straw or leaves to balance out the ratio of green and brown material. It can also be turned and watered to cool it off. However, this effect might only be temporary if the carbon-nitrogen imbalance isn't corrected at the same time.

## Managing Temperature and Moisture in the Compost Pile

Problem	Possible Cause	Solution
<b>AMMONIA ODOR</b>	Too much green material (grass or other vegetation)	Add brown material (leaves, straw, wood chips, etc)
<b>ROTTEN ODOR</b>	Pile too wet Exposed food scraps	Turn pile, add coarse, dry material such as sawdust, wood chips, etc. Bury food scraps
<b>LOW PILE TEMPERATURE</b>	Pile too small	Make pile larger
	Insufficient moisture	Add water while turning pile
	Poor aeration	Turn pile
	Insufficient green material	Add grass clippings, other vegetation or food waste
	Cold air temperature	Increase pile size, or insulate pile with an extra layer of material (straw or leaves make good insulators)
<b>HIGH PILE TEMPERATURE</b>	Pile too large	Reduce pile size
	Insufficient ventilation	Turn pile
<b>MATERIAL NOT BREAKING DOWN</b>	Pile too small	Make pile bigger or insulate sides
	Lack of green material	Add grass clippings, other vegetation or food waste
	Insufficient water	Turn pile and add water

## When is the Compost Ready?

Finished compost should be dark brown in color and should resemble soil. However, the material on the outer edges of the pile takes longer to compost, so pull aside the top inch of material before attempting to make this determination. If you remove the top inch of material and can still identify the material underneath as leaves, pine needles, etc, then the

compost needs more time to decompose. At that point the compost should be watered and/or turned if necessary and allowed more time to “cook.”



## Using Finished Compost

Finished compost has many uses:



1. Use half an inch as a top dressing on your lawn or reseed a bare patch.
2. Add an inch to the soil around the base of established plants.
2. Add a two inch layer to potted plants.
3. Add a three inch layer at the base of new trees, bulbs or other plants.
4. Add a four inch layer when tilling the soil in a garden bed.
6. Remember to save some finished compost to add soil organisms into the new pile.



# Further Adventures in Composting and Earth-friendly Yard Care.

## Pallet Bins

In addition to composting with the bins that are available through Howard County and the Master Gardeners, compost can also be made using pallets that have been wired together.

Pallet systems can be as simple as a single

three-sided chamber, or more complex as shown in the accompanying photograph. With the system shown in the photograph, turning material is easy. After one bin has been filled, just take material from the full bin and toss it into the bin next door. The next week, just return the material back to the first bin. The third bin can be used to store excess green or brown material (i.e. stockpile extra leaves over the winter so that it is available to add to the green material in the spring).



## Rake and Take Program

If your yard does not supply enough green or brown material, call the Howard County Master Gardeners and ask them about their ***Rake and Take Program***. This program coordinates Rakers (homeowners) who have excessive amounts of yard waste and are willing to rake it and bag it for Takers (you) to use for composting. For more information, call the Master Gardeners at 410-313-2707.



# Grasscycling

Grasscycling is an environmentally responsible lawn care practice. To grasscycle, just remember to *"Mow it high and let it lie."* Keep your mower blades sharp and stick to the one-third rule. Never remove more than one-third of the height of the grass in one mowing. Recommended mowing heights for home lawns are:

- Bluegrass 2-3 inches
- Perennial ryegrass 2-3 inches
- Bermudagrass 1-2 inches
- Tall fescue 2.5-3.5 inches
- Zoysiagrass 1-2 inches

Leave your grass clippings on the lawn, do not rake. The grass clippings will return nitrogen to your lawn and will make your lawn more drought resistant. Grass that is cut too short will develop shallow roots which are less able to withstand drought than plants with deeper roots, so by following the *one-third rule* you can also reduce the amount of water needed by your lawn. Grass clippings do not cause thatch, over-fertilizing causes thatch.

## Howard County Master Gardeners

The University of Maryland, Cooperative Extension Service runs a program called the Master Gardener Program. The mission of the Master Gardeners is to educate Maryland residents about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes and communities. Their services are free of charge to all Howard County residents and community groups. They are available to help you with:

- |                       |                             |
|-----------------------|-----------------------------|
| Composting            | Plant diseases and insects  |
| Rake and Take Program | Wildlife issues             |
| Soil testing          | Gardens and lawn management |

For additional information, please go to [www.mastergardener.umd.edu](http://www.mastergardener.umd.edu) or call: 410-313-2707.



## References

- "The Rodale Book of Composting,"* Mary Gershuny, Rodale Press, (1992).
- "Let it Rot: The Gardeners Guide to Composting,"* Stu Campbell, (1998).
- "The Urban/Suburban Composter: The Complete Guide to Backyard, Balcony and Apartment Composting,"* Mark Cullen, Lorraine Johnson and Andrew Leverle, St Martins Press, (1994).





Howard County Bureau of Environmental Services

6751 Columbia Gateway Drive

Suite 514

Columbia, Maryland 21046

[www.howardcountyrecycles.org](http://www.howardcountyrecycles.org)



# Electronics Recycling Options

Howard County does not endorse the following listings.

## **Alpha Ridge Landfill (2350 Marriottsville Road)**

Visit [www.howardcountymd.gov/electronics.htm](http://www.howardcountymd.gov/electronics.htm) for details.

## **A Better Way Computer Recycling**

Elkridge based. Visit [www.abetterwayrecycling.com](http://www.abetterwayrecycling.com) or call 410-381-5588.

## **Apple**

[www.apple.com/recycling](http://www.apple.com/recycling) iPhone Reuse and Recycling Program and recycling for other electronics too.

## **AT&T**

[www.att.com/recycle](http://www.att.com/recycle) - Drop-off program for recycling

## **Best Buy**

[www.bestbuy.com/recycling](http://www.bestbuy.com/recycling) Free drop-off, including tube TVs up to 32 inches and flat TVs up to 60 inches.

## **Capitol Asset Recycling**

Drop-off or pick-up. Visit [www.caprecycling.com/electronics-recycling](http://www.caprecycling.com/electronics-recycling) or call 877-247-2616 for details.

## **Costco Trade-in**

[www.costco.gazelle.com](http://www.costco.gazelle.com) See what your electronics are worth: sell-back or recycle.

## **Dell**

[www.dell.com](http://www.dell.com)

## **Goodwill**

Visit [www.reconnectpartnership.com](http://www.reconnectpartnership.com) for participating locations and accepted items.

## **e-End**

[www.eendusa.com/](http://www.eendusa.com/) Certified Woman-Owned Small Business based in Frederick, MD.

## **Hewlett-Packard**

- [www.hp.com/recycle](http://www.hp.com/recycle) for hardware, ink cartridges, rechargeable batteries, fluorescent light bulbs and more.
- [www.hp.com/united-states/tradein/home\\_flash.html](http://www.hp.com/united-states/tradein/home_flash.html) - Money for your old computer

## **Howard County Sheriff's Department**

Cell phones are provided to victims of domestic violence. Contact Corporal Bryan Waser at 410-313-4152.

## **Lazarus Foundation**

Non-profit computer refurbishing and donation organization [www.lazarus.org](http://www.lazarus.org) or call 410-531-8485

## **NT Recycling**

Free drop-off and pick-ups available. <http://www.ntrecycling.com/> or 301-937-0393

## **Sam's Club Trade-in**

[www.econewonline.com/samsclub](http://www.econewonline.com/samsclub) See what your electronics are worth: sell-back or recycle.

## **Samsung**

Recycling Direct program. Visit [www.samsung.com/recycling](http://www.samsung.com/recycling) for a prepaid mailing label.

## **Securis**

[www.Securis.com](http://www.Securis.com) or call 443-244-3661 for data destruction and recycling services.

## **Sony**

[www.sonystyle.com](http://www.sonystyle.com) Trade-in or recycle

## **Sprint**

The Sprint Buyback program offers customers an account credit Visit [www.sprint.com](http://www.sprint.com).

## **Staples**

[www.staples.com](http://www.staples.com) - Staples Soul take-back and recycling program. Check link for restrictions

## **T-Mobile**

Drop-off phones to any T-Mobile store.

## **Turtle Wings, Inc.**

FREE drop-off of electronics (except CRT monitors). Pick-up is available. [www.TURTLEWINGS.com](http://www.TURTLEWINGS.com)

## **U.S. Postal Service**

Get free envelopes from post offices to mail back inkjet cartridges, PDAs, Blackberries, digital cameras and MP3 players.

## How Can I be a Responsible Consumer?

*Proper care is essential when dealing with HHW*

### Buy Responsibly

- Compare and read labels. Not all brands contain hazardous materials.
- Only buy what you need. The large economy size ends up costing more when you don't use it all and must dispose of the leftovers.
- Purchase non-toxic household cleaning products, or safer alternatives, whenever possible.
- Use latex paint instead of oil-based paint.

### Use Responsibly

- Always read and follow directions and precautions on labels.
- Never mix products unless directed. Some products are chemically incompatible and may react to cause fumes, fires or explosions.
- Avoid contact with skin and eyes. Wear protective eyes glasses, gloves and clothing when handling hazardous products.
- Use products for their intended purpose. If you have some left over, share it with friends, neighbors or community groups.

### Store Properly

- Keep hazardous materials OUT OF CHILDREN'S REACH, in a dry, secure place.
- Separate flammable, corrosive and poisonous products.
- Keep hazardous materials away from food and sources of heat or sparks.
- Store materials in their original containers with their labels intact.

### Dispose Properly

- DON'T place hazardous wastes in trash cans or refuse containers. These wastes may injure collection personnel, contribute to groundwater contamination from landfills and damage collection containers or vehicles.
- DON'T flush hazardous wastes down household or storm drains. These wastes can ruin septic fields, pollute groundwater or pass through municipal treatment systems to surface waters.
- DON'T dump, burn or bury hazardous wastes.

### Accepted Mon-Sat

The following items are accepted for recycling at the Convenience Center Monday-Saturday, 8 a.m. to 4 p.m.

- Antifreeze
- Automobile batteries
- Motor oil & filters
- Propane tanks\*
- Electronic equipment

\*Also consider returning propane and other tanks to the seller.



Bureau of Environmental Services  
6751 Columbia Gateway Drive  
Suite 514  
Columbia, MD 21046  
410-313-6444

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## Household Hazardous Waste

**Your Guide to  
Howard County's  
Household Hazardous  
Waste Program**



Alpha Ridge Landfill  
Residents' Convenience Center

2350 Marriottsville Road  
Marriottsville, MD 21104

**April - November  
SATURDAYS ONLY  
8 a.m. - 4 p.m.**

*Proof of County residency  
(driver's license) is required.*

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## What are Household Hazardous Wastes?

Many of the products we use in our home and routinely throw away with our trash are considered HOUSEHOLD HAZARDOUS WASTES. These products are similar to the regulated hazardous wastes produced by business and industry.

Products which are corrosive, flammable, reactive or toxic can be found in most homes, garages and workshops. These products pose risks if used, stored or disposed of improperly. Consider using less hazardous products instead.



### Tip:

Use white vinegar, salt and water for surface cleaning and baking soda as a toilet cleaner. Search online for instructions to make additional green cleaners.



### Tip:

Air dry or solidify paint by adding kitty litter, wood chips or sawdust. Once the paint is solid, place it out with your regular trash.

## YES We Accept

- Automotive fluids (transmission fluids, brake fluid, etc)
- Batteries\* (rechargeable, button, etc)
- Degreasers
- Fluorescent light bulbs/CFLs\*
- Gasoline
- Household cleaners/powders
- Insecticides, pesticides, herbicides
- Mercury (thermostats)\*\*
- Paint (Latex and oil-based)
- Photography chemicals
- Rust removers
- Solvents/strippers
- Swimming pool chemicals

For a full list call 410-313-6444 or visit [www.howardcountymd.gov/HHW.htm](http://www.howardcountymd.gov/HHW.htm)

\*Consider free customer take-back programs at Home Depot, IKEA, Lowes, My Organic Market and Radio Shack.

\*\*Mercury thermostats and thermometers can be taken to the Howard County Health Department for recycling.

## NO We Cannot Accept

- **Commercial, industrial or medical wastes.** This includes biologically active wastes. Contact a local waste service company for handling instructions.
- **Radioactive materials.** For further information, call the Maryland Department of the Environment, Office of Radiological Health, at 410-537-3300.
- **Asbestos.** This should only be removed by a trained contractor. For further information, contact the Bureau of Environmental Services at 410-313-6444.
- **Kepones (an insecticide)**
- **PCB's**
- **Dioxin**
- **Explosives or Ammunition.** Call the Office of the State Fire Marshal for disposal at 410-653-8980.

## Did you know?

- Alkaline batteries manufactured after 1995 can be placed with your trash.
- The average family can accumulate as much as 100 pounds of HHW in the basement, garage, storage closets and under the kitchen sink. Consider non-toxic alternatives to save money and the environment.

## What can I expect at the collection area?

You will be directed to the HHW drop-off area and asked to move your items to one of the analyzing tables.

On-site chemists will examine the materials. They may ask for your help in identifying any unknown or unlabeled materials that you have brought. Based on their analysis, they will determine the proper packaging for transport and disposal of the hazardous materials.

## Helpful hints for transporting wastes safely

- Bring materials in their original container or in a secure, clearly labeled, leak-proof container.
- Make sure lids are tight.
- Group similar materials to make unloading easier.
- DON'T mix different or unknown materials together in the same container.

### Tip:

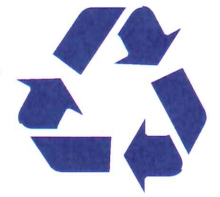
Even green, natural cleaners can be hazardous. Please also dispose of these products responsibly.







# Recyclables Only



- paper
- cardboard
- metal cans
- plastic containers
- glass bottles & jars

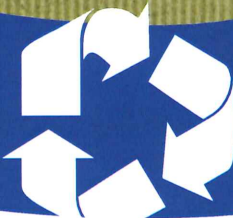


**NO: Styrofoam, paper towels, napkins, food waste, snack wrappers, trash, etc.**

**[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org) 410-313-6444**



# Why Recycle?



## It's Simple

Place your recyclable paper, plastic, cans, glass and cardboard together in the same container. No need to remove lids or labels, but please make sure containers are empty.

## To Reduce Trash

Every item that is reused or recycled is one less item in the trash. Also consider:

- Donating to Goodwill or Salvation Army
- Exploring online classifieds
- Customer take-back programs for CFLs, electronics and batteries. Check out Best Buy, Home Depot, Lowes, My Organic Market, Staples, etc. for program details.

## Your Contribution Matters

- American's generate 4.5 lbs of trash everyday!
- Recycling 1 aluminum can saves enough energy to power a TV for 3 hours.

Source: EPA

# Alpha Ridge Landfill

**2350 Marriottsville Road**

**Hours: 8am to 4pm, Monday - Saturday**

The ARL Convenience Center is free for Howard County residents; just show your driver's license.

Antifreeze  
Appliances  
Automobile batteries  
Carpet & padding\*  
Clothing & textiles  
Compressed gas tanks  
Cooking oil  
Electronics (items with a plug or batteries)  
Household hazardous waste  
(Saturdays only April-November)  
Mattresses & box springs  
Metal (scrap)  
Motor oil  
Reusable building materials  
Rigid plastics (lawn furniture, playhouses, coolers, etc.)  
Styrofoam™  
Tires  
Yard/Wood waste

\*Fee applies

For a map of the Convenience Center and more details about Alpha Ridge Landfill, visit [www.howardcountymd.gov/ARL.htm](http://www.howardcountymd.gov/ARL.htm)

**Remember...No recyclable is too small to make a difference!**

## Questions?

410-313-6444

[help@HowardCountyRecycles.org](mailto:help@HowardCountyRecycles.org)

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)

Twitter: @HoCoRecycles



# Recycling in Howard County



## Holiday Slide Schedule

No collections will be made on the following holidays:

New Year's Day	Labor Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

For a holiday listed above and the rest of that week, ALL trash, recycling and yard trim collections will slide to the next day. For a chart of your holiday collections, visit [www.howardcountymd.gov/HolidaySchedule.htm](http://www.howardcountymd.gov/HolidaySchedule.htm).

2/2014



# Recycling Guide for County Collections

## YES

### Paper

- drink boxes
- milk cartons
- newspaper and inserts
- white or colored paper
- food and snack boxes
- hard and soft cover books
- greeting cards
- non-foil gift wrap
- catalogs and magazines
- junk mail
- phone books
- bagged shredded paper
- three ring binders

### Plastic

- bottles (milk jugs, soda, detergent, salad dressing, cooking oil, shampoo, liquid soap, spray products, etc.)
- tubs
- jars
- trays
- disposable cups and plates (non acrylic)
- flower pots
- toys
- buckets
- bundled bags & film (best returned to store)

### Cans

- aluminum and steel cans (drink, food, and pet food)
- EMPTY aerosol cans (hairspray, whipped cream, etc.)
- aluminum foil
- pie and cake pans

### Glass

- bottles
- jars

### Cardboard

- flatten all boxes to less than 4' x 6'
- bundling is preferred but not required
- bundles should be no higher than 6 inches

Please  
leave lids  
& caps on  
containers.

## NO

### Paper

- paper towels
- tissues
- napkins
- food-soiled paper plates or cups
- foil gift wrap
- ice cream containers
- wax paper
- laminated paper

### Plastic

- styrofoam™ (take to Alpha Ridge for recycling)
- plastic clam shells (packaging for electronics, toys, batteries, berries, baked goods, etc.)
- CDs, DVDs or jewel cases
- acrylic plastic
- motor oil containers
- pesticide bottles
- VHS tapes
- plastic electronics
- juice pouches
- crinkly wrappers from snacks and chips

### Cans

- propane cylinders
- beach or lawn chairs
- pots and pans
- scrap metal

### Glass

- window glass
- drinking glasses
- mirrors
- ceramics
- crystal
- cookware
- light bulbs

### Cardboard

- styrofoam™ inserts
- food-soiled boxes

## Recycle Outside The Bin

### Get Rid of Stuff

Visit [www.howardcountymd.gov/WhatShouldIDoWith.htm](http://www.howardcountymd.gov/WhatShouldIDoWith.htm) to find reuse and recycling options for almost everything!

### Bulk Item & Scrap Metal Collection

Please consider reuse options first! Pick up of bulk trash items or scrap metal must be scheduled. Call 410-313-6444 or visit [HowardCountyBulkPickup.org](http://HowardCountyBulkPickup.org)

### Styrofoam™

White foam packaging, clean food trays, cups, containers and egg cartons (all colors) marked with ♻️ can be recycled at Alpha Ridge Landfill. No foam peanuts, insulation, clamshells or other non-foam #6 containers.  
[www.howardcountymd.gov/Styrofoam.htm](http://www.howardcountymd.gov/Styrofoam.htm)

### Household Hazardous Waste

HHW items can be taken to the Alpha Ridge Landfill on Saturdays ONLY in April-November.  
[www.howardcountymd.gov/HHW.htm](http://www.howardcountymd.gov/HHW.htm)

### Composting

The County provides free bins for backyard composting.  
[www.howardcountymd.gov/Composting.htm](http://www.howardcountymd.gov/Composting.htm)

### Yard Trim Recycling

Use paper bags or reusable containers for curbside yard trim collection or landfill drop-off.  
[www.howardcountymd.gov/YardTrim.htm](http://www.howardcountymd.gov/YardTrim.htm)

### Grasscycling

For a healthier lawn, don't bag those nutrient-rich grass clippings, let them lie!  
[www.howardcountymd.gov/Grasscycling.htm](http://www.howardcountymd.gov/Grasscycling.htm)



No yard trim or trash in your recycling container.  
Non-see through bags of recyclables will not be collected.  
Place carts and items within 5 feet of the nearest public road.



[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



# Recycling Guide for County Collections

## YES

### Paper

- drink boxes
- milk cartons
- newspaper and inserts
- white or colored paper
- food and snack boxes
- hard and soft cover books
- greeting cards
- non-foil gift wrap
- catalogs and magazines
- junk mail
- phone books
- bagged shredded paper
- three ring binders

### Plastic

- bottles (milk jugs, soda, detergent, salad dressing, cooking oil, shampoo, liquid soap, spray products, etc.)
- tubs
- jars
- trays
- disposable cups and plates (non acrylic)
- flower pots
- toys
- buckets
- bundled plastic bags

### Cans

- aluminum and steel cans (drink, food, and pet food)
- EMPTY aerosol cans (hairspray, whipped cream, etc.)
- aluminum foil
- pie and cake pans

### Glass

- bottles
- jars

### Cardboard

- flatten all boxes to less than 4' x 6'
- bundling is preferred but not required
- bundles should be no higher than 6 inches

Please  
leave lids  
& caps on  
containers.

## NO

### Paper

- paper towels
- tissues
- napkins
- food-soiled paper plates or cups
- foil gift wrap
- ice cream containers
- wax paper
- laminated paper
- paper that cannot be torn easily (typically means there are plastic layers added)

### Plastic

- styrofoam™ (take to Alpha Ridge for recycling)
- plastic clam shells (packaging for electronics, toys, batteries, berries, baked goods, etc.)
- CDs, DVDs or jewel cases
- acrylic plastic
- motor oil containers
- pesticide bottles
- VHS tapes
- plastic electronics
- juice pouches
- crinkly wrappers from snacks and chips

### Cans

- propane cylinders
- beach or lawn chairs
- pots and pans
- scrap metal

### Glass

- window glass
- drinking glasses
- mirrors
- ceramics
- crystal
- cookware
- light bulbs

### Cardboard

- styrofoam™ inserts
- food-soiled boxes



No yard trim or trash in your recycling container.  
Please do not use non-see through bags for recycling, they will not be collected.





# ¿Por qué Reciclar?



## Es fácil

En el mismo contenedor coloque papel, plástico, latas, vidrio y cartón reciclable. No tiene que quitar tapas, sólo asegúrese que los envases estén vacíos.



## Reduce la basura

Cada artículo reciclado o reusado, es uno menos en la basura. También considere:

- Hacer donaciones a Goodwill o Salvation Army
- Buscar en los anuncios clasificados
- Programas de devolución para CFLs, electrónicos y pilas. Pregunte detalles acerca de esos programas en Best Buy, Home Depot, Lowes, My Organic Market, Staples, etc.



## Su contribución cuenta

- ¡Los americanos generamos 4.5 lb de basura al día!
- Reciclar 1 lata de aluminio ahorra suficiente energía para hacer funcionar un televisor 3 horas.  
Según la EPA

# Vertedero Alpha Ridge

2350 Marriottsville Road

Horario: de 8am a 4pm, de lunes a sábado

El Centro de Conveniencia ARL es gratuito para los residentes del Condado de Howard; solo muestre su licencia de conducir. Usted puede llevar:

Anticongelantes  
Electrodomésticos  
Acumuladores  
Alfombra y esponja\*  
Ropa & textiles  
Tanques de gas comprimido  
Aceite para cocinar  
Electrónicos (eléctricos o de pilas)  
Desperdicios peligrosos del hogar  
(Solo en sábado, de abril a noviembre)  
Colchones y box-spring/somieres  
Metal (pedazos)  
Aceite automotriz  
Materiales para construcción reusables  
Plástico rígido (muebles de patio, juegos, neveras, etc.)  
Polietileno - Styrofoam™  
Llantas

Podas, ramas, desperdicio de madera\*

\*Tiene que pagar cuota

Para obtener más detalles y mapa del Vertedero Alpha Ridge

visit [www.howardcountymd.gov/ARL.htm](http://www.howardcountymd.gov/ARL.htm)

Recuerde...Nada es tan pequeño  
¡que no haga una diferencia!

¿Preguntas?

410-313-6444

[help@HowardCountyRecycles.org](mailto:help@HowardCountyRecycles.org)

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)

Twitter: @HoCoRecycles

## Horario de días festivos

No habrá recolección los siguientes días festivos:

Año Nuevo	Día del Trabajo
Día de Recordación	Día de Acción de Gracias
Día de la Independencia	Navidad

En los días antes mencionados y el resto de la semana que les sigue TODA basura, reciclaje y podas del jardín se efectuara al día siguiente. Para ver el calendario de recolección en esas fechas, visite:

[www.howardcountymd.gov/HolidaySchedule.htm](http://www.howardcountymd.gov/HolidaySchedule.htm)

# Reciclaje en el Condado de Howard





# Guía de Reciclaje para la Recolección del Condado

SI

NO

## Papel

- cajas de bebidas
- cartones de leche
- periódicos y anuncios
- papel blanco o de color
- cajas de comida o botanas
- libros de tapa dura o suave
- tarjetas de felicitación
- papel para envoltura (no metálico)
- revistas y catálogos
- volantes publicitarios
- directorios telefónicos
- papel triturado en bolsa
- carpeta de tres aros

## Papel

- toallas de papel
- pañuelo facial
- servilletas
- platos o vasos de papel sucios con comida
- papel metálico para envolver
- recipiente de nieve/sorbete
- papel encerado
- papel laminado

## Plástico

- botellas (de leche, refresco, detergente, aderezo, aceite de cocina, champú, jabón líquido, atomizadores, etc.)
- tubos
- tarros
- charolas
- platos y vasos desechables (no acrílicos)
- macetas
- juguetes
- cubetas
- paquetes de bolsas y de película (de preferencia regréselos a la tienda)

## Plástico

- espuma de poliestireno (llévela a Alpha Ridge)
- empaque de plástico (para electrónicos, juguetes, pilas, frutas, repostería, etc.)
- compactos CD, DVD o sus cajas de plástico
- plástico acrílico
- bote de aceite automotriz
- bote de pesticidas
- cintas VHS
- electrónicos de plástico
- bolsas de jugo
- material corrugado para empacar botanas y chips

## Latas

- latas de aluminio y metal (bebidas, comida, comida para mascota)
- botes de aerosol VACIAS (laca para el pelo, crema batida, etc.)
- papel de aluminio
- charolas para pastel o tarta

## Latas

- cilindros de gas propano
- sillas de playa o jardín
- ollas y sartenes
- pedazos de metal

## Vidrio

- botellas
- tarros

## Vidrio

- ventanas
- vasos
- espejos
- cerámica
- cristal
- refractarios
- bombillas/focos

## Cartón

- Desarme y aplane todas las cajas a menos de 4'x 6'
- Es preferible atarlas, pero no es necesario
- Los atados deben ser de menos de 6" de alto

## Cartón

- insertos de poliestireno
- cajas sucias de comida

¡Por favor  
tapa los  
contenedores!



No debe colocar pasto ni basura en su contenedor para reciclaje.  
No se aceptan bolsas que no sean transparentes.  
Coloque los contenedores rodantes y artículos a 5' de la calle pública más cercana.



# Reciclaje Fuera Del Contenedor



## No Junte Tanta Cosa

Visite [www.HowardCountymd.gov/WhatShouldIDoWith.htm](http://www.HowardCountymd.gov/WhatShouldIDoWith.htm)  
¡Encontrará opciones para casi todo!



## Artículos Grandes y Pedazos de Metal

¡Por favor primero considere opciones para reusarlos!  
Tiene que programar la fecha para recogerlos llamando al 410-313-6444 o visite [www.HowardCountyBulkPickup.org](http://www.HowardCountyBulkPickup.org)



## Poliestireno

Empaque de espuma blanca, charolas de comida limpias, vasos, recipientes y cartones de huevos (de todos colores) marcados con el símbolo pueden ser reciclados en el Vertedero Alpha Ridge. No se aceptan: bolitas de espuma, aislante, empaques de plástico u otros recipientes tipo #6.  
[www.HowardCountymd.gov/Styrofoam.htm](http://www.HowardCountymd.gov/Styrofoam.htm)



## Desperdicios Peligrosos del Hogar

Artículos HHW (por sus siglas en inglés) pueden ser llevados al Vertedero Alpha Ridge SÓLO los sábados de abril a noviembre.  
[www.HowardCountymd.gov/HHW.htm](http://www.HowardCountymd.gov/HHW.htm)



## Abono Orgánico

El Condado le proporcionará contenedores gratuitos para hacer abono orgánico en su jardín.  
[www.HowardCountymd.gov/Composting.htm](http://www.HowardCountymd.gov/Composting.htm)



## Reciclaje Resultado de Podar Su Jardín

Use bolsas de papel o recipientes reusables para llevarlos al vertedero o sáquelos para recolección en la calle.  
[www.HowardCountymd.gov/YardTrim.htm](http://www.HowardCountymd.gov/YardTrim.htm)



## Reciclaje de Césped

No tire en bolsas el pasto que cortó, déjelo sobre su jardín, está lleno de nutrientes y ¡su jardín será más saludable!  
[www.HowardCountymd.gov/Grasscycling.htm](http://www.HowardCountymd.gov/Grasscycling.htm)

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## 재활용을 왜 할까요?

### 간단합니다

재활용 폐지, 플라스틱, 캔, 유리, 판지를 같은 용기에 넣습니다. 뚜껑이나 상표를 제거할 필요는 없지만, 안에 내용물이 없는지 확인하세요.

### 쓰레기량 줄이기

재사용 또는 재활용되는 각 물품이 쓰레기 하나를 줄이는 것입니다. 또한 고려해 볼 사항은:

- 굿윌 (Goodwill) 또는 구세군 (Salvation Army)에 기부
- 온라인 항목별 광고란
- CFL(안정기 내장형 소형광등), 폐전자제품 및 폐건전지 무상수거 프로그램. Best Buy, Home Depot, Lowes, My Organic Market, Staples 등에 문의하세요.

### 참여의 중요성

- 미국에 한명 당 매일 4.5 파운드의 쓰레기를 발생합니다!
- 알루미늄 캔 1 개를 재활용하면 3 시간 동안 티비에 전원을 공급하기에 충분한 에너지를 절약 할 수 있습니다.

### 휴일 수거 연기 일정

아래 휴일에는 수거를 하지 않습니다:

새 해	노동절
현충일	추수감사절
독립기념일	크리스마스

위에 나열된 휴일과 그 주에는 모든 쓰레기, 재활용품, 정원쓰레기 수거가 다음 날로 연기 됩니다. 휴가 수거 차트는 [www.howardcountymd.gov/HolidaySchedule.htm](http://www.howardcountymd.gov/HolidaySchedule.htm). 에서 참조하세요.

## 알파 리즈 매립지 (Alpha Ridge Landfill)

2350 Marriottsville Road

운영시간: 오전 8 - 오후 4 시, 월-토

ARL 편의 센터는 하워드 카운티 주민에게 무료입니다. 운전 면허증을 보여주세요.

부동액 기기  
자동차 배터리  
카펫 & 패딩 \*  
의류 및 섬유  
압축 가스 탱크  
식용유  
전자제품 (플러그 또는 배터리 포함된 것)  
가정용 유해 폐기물 (4 월-11 월사이 토요일 만)  
매트리스 및 박스 스프링  
고철류 (폐기류)  
자동차 오일  
재사용 가능한 건축 자재  
경질 플라스틱 (잔디 가구, 작은 집, 쿨러 등)  
스티로폼  
타이어  
마당 / 목재 폐기물

\* 요금 적용

편의점 센터의 지도와 알파 리지 매립지에 대한 자세한 내용은 [www.howardcountymd.gov](http://www.howardcountymd.gov) / [ARL.htm](http://ARL.htm) 을 방문하세요.

아무리 작은 재활용 이라도 변화를 가져 올 수  
있다는것을 기억하세요!  
질문이 있으세요?

410-313-6444  
[help@HowardCountyRecycles.org](mailto:help@HowardCountyRecycles.org)  
[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)  
Twitter: @CoRecycles

# 하워드 카운티 재활용





# 카운티 재활용 수거 가이드

허용	비허용
<b>종이류</b> <ul style="list-style-type: none"> <li>음료 상자</li> <li>우유팩</li> <li>신문지 및 삽입광고</li> <li>흰색 또는 색지</li> <li>음식과 간식 상자</li> <li>양장본 및 종이표지 서적</li> <li>연하장</li> </ul>	<b>종이류</b> <ul style="list-style-type: none"> <li>종이 타올</li> <li>티슈</li> <li>냅킨</li> <li>음식을 담은 종이 접시 또는 컵</li> <li>포일 선물 포장지</li> <li>아이스크림 통</li> <li>왁스를 입힌 종이</li> <li>비닐 코팅 된 종이</li> </ul>
<b>플라스틱</b> <ul style="list-style-type: none"> <li>병 (우유, 청량음료, 세제, 샴푸, 드레싱, 식용유, 샴푸, 물비누, 스프레이제품 등)</li> <li>들통</li> <li>단지</li> <li>식판</li> </ul>	<b>플라스틱류</b> <ul style="list-style-type: none"> <li>스티로폼 (재활용을 위해 알파 리즈 매립지에 배출하기)</li> <li>플라스틱 클램셸 포장 (전자제품, 장난감, 건전지, 산딸기, 제과류 등 포장용)</li> <li>씨디, 디비디, 보석 케이스</li> <li>아크릴 플라스틱</li> <li>부동액 통</li> <li>스넥이나 칩스 포장지</li> </ul>
<b>캔류</b> <ul style="list-style-type: none"> <li>알루미늄 및 철 캔 (음료수, 음식, 애완동물 음식)</li> <li>빈 에어로졸 캔 (헤어스프레이, 휘핑크림, 등)</li> <li>알루미늄 포일</li> <li>케익 및 케익 접시</li> </ul>	<b>캔류</b> <ul style="list-style-type: none"> <li>프로판 용기</li> <li>비치 체어 또는 야외용 의자</li> <li>냄비 및 프라이팬</li> <li>고철류</li> </ul>
<b>유리병류</b> <ul style="list-style-type: none"> <li>병</li> <li>단지</li> </ul>	<b>유리병류</b> <ul style="list-style-type: none"> <li>창유리</li> <li>유리컵</li> <li>거울</li> <li>도자기</li> </ul>
<b>판지류</b> <ul style="list-style-type: none"> <li>4 x 6 인치 미만의 상자는 납작하게 줄일 것</li> <li>묶어서 배출하는 것을 선호 하지만 필수는 아님</li> <li>목음은 6 인치 이상 높이지 말것</li> </ul>	<b>판지류</b> <ul style="list-style-type: none"> <li>스티로폼 완충재</li> <li>음식 이물질이 묻은 상자</li> </ul>

뚜껑과 마개는  
용기와 함께  
배출해주세요.



정원 쓰레기를 재활용 용기에 배출하지 말아 주십시오.  
재활용품을 불투명한 봉지에 넣어 배출하지 말아 주십시오. 수거되지 않습니다.



## 수거함 외 재활용법

### 안쓰는 물건 버리기

[www.howardcountymd.gov/WhatShouldIDoWith.htm](http://www.howardcountymd.gov/WhatShouldIDoWith.htm) 을 방문해 거의 모든 물건의 재사용 및 재활용 옵션을 알아보세요.

### 대용량 쓰레기 및 고철 수거

먼저 재사용 옵션을 고려하기 바랍니다! 대용량 쓰레기 항목이나 고철 수거는 예약을 해야합니다. 410-313-6444 로 문의하거나 [HowardCountyBulkPickup.org](http://HowardCountyBulkPickup.org) 를 방문하세요.

### 스티로폼

알파 리즈 매립지에서는 흰색 발포 포장재, 깨끗한 음식 식판, 컵, 용기 그리고 모든 색상의 계란 판지에 표시가 있으면 재활용합니다. 발포 피넛, 단열재, 클램셸 포장 또는 발포가 아닌 #6 용기는 받지 않습니다.

### 가정용 유해 쓰레기 (HHW)

알파 리즈 매립지에서는 HHW 항목 쓰레기를 4 월-11 월 사이 토요일에만 받습니다.

[www.howardcountymd.gov/HHW.htm](http://www.howardcountymd.gov/HHW.htm)

### 정원 손질 쓰레기

골목길 연석 수거나 매립지 배출 경우 종이 봉투 또는 재사용 가능한 용기를 사용하세요.

[www.howardcountymd.gov/YardTrim.htm](http://www.howardcountymd.gov/YardTrim.htm)

### 퇴비화

카운티에서는 뒷마당 퇴비화를 위해 무료로 통을 제공합니다. [www.howardcountymd.gov/Composting.htm](http://www.howardcountymd.gov/Composting.htm)

### 잔디 재활용

더욱 건강한 잔디를 위해 영양이 풍부한 잘린 잔디를 버리지 말고, 그냥 누어있게 놔두세요!

<http://www.howardcountymd.gov/Grasscycling.htm>

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## Holiday Slide Schedule:

Your curbside collections may be affected by:

New Year's Day	Labor Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

For a holiday listed above and the rest of that week, ALL trash, recycling and yard trim collections will slide to the next day.

Holidays that do NOT affect collection include: Martin Luther King Jr. Day, President's Day, Good Friday, Columbus Day, and Veteran's Day.

## Inclement Weather:

Every effort will be made to continue to provide scheduled collections. If collections are cancelled due to severe weather, all collections (trash, recycling and yard trim) will slide and be made one day later that week, if possible.

Visit [www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org) or call (410) 313-6444 for cancellation and make-up information.

## Tips to reduce your trash by 80%

- Recycle unlimited quantities of acceptable items on your recycling day. Visit our website for a list of acceptable items.
- Grasscycle by leaving grass clippings on your lawn. This means less work for you and provides free fertilizer for your lawn.
- Compost grass, leaves, yard trimmings and select food scraps. Use the finished product to amend your lawn, flower beds and vegetable gardens. **Free compost bins** are available to Howard County residents at 6751 Columbia Gateway Dr. Suite 514 and Alpha Ridge Landfill.
- Donate usable items to charities such as Goodwill, Salvation Army, etc. to keep good items out of the trash.

## Bulk Items and Scrap Metal:

Pickup of **bulk trash items** must be **scheduled** by calling 410-313-6444 or visiting [HowardCountyBulkPickup.org](http://HowardCountyBulkPickup.org).

Bulk trash items such as mattresses, box springs and furniture will be collected. After scheduling, place these items at curb on your regular trash day. A maximum of 4 bulk trash items will be collected per pickup. Items must be able to be lifted by two collection crew members (larger/unaccepted items will be tagged and left for the resident's disposal).

Pickup of **scrap metal items** must be **scheduled** by calling 410-313-6444. After scheduling, you will be given your collection day. Restrictions may apply.

### Items NOT Accepted

- Batteries\*
- Carpets/Rugs
- Chairs with electric plugs
- Compressed gas tanks\*
- Computer monitors\*
- Construction & demolition debris
- Drum containers/fuel & oil tanks
- Medical waste
- Mirrors/plate glass
- Motorized toys\*
- Pallets\*
- Picnic tables (wooden)
- Playhouses/swing sets (wooden)
- Recliners
- Sofa beds
- Stumps & logs\*
- Tires\*
- TVs\*

\*These items can be recycled at Alpha Ridge Landfill (2350 Marriottsville Road, Marriottsville).



# Trash

## Your Guide to Howard County's Trash Service



Many items we often consider to be trash can be recycled, reused or donated. Please consider reuse/recycle options first.

Bureau of Environmental Services  
6751 Columbia Gateway Drive  
Suite 514, Columbia, MD 21046  
410-313-6444

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## What will be collected?

Household trash must be packaged to fit the size, weight and quantity restrictions below:

- Four (4) items on each collection day. This includes up to four cans, bags or bundles.
- Each can, bag or bundle must be **less than 40 pounds**.
- Bundles must be less than 4 feet in length, less than 18" in diameter and less than 40 pounds.
- For bulk pickup information, see back panel.

## What will NOT be collected?

- Liquids such as paint, cooking oil, chemicals and motor oil (which can leak onto the streets).
- Hazardous, toxic or flammable materials - asbestos, ammunition, explosives, dead animals, firearms, etc.
- Car parts - tires, wheels, batteries, etc.
- Landscape and construction debris - dirt, rocks, stumps, concrete, sod, drywall, lumber, plywood, etc.
- Cart-type containers larger than 40-gallons containing loose trash will not be serviced.
- Yard trimmings may not be put out as trash during yard trim season in areas that receive curbside yard trim collection. Yard trim season is April 1st through the third week in January.
- **Trash placed in County-provided recycling containers will not be serviced.**

**Note:** Many of these items can be taken to the Alpha Ridge Landfill for recycling and disposal. Visit [www.howardcountymd.gov/ARL.htm](http://www.howardcountymd.gov/ARL.htm) or call 410-313-6444 for details.

## How to prepare trash:

Residents may utilize reusable containers or disposable bags.

### Reusable containers must be:

- Made of metal or tough plastic and equipped with handles and watertight, well-fitting lids.
- Maximum 40-gallon capacity. If containers are larger than 40 gallons, each bag inside is counted as one item.
- Cart-type containers larger than 40 gallons should not be used.

Note: Reusable containers may be required in townhome communities or in areas where previous sanitation problems or rodent infestations have been identified.

### Disposable trash bags must be:

- Heavy gauge plastic that can be picked up and carried without tearing.
- Securely tied at the top to prevent spillage.



**Note:** The clean-up of trash or recycling, especially in grouping locations, that is spilled and/or spread by animals or wind is the responsibility of the residents.

## Where to place trash:

- Residents of single family homes must place trash to be collected within five (5) feet of the nearest public road fronting the home.
- Place cans, bags, carts, etc. away from cars, mailboxes and fire hydrants on the opposite side of the driveway, if possible.
- Residents of townhome communities without garages are required to group items in designated areas accessible to the collectors, such as the curb end of grass islands or at the end of parking areas.
- Do not block mailboxes or fire hydrants.

## When are collections?

- Trash is collected on your scheduled collection day between the hours of 6 a.m. and 7 p.m. Pickup times may vary week to week.
- Items must be placed out after 6 p.m. the night before collection or before 6 a.m. the day of collection. Please do not set items out days in advance of your collection day.
- **Contractors will not return to collect items set out after the truck has serviced the area.**
- Collections missed due to road closings will be made the next day, if possible.





## Calendario para días festivos:

Su calendario pudiera cambiar en estos días:

Día del Trabajo	Año Nuevo
Día de Recordación	Día de Acción de Gracias
Día de la Independencia	Navidad

Para los días festivos antes mencionados y el resto de esa semana, TODO la basura y reciclaje se recogerán al día siguiente del usual.

Días festivos **NO** afectados incluyen: Día de Martin Luther King, Jr., Día del Presidente, Viernes Santo, Día de la Raza y Día de los Veteranos.

## Por inclemencia del tiempo:

Haremos lo posible por seguir el calendario normal. Si se tiene que cancelar su día de recolección de basura, reciclaje o podas, de ser posible se recogerá al día siguiente en esa semana.

Visite [www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org) o lláme al 410-313-6444 para mayor información.

## Para reducir la basura un 80%

- Recicle cantidades ilimitadas de artículos aceptables su día de reciclaje Visite nuestra web para una lista de artículos aceptables.
- Recicle el pasto, deje lo que podó sobre su jardín. ¡Se ahorra trabajo y fertiliza su jardín gratis!
- Haga abono orgánico con pasto, hojas, podas del jardín y ciertos desperdicios de comida. Con este abono orgánico Ud. puede fertilizar su césped, flores, y jardín de vegetales. Contenedores para abono orgánico gratuitos, están disponibles para los residentes del Condado de Howard en el Vertedero Alpha Ridge en 6751 Columbia Gateway Dr. #514
- Done los artículos que todavía pueden usarse a organizaciones sin fines de lucro tales como: Goodwill, Salvation Army, etc. para mantener cosas buenas fuera de la basura.

## Cantidades grandes y chatarra:

Para que se recojan grandes cantidades **usted debe programar la fecha** llamando al 410-313-6444 o visitando [www.HowardCountyBulkPickup.org](http://www.HowardCountyBulkPickup.org).

Para basura grande como colchones/box/somier y muebles. Después de programar la fecha, colóquelos en la acera en donde está designado colocar basura. Máximo 4 artículos grandes serán recogidos. Debe ser posible que dos personas del servicio puedan cargarlos (artículos más grandes o rechazados, serán etiquetados y dejados para que el residente se deshaga de ellos).

Para que se recoja **chatarra** tiene que **programar la fecha** llamando al 410-313-6444, le dirán que día pueden ir por ella. Hay restricciones.

## NO se aceptan:

- Acumuladores/pilas\*
- Alfombras / Tapetes
- Sillones eléctricos
- Tanques de gas\*
- Pantalla de ordenador\*
- Escombro
- Tanques de aceite o combustible
- Desechos médicos
- Espejos/vidrio metalizado
- Juguetes de motor\*
- Tarimas\*
- Mesas de picnic (madera)
- Juegos/columpios (de madera)
- Sillones reclinables
- Sofacama
- Tocones y troncos\*
- Llantas\*
- Televisores\*

\*Se pueden reciclar en el Vertedero Alpha Ridge (2350 Marriottsville Road, Marriottsville)



# Basura

## Guía para el Servicio de Recolección de Basura del Condado de Howard



Tiramos muchas cosas que no son basura. Por favor, primero considere reciclar, reusar o donar antes que tirar a la basura

Departamento de Servicios Ambientales  
(Bureau of Environmental Sciences)  
6751 Columbia Gateway Drive  
Suite 514, Columbia, MD 21046  
410-313-6444

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



## ¿Qué será recogido?

La basura de su casa debe ser empacada para cumplir con las restricciones de tamaño, peso y cantidad especificada a continuación:

- Cuatro (4) artículos por ocasión. Incluye hasta cuatro botes, bolsas o paquetes.
- Cada bote, bolsa o paquete debe pesar menos de 40 libras.
- Los paquetes deben ser de menos: de 4 pies de largo, 18" de diámetro y 40 libras de peso.
- Para que se recojan artículos grandes vea al reverso.

## ¿Qué NO será recogido?

- Líquidos (como pintura, aceite para cocinar, productos químicos, aceite automotriz – pues pueden derramarse en la calle).
- Materiales peligrosos, tóxicos o inflamables - asbestos, municiones, explosivos, armas de fuego, animales muertos, etc.
- Autopartes (llantas, rines, acumuladores, etc.)
- Desperdicios de jardín y escombros de construcción- tierra, rocas, ramas, concreto, tabla-roca, tablas, triplay, etc.
- No se acepta basura suelta dentro de los contenedores rodantes de más de 40 gal.
- NO se pueden sacar podas a la acera como si fuera basura durante la época de podar (del 1 de abril hasta la tercera semana de enero).
- **Basura adentro de los contenedores de reciclaje del Condado, NO será recogida.**

**Nota:** Muchos de estos artículos pueden ser llevados al Vertedero Alpha Ridge para tirarlos o reciclarlos. Para más detalles, Visite [www.howardcountymd.gov/ARL.htm](http://www.howardcountymd.gov/ARL.htm) o llamo 410-313-6444 para detalles.

## Como acomodar la basura:

Los residentes pueden utilizar contenedores reutilizables o bolsas desechables.

### Los contenedores reutilizables deben ser:

- Hechos de metal ó plástico rígido, con agarraderas y tapas herméticas
- Con capacidad máxima de 40 galones. Si son más grandes, cada bolsa adentro del mismo, cuenta como un artículo.
- No debe usar contenedores rodantes de más de 40 galones.

**Nota:** pudiera ser obligatorio utilizar contenedores reusables en comunidades multifamiliares o lugares identificados con problemas sanitarios o infestación de roedores.

### Las bolsas desechables deben:

- Ser de plástico grueso para que no se rompan al ser levantadas.
- Estar bien atadas para que no se desparrame el contenido.



**Nota:** Los residentes son responsables de limpiar la basura o reciclables que se desparraman debido al viento o animales, en particular en donde se agrupan los botes o contenedores.

## Donde colocar la basura:

- Residentes de casa unifamiliar deben colocar la basura a 5 pies de distancia de la calle pública más cercana al frente de la casa.
- Coloque las botes, bolsas, contenedores, etc. alejados de carros, buzones o hidrantes en el lado opuesto del acceso, si es posible.
- Residentes de multifamiliares sin cochera, deben agruparlos en áreas accesibles designadas, tales como la acera, las islas de grama o al final del estacionamiento.
- No obstaculice buzones ni hidrantes.

## ¿Cuándo se recogerá?

- La basura se recogerá según su calendario entre 6 AM y 7 PM. El horario cambia según el día.
- Debe sacar la basura después de las 6 PM de la noche antes del día en que será recogida, o el día que le toca pero antes de las 6 AM. Por favor no la saque días antes del día designado.
- **Los contratistas no regresarán a recoger artículos sacados tarde.**
- Si las calles están cerradas, la basura se recogerá al día siguiente, si es posible.





## 휴일 수거 연기 일정

연석 수거는 다음 공휴일 동안 영향을 받을 수도 있습니다.

신년	노동절
현충일	추수 감사절
독립 기념일	크리스마스

위에 나열된 공휴일과 그 한 주 동안은 모든 쓰레기, 재활용품 그리고 정원 손질 쓰레기의 수거가 다음날로 연기됩니다.

수거에 영향을 받지 않는 공휴일은:

마틴 루터 킹의 날, 대통령의 날, 금요일, 콜럼버스의 날, 그리고 재향 군인의 날.

## 악천후

예정된 수거 서비스를 제공하기 위한 노력을 다 할 것입니다. 수거가 혹독한 기상 상황 때문에 취소될 경우, 가능한 그 주에 하루 연기되어 모든 수거 (쓰레기, 재활용품과 정원 손질 쓰레기)가 이루어질 것입니다. 취소나 보충 수거 정보는

www.HowardCountyRecycles.org 에서 참조하거나 (410) 313-6444 로 문의하십시오.

## 쓰레기 80 프로 줄이는 유용한 정보

- 허용되는 항목의 재활용품을 재활용 수거일에 무제한으로 내놓으세요. 허용되는 재활용품 목록은 웹 사이트에 있습니다.
- 잔디밭에 자른 잔디를 놔두어 잔디 재활용을 합니다. 이렇게 함으로 여러분은 일거리가 줄고 잔디에 무료로 비료를 주게 되는 것입니다.
- 잔디, 나뭇잎, 정원 손질 쓰레기와 선별된 음식물 쓰레기를 퇴비화합니다. 완성된 퇴비를 사용해 잔디밭, 화단과 채소 정원을 개선하십시오. 하워드 카운티 주민을 위한 **무료 퇴비통**은 6751 Columbia Gateway Dr. Suite 514 와 알파 리지 매립지에서 제공됩니다.
- 좋은 물건이 쓰레기가 되지 않게 사용 가능한 물품은 굿윌 (Goodwill), 구세군 (Salvation Army) 등 자선 단체에 기부하십시오.

## 대형 폐기물 및 고철

대형 폐기물 항목의 수거는 410-313-6444 에 문의 또는 HowardCountyBulkPickup.org 를 방문하여 **예약**을 해야합니다.

매트리스, 박스 스프링, 가구 등 대형 쓰레기 항목은 수거됩니다. 예약 후 일반 쓰레기 수거 날에 연석에 내놓으십시오. 매번 최대 네 개의 대형 쓰레기 물품이 수거됩니다. 물품은 두 명의 수거인이 들 수 있어야 합니다. (너무 큰 것/ 비허용 항목의 물품은 꼬리표를 달아 거주자의 처분을 위해 남겨둡니다.)

고철 항목의 수거는 410-313-6444 로 문의하여 **예약**을 해야합니다. 예약 후, 수거일시를 받게 될 것입니다. 제한 사항이 적용될 수 있습니다.

## 비허용 항목

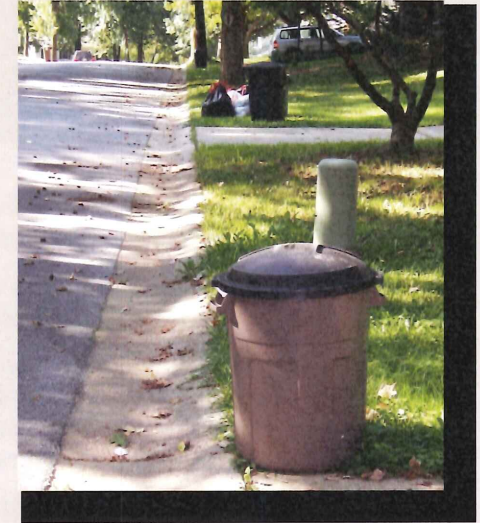
- |                    |                    |
|--------------------|--------------------|
| • 건전지*             | • 거울/판유리           |
| • 카펫/융단            | • 모터달린 장난감*        |
| • 전기 플러그가 달린 의자    | • 팻릿 (화물 운반대)*     |
| • 압축 가스 탱크*        | • 피크닉용 테이블 (목재)    |
| • 컴퓨터 모니터*         | • 장난감 집/그네 세트 (목재) |
| • 건축 및 철거 자재 부스러기  | • 뒤로 젖히는 안락의자      |
| • 드럼 컨테이너/연료 기름 탱크 | • 소파 겸용 침대         |
| • 의료 폐기물           | • 나무 그루터기 및 통나무 *  |
|                    | • 타이어*             |
|                    | • 텔레비전*            |

\* 항목들은 알파 리지 매립지에서 재활용 할 수 있습니다. (2350 Marriottsville Road, Marriottsville).



# 쓰레기

## 하워드 카운티 쓰레기 처리 안내서



우리가 종종 쓰레기로 간주하는 많은 물품이 재활용, 재사용 또는 기부될 수 있습니다. 재사용/재활용을 먼저 고려하십시오.

환경 서비스국  
(Bureau of Environmental Services)  
6751 Columbia Gateway Drive  
Suite 514, Columbia, MD 21046  
410-313-6444  
[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)

## 무엇을 수거합니까?

가정용 쓰레기는 아래의 크기, 무게 및 수량 제한에 맞게 포장해야 합니다:

- 각 수집 일에 (4) 개의 항목. 이것은 플라스틱 통, 봉지 또는 꾸러미 4 개까지 포함됩니다.
- 각 플라스틱 통, 봉지 또는 꾸러미는 **40 파운드 미만**이어야 합니다.
- 각 꾸러미의 길이는 길이 4 피트 이하, 지름 18 인치 이하 그리고 40 파운드 이하이어야 합니다.
- 대용량 수거 정보는 뒷면을 참조하십시오.

## 무엇이 수거되지 않습니까?

- 페인트, 식용유, 화학 물질 및 엔진 오일 등의 액체(거리로 누출될 수 있습니다).
- 유해 독성 또는 인화성 물질 - 석면, 탄약, 폭발물, 죽은 동물, 총기 등.
- 자동차 부품 - 타이어, 바퀴, 건전지 등 .
- 조경 및 건축 자재 부스러기 - 흙, 바위, 나무 그루터기, 콘크리트, 잔디, 석고, 목재, 합판 등.
- 40 갤런보다 큰 카트형 컨테이너에 묶여 있지 않은 쓰레기는 수거되지 않습니다.
- 정원 손질을 하는 계절 동안 연석 수거 서비스를 받는 지역에서는 정원 손질 후 나오는 잔여물을 쓰레기로 배출하지 마십시오. 정원 손질 계절은 4 월 1 일부터 1 월 세 번째 주까지입니다.
- 카운티에서 제공하는 재활용 용기에 넣은 쓰레기는 수거되지 않습니다.

**참고:** 이 항목의 대부분은 알파 리지 매립지에서 재활용 및 폐기물로 배출할 수 있습니다. 자세한 내용은 [www.howardcountymd.gov/ARL.htm](http://www.howardcountymd.gov/ARL.htm) 에서 참조하거나 410-313-6444 로 문의하세요.

## 쓰레기 배출 요령:

주민들은 재사용이 가능한 용기나 일회용 봉지를 사용할 수 있습니다.

### 재사용 용기는:

- 손잡이가 있고 물이 새지 않는 뚜껑이 있는 금속이나 단단한 플라스틱 재질.
- 최대 40 갤런 용량. 용기가 40 갤런보다 클 경우, 내부의 각 봉지가 하나의 항목으로 계산됩니다.
- 40 갤런보다 큰 카트형 용기는 사용하지 않아야 합니다.

**참고 :** 타운 홈 공동체 또는 이전에 위생 문제나 설치류 감염이 확인된 지역에서는 재사용 용기가 필요할 수 있습니다.

### 일회용 쓰레기 봉투는:

- 집어 옮길 때 찢어지지 않는 두꺼운 플라스틱 재질로 된 것
- 쓰레기가 유출 되지 않게 봉지 입구를 꼭 묶어 놓을 것.



**참고:** 특히 그룹으로 수거되는 지역에서 동물이나 바람 때문에 펼쳐졌거나 유출된 쓰레기와 재활용품의 청소는 주민의 책임입니다.

## 쓰레기 배출 장소

- 단독 주택의 거주자는 수거 할 쓰레기를 집 앞 5 피트 내에 있는 공공 도로에 배치해야 합니다.
- 통, 봉지, 카트 등은 차, 우편함 및 소화전에서 가능한 한 멀리 진입로 반대편에 놓아주세요.
- 차고가 없는 타운 홈 지역 주민께서는 지정된 연석 끝의 잔디 섬 또는 주차장의 끝 구역처럼 수거인이 접근할 수 있는 곳에 수거품을 모아놓아야 합니다.
- 우편함이나 소화전을 막지 마십시오.

## 언제 수거합니까?

- 쓰레기는 예정된 수거 당일 오전 6 시 부터 오후 7 시 사이에 수거 됩니다. 수거 시간은 매주 다를 수 있습니다.
- 수거품들은 수거일 전날 밤 오후 6 시 이후 또는 수거일 아침 오전 6 시 이전에 내놓아야 합니다. 수거일 전에 수거품을 미리 내놓지 마십시오.
- **협력 업체 트럭은 이미 다녀간 지역에 수거 후 내놓인 수거품을 재방문하여 거둬가지 않습니다.**
- 도로 폐쇄 때문에 밀린 수거는 가능한 다음 날 실시 될 것입니다.





## Yard Trim Recycling Options for ALL County Residents

### Rake and Take Program

Match yourself (Raker) with someone who needs material for their compost bin (Taker). For more details, call the Howard County Master Gardeners at 410-313-2707.

### Drop-off

Recycle your yard trim at the Alpha Ridge Landfill from 8 a.m. to 4 p.m., Monday–Saturday.

*Proof of Howard County residency required.*



## Take yard trim recycling to the next level!

### Grasscycle

Save time, energy and money by leaving grass clippings on your lawn to return nutrients to the soil and improve lawn quality. Grasscycling is recommended by lawn care professionals and helps the Chesapeake Bay by eliminating fertilizer needs.

### Compost

Mix leaves, grass clippings and vegetable scraps together and watch the decomposition process turn these items into a natural soil amendment.

Compost demonstrations are offered by the Master Gardeners in the spring, summer and fall. **Free compost bins** are available to Howard County residents at 6751 Columbia Gateway Drive, Suite 514 and Alpha Ridge Landfill.

## Christmas Tree Collection

*December 26 through the third week in January*

**Place clean, undecorated trees out for collection on your recycling day.**

### YES - We will collect:

Whole trees under 6 feet or trees over 6 feet that are cut in half.



### NO - We can't collect:

- Trees with metal or plastic bases
- Trees with tinsel, icicles or any other ornaments or materials
- Trees wrapped in plastic bags
- Artificial trees (please recycle with scrap metal at Alpha Ridge Landfill)

### Other options:

- Merry Mulch Drop-off locations, including designated County parks and the Alpha Ridge Landfill Woodwaste Area. Check online or call for a complete list of sites.
- Check local nurseries for tree chipping services.



## Yard Trim

## Your Guide to Howard County's Yard Trim Collection Service



Bureau of Environmental Services  
6751 Columbia Gateway Drive  
Suite 514, Columbia, MD 21046  
410-313-6444

[www.HowardCountyRecycles.org](http://www.HowardCountyRecycles.org)



# Curbside Yard Trim Collection

## April 1 through the third week in January

Howard County collects curbside yard trim from homes in most areas on County roads and some approved private roads.

### How to recycle...

- Unlimited quantities of grass, leaves and light brush can be put out for collection on your recycling day. Items must be at the curb by **6 a.m.** the day of collection.
- Set your yard trim out in reusable containers or in paper or plastic bags.
- Tie brush and branches together with string or twine. Bundles may not exceed 18" in diameter and 4' in length.
- Yard trim may not be put out as trash during the yard trim collection season in areas that receive curbside yard trim service.
- Remember the **40 pound weight** limit for cans, bags and bundles.

### How will holidays affect my collection?

There will be no collection on the following County holidays:

<b>New Year's Day</b>	<b>Labor Day</b>
<b>Memorial Day</b>	<b>Thanksgiving Day</b>
<b>Independence Day</b>	<b>Christmas Day</b>

For a holiday listed above and the rest of that week, ALL trash, recycling and yard trim collections will slide to the next day. For a chart of your holiday collections, visit [howardcountymd.gov/HolidaySchedule.htm](http://howardcountymd.gov/HolidaySchedule.htm)

### YES - We will collect:

- Grass
- Leaves
- Hedge clippings/light brush
- Small limbs or branches less than 4" in diameter and 4' in length
- Seed pods (pine cones, sour gum balls, etc)
- Straw/hay
- Bamboo

### NO - We can't collect:

- Bushes with root bases attached
- Logs
- Yard trim placed in recycling carts and cardboard boxes
- Yard trim mixed with trash or miscellaneous materials, such as:
  - Plastic/clay pots
  - Fruits, vegetables or nuts
  - Dirt, rocks, sod or sand
  - Metal wire or fencing
  - Glass, pottery or stone

### Where to place items for collection

- Single family homeowners must place items within five (5) feet of the nearest public road fronting their homes.
- Place cans, bags, etc. away from mail boxes on the opposite side of the driveway, if possible.
- Residents in townhome communities with head-in parking areas are required to group items in designated areas. Do not block mailboxes or fire hydrants.

### Did You Know?

- The truck that picks up your yard trim may arrive earlier or later than the other recycling truck.
- Material collected is composted or mulched and residents can purchase the finished products at the Alpha Ridge Landfill.
- Yard trim is accepted year-round at the Alpha Ridge Landfill Woodwaste Area. Plastic bags are restricted, however reusable containers and paper bags are welcome.
- Grass clippings placed in plastic bags often create condensation, which can leak or spill. Try grasscycling instead.

### Paper Yard Trim Bags

Howard County encourages residents to use paper bags or reusable containers for yard trim instead of plastic bags.

### Why Paper Bags?

- Paper bags decompose naturally with yard trim while plastic bags do not. Plastics reduce the quality of the finished compost.
- Paper bags can hold the same amount as plastic bags, but won't puncture as easily.
- Paper bags can stay open for easy filling.



### Questions?

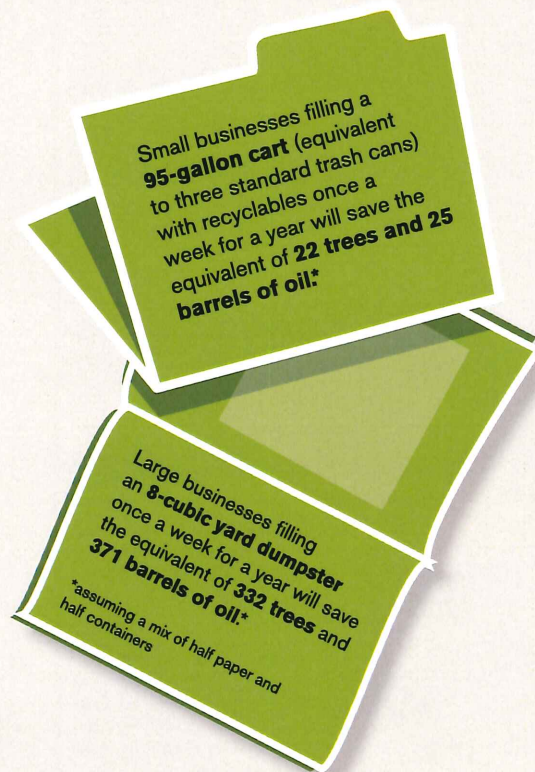
Howard County Bureau of Environmental Services  
410-313-6444  
Howard County Master Gardeners  
410-313-2707  
University of MD Home and Garden Info Center  
1-800-243-2507



## Specialty Recycling

While this guide focuses on office recycling, the same principles can apply to recycling all types of waste. For more information contact: [www.mdrecycles.org](http://www.mdrecycles.org)

- Appliances
- Asphalt, Bricks and Concrete
- Batteries
- Bulbs, CFL's and Fluorescents
- Carpet and Carpet Padding
- Ceiling Tiles
- Drywall
- Dirt, Sand and Clean Fill/Soil
- Electronics
- Glass (Window and Plate)
- Gypsum
- Metals
- Mixed Construction and Demolition Debris
- Motor Oil and Antifreeze
- Paper and Paper Shredding
- Pallets
- Produce
- Roof Shingles
- Textiles
- Tires
- Toner Cartridges
- Vinyl and PVC Scrap
- Wood Waste



[www.howardchamber.com/recycling](http://www.howardchamber.com/recycling)  
[www.howardcountyrecycles.org](http://www.howardcountyrecycles.org)



## Recycling Guide for the Business, Educational and Institutional Communities



Good for Business  
Good for the Environment  
It Just Makes Sense



### Using This Guide

Recycling has been around for many years but it is just now hitting its stride as businesses and the government are looking for ways to be environmentally sensitive in a fiscally responsible manner.

At the request of Howard County Executive Ken Ulman, the Howard County Chamber of Commerce in conjunction with individuals from the business, institutional and educational communities and the Howard County Government have joined forces to create sustainable initiatives for the non-residential community.

This guide is meant to help give direction for the recycling needs in the commercial community by providing information and the resources available in Howard County as well as the surrounding area. This brochure also provides web links and phone numbers to help a business or institution begin its recycling process.



## Getting Started

### From the Workspace to the Recycling Facility

Establishing your recycling program:

- Identify which of your waste disposal items are recyclable.
- Select new containers or retrofit existing containers to separate trash and recyclable items.
- Contact your recycling collection vendor of choice and establish which is the best program and pick-up container for your needs.
- Select the best location for your pick-up container and make sure it is clearly marked as recyclable materials only.
- Educate your employees and patrons about your recycling program and post proper signage and instructions.
- Educate your janitorial services or employees that will be handling the recyclable materials from the workplace to the collection point.
- Continually monitor your program for compliance and quality.



## Single Stream / Co-Mingled Recycling

**All together now!**

Recyclable & non-recyclable items

### Accepted

Aluminum and Steel Cans  
Brown Paper Bags  
Cardboard  
Clean Foil Trays  
Computer and Fax Paper  
Copy and Printing Paper  
Folders and Report Covers  
Glass Bottles & Jars  
Hanging Files (no metal)  
Hard and Soft Cover Books  
Index Cards  
Junk Mail and Envelopes  
Magazines  
Manila File Folders  
Margarine or Yogurt Containers  
Newspapers and Inserts  
Non-Metallic Gift Wrap  
Office & Shredded Paper  
Plastic Bottles  
Sticky Notes

### Not Accepted

Drinking Glasses  
Food Contaminated Paper  
Laminated Paper  
Light Bulbs  
Mirrors  
Motor Oil Bottles  
Mylar Sheets  
Photographic/Carbon Paper  
Styrofoam  
Window Glass

\*shredded paper must be bagged.



## Two Recycling Options



### Individual Contracting

For larger companies that have significant recycling needs it may be more cost effective and efficient to contract individually with a waste disposal company that also handles recycling.

In many cases, recycling can be a cost-savings measure over the cost of solid waste disposal.

There are several area waste management companies that provide recycling collections for organizations with larger disposal requirements. While we do not endorse any one company, each has been in the region for a number of years.

AbitibiBowater  
6401 Quad Avenue, Suite B  
Baltimore, MD 21205  
410-588-1704  
[www.abitibibowater.com](http://www.abitibibowater.com)

Allied Waste Services of Baltimore  
260 W. Dickman Street  
Baltimore, MD 21230  
410-727-6161  
[www.disposal.com](http://www.disposal.com)

Jenn-Kans  
5135 Frolich Lane  
Tuxedo, MD 20781  
410-313-9800  
[www.jennkans.com](http://www.jennkans.com)

Waste Management Recycle America  
6994 Columbia Gateway Drive, Suite 200  
Columbia, MD 21046  
410-796-7010  
[www.wm.com](http://www.wm.com)



### Co-op Recycling

The Howard County Chamber of Commerce is sponsoring a Recycling Cooperative to assist businesses lower costs. Education and information sessions are being conducted. To learn about the Cooperative go to the Chamber website at [www.howardchamber.com](http://www.howardchamber.com).







HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Marsha S. McLaughlin, Director

[www.howardcountymd.gov](http://www.howardcountymd.gov)

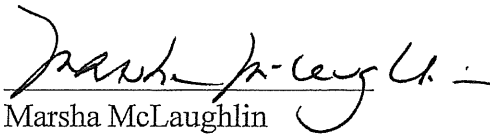
FAX 410-313-3467

TDD 410-313-2323

STATEMENT OF CERTIFICATION

December 2014

The Solid Waste Management Plan, 2014-2024, for Howard County is consistent with Howard County's General Plan, *PlanHoward 2030*, adopted on July 26, 2012 by the Howard County Council. The Solid Waste Management Plan has been developed based upon population estimates and land use objectives shown in the General Plan provided by the Department of Planning and Zoning. Per the Annotated Code of Maryland, the County planning agency shall certify that the plan, revision, or amendment is consistent with the County Comprehensive Plan prepared under Article 66B, § 3.05; Article 25A, § 5(X); or Article 25B, § 13 of the Code.



Marsha McLaughlin  
Director

11/25/14  
Date

