

**BALTIMORE COUNTY, MARYLAND**  
**TEN YEAR SOLID WASTE MANAGEMENT PLAN**  
**EXECUTIVE SUMMARY**

*Baltimore County Department of Public Works*  
*Bureau of Solid Waste Management*

OVERVIEW

Baltimore County is adopting a new Ten Year Solid Waste Management Plan, covering the years 2009-2018, in fulfillment of Section 26.03.03 of the Code of Maryland Regulations and consistent with Baltimore County's 1999 Public Participation Plan. Baltimore County last adopted a Ten Year Solid Waste Management Plan in 1992, and the Maryland Department of the Environment (MDE) approved that Plan in 1993.

**Baltimore County's existing solid waste/recycling infrastructure (collection, processing, marketing, and disposal), allowing for some improvements as outlined later in this Executive Summary, appears to be adequate at least through the year 2018.** Adoption of this Ten Year Solid Waste Management Plan will ensure that Baltimore County has a solid waste management strategy in place covering 2009-2018. Implementation of this Plan will also yield these very important benefits:

- extend the life of Baltimore County's only operating landfill (already half full) by preventing waste and increasing recycling;
- improve the cost-effectiveness of the County's solid waste management/recycling program (when trash disposal costs are sharply increasing); and
- enhance resident satisfaction with the County's solid waste management/recycling program.

CHAPTER I: GOALS, ORGANIZATION, AND REGULATIONS

As reflected in the current mission statement of the Department of Public Works, Bureau of Solid Waste Management, Baltimore County is committed to provide a safe, environmentally sound, integrated solid waste management program that:

- promotes waste prevention;
- increases recycling;
- increases resource recovery; and
- decreases the quantity of solid waste requiring landfilling.

The Bureau of Solid Waste Management is the County agency primarily responsible for solid waste management, particularly in the residential sector. Major areas of responsibility include managing the County's waste prevention and recycling program, collecting residential trash and recyclables, coordinating with the Maryland Environmental Service (MES) on the operation of the Western Acceptance Facility (WAF) and the Baltimore County Resource

Recovery Facility (BCRRF), and operating the Eastern Sanitary Landfill Solid Waste Management Facility (ESL).

The Department of Environmental Protection and Resource Management (DEPRM) also plays a major role in the County's solid waste management system, including but not limited to permitting and inspecting solid waste facilities, accepting certain materials for recycling or proper disposal, and responding to hazardous waste emergencies.

Baltimore County strives to comply with all applicable Federal, State, and local laws and regulations, and has its own set of comprehensive laws and regulations regarding solid waste management.

## CHAPTER II: POPULATION, ZONING, AND LAND USE

Baltimore County's population is expected to grow from nearly 800,000 residents as of 2006 to nearly 838,000 residents by 2018. Baltimore County Zoning Regulations govern the construction of new solid waste disposal facilities. Facilities owned and operated by the County are exempt from these regulations. Baltimore County's Master Plan 2000-2010 includes sections on "Public Infrastructure" and "Solid Waste" (both of which emphasize the importance of waste prevention, recycling, and resource recovery).

## CHAPTER III: SOLID WASTE GENERATION, IMPORT/EXPORT, COLLECTION AND ACCEPTANCE FACILITIES

Projected increases in the County's solid waste stream referred to in this Plan are based on expected population growth as discussed in Chapter II, and presume the continuation of a slight upward trend in per capita residential generation (about 10 more pounds per person, per year, over the 2006 baseline of 1,022 pounds per person, per year) and no change in per capita commercial generation above the estimated 2006 baseline of 890 pounds per person, per year. Attachment A to this Executive Summary is Table III-1 from the Ten Year Solid Waste Management Plan itself (entitled "Trash Generation and Population Data"). Table III-1 summarizes the increases in material generation the County is expected to face during the ten-year planning period, with vision out to the year 2030.

The most significant imports of residential materials currently involve Harford County. Baltimore County accepts the bottles and cans from Harford County's residential recycling program for sorting at BCRRF in Cockeysville. In addition, Baltimore County is in the process of accepting about 100,000 tons of residential trash from Harford County pursuant to a memorandum of understanding whereby Baltimore County will ultimately export 30% more trash to Harford County. Significant quantities of land clearing and demolition materials from out-of-County come to in-County facilities such as Honeygo Run Reclamation Center Rubble Landfill and Days Cove Rubble Landfill. Baltimore County currently has two major out-of-County outlets for residential trash. 102,000 tons per year of residential trash can be taken to Wheelabrator Baltimore through 2011 (current cost to County = \$36.70 per ton). Through January 2010, up to 240,000 tons per year of residential trash can be transferred out-of-County via a contract with Waste Management of Pennsylvania (current cost to County = \$38.10 per ton). The County also exports some of its yard materials (grass, leaves, and small brush) through a regional agreement with Anne Arundel County, Howard County, and the Maryland

Environmental Service (MES). The County is currently paying \$60.64 per ton in conjunction with this agreement.

47 private collection companies, many family-owned businesses of long standing, collect residential trash and recycling on County-designated routes, and then deliver the materials to County-designated facilities. Commercial trash and recycling collection is strictly a function of the private sector, although Baltimore County encourages such recycling and provides technical assistance and recognition. For information on the collection of institutional and other materials, please see the Ten Year Solid Waste Management Plan itself.

Please see Map III-1 from the Ten Year Solid Waste Management Plan (Attachment B to this Executive Summary), which is entitled “Selected Solid Waste Facilities Used by Baltimore County and/or Located in Baltimore County.”

#### CHAPTER IV: ASSESSMENT OF EXISTING SOLID WASTE MANAGEMENT SYSTEM

**Baltimore County has developed a sound and flexible solid waste management system adequately handling all the material currently being generated. Looking to the future, there are two main challenges to face in terms of disposal capacity – the likelihood of more trash and a need to secure replacement outlet(s) for trash by 2011-2012.**

**Baltimore County is already a leader in the solid waste management field. Baltimore County’s solid waste/recycling program has received one international, two national, and three statewide honors during the past decade.** As would be expected in light of so many solid waste/recycling program accolades, there are many positive aspects to the County’s solid waste/recycling situation. For example, in 2007 the County achieved a 62% (combined residential and commercial) recycling rate, and MDE accorded the County a 4% waste prevention credit for “reduce and reuse” efforts. Adding this 4% waste prevention credit to the 62% recycling rate meant that the County’s overall waste diversion rate for 2007 was 66%. **Both the County’s 62% recycling rate and 66% waste diversion rate for 2007 were #1 in the State of Maryland.**

**However, there are some items of concern regarding the County’s solid waste/recycling “big picture.”** During the 1998-2006 period population increased 7.2%, yet residential trash generation moved upwards 15.3% (about a 60,000 ton hike). Meanwhile, residential recycling tonnages (paper and bottles & cans) decreased by 14.9% and 11.2%, respectively, even though there were more people in the County available to recycle and more material to recycle. More residential material will almost certainly be generated annually over the next ten years as the County’s population moves beyond its current level of about 800,000 residents. All of this makes planning for the next ten years, with vision further out, that much more important.

**In general, the residential collection system is functioning in a satisfactory manner, and is capable of doing so for the foreseeable future. Indeed, in a survey of 223 County residents completed in December 2006, 79% said they considered the County’s trash/recycling collection service satisfactory (49% strongly agreed).** The most significant concern regarding the current recycling program for single family homes and town homes is adequate storage (39% reported difficulty). One area frequently mentioned as a concern during the extensive public participation process was multi-family recycling. County solid waste management regulations enacted in the early 1990s (and still on the books) include the following

statement: **“After this one and one program is initiated County-wide for single-family homes and town houses by July 1, 1995, it will be expanded to multi-family dwelling units.”** [emphasis added] **Now, approximately 13 years later and notwithstanding significant efforts to promote multi-family recycling, only a small minority of multi-family homes are part of the “one and one” recycling program.**

**The County’s processing options are satisfactory at present, but major challenges lie ahead. On a very positive note, in recent years revenues from the sale of recyclables sorted at the Baltimore County Resource Recovery Facility (BCRRF) in Cockeysville have offset \$2 million or more (\$5 million in FY 2008) in terms of overall Bureau of Solid Waste Management costs (about \$52 million in FY 2008; thus, revenues offset nearly 10% of costs).** Based on the survey of 223 County residents completed in December 2006, a strong majority of County residents (72%) already understand that recycling is cost-effective. This level of public understanding gives the County a solid basis for investing in new recycling initiatives during the next decade. In terms of important processing challenges the County is confronting, the equipment at BCRRF has been aging. Important decisions on equipment replacement and/or repair are being made and will continue to be made in the next few years to ensure that recycling processing remains at least adequate.

**As things stand now, Baltimore County’s only guaranteed outlet for trash after the year 2011 is the Eastern Sanitary Landfill in White Marsh. However, the County’s ownership and stewardship of this landfill assures the County a high degree of solid waste management independence, especially during the ten-year planning period. Without arranging for contract extensions and/or replacement capacity in the interim, the “worst case scenario” is that the County would lose 102,000 tons per year (Wheelabrator Baltimore) and up to 240,000 tons per year (Waste Management of Pennsylvania) in trash outlets by the year 2012.** The County is committed to securing adequate replacement capacity before these long-term, out-of-County waste to energy and trash transfer contracts expire in 2011 and 2010, respectively. Contracts are currently being negotiated. Therefore, the County has every reason to expect that it will avoid the “worst case” scenario situation.

**The Eastern Sanitary Landfill (ESL), with an estimated remaining trash capacity of about 9.2 million cubic yards as of January 1, 2007, is the County’s ultimate assurance that it can handle the County’s next decade of trash.** Please see Attachment C to this Executive Summary (Table IV-3 from the Ten Year Solid Waste Management Plan itself).

**In its 2006 annual disposal facility report to MDE, the County estimated that ESL would not be full until the year 2039.** A year earlier, using the same estimating methodology but based on a year when more trash entered ESL, the County projected ESL would reach capacity by 2033.

**The bottom line is that ESL’s longevity will for the most part be a function of choices the County and its citizens make.** Recycling materials that would otherwise become “waste” is each resident’s responsibility, for fiscal as well as environmental reasons. The cost of wasting recyclables, already high, will almost certainly increase sharply during the next decade. The more the County is successful in persuading residents to prevent waste and recycle more of what is generated, the less stress the overall solid waste management system will experience. The more practical and convenient the County makes waste prevention and recycling for residents, the more persuasive the County is likely to be.

**Overall, the situation regarding collection and processing/disposal of commercial recyclables/trash appears to be satisfactory for the next ten years.** However, the County does not expect to continue transferring commercial trash out-of-County after January 2010. The impact in terms of solid waste management during the planning period cannot be known at this time.

## CHAPTER V: PLAN OF ACTION

As part of a Countywide Renaissance initiative, Baltimore County Government is committed to a vision where families come first, communities are safeguarded, and County Government is as effective and efficient as the citizens it serves. One component of this vision is that Baltimore County Government will “work hard to build a community better than the one we found.” This is the essence of stewardship.

**This plan of action covers Baltimore County’s solid waste management program through the year 2018, with vision beyond. Looking forward, Baltimore County is committed to the continuous improvement of its solid waste management system. For planning purposes, this involves setting priorities and crafting strategies while preserving flexibility to deal with inevitable changes in circumstances as the years unfold.**

As noted in Chapters III and IV, the County confronts a solid waste management challenge during the planning period. Residential trash generation is projected to reach 447,000 tons per year by 2012 (up from 408,000 tons in 2006), while long-term outlets for trash (Waste Management of Pennsylvania and Wheelabrator Baltimore) expire in 2010 and 2011, respectively. By the end of the planning period (2018), residential trash generation is projected to reach 478,000 tons. Difficult, and likely costly, solid waste management decisions will need to be made in the next few years in light of this situation. However, the County’s ownership of ESL means the County is very unlikely to face a crisis in capacity during the planning period.

In general, the County anticipates that most of the facilities currently being used for solid waste management/recycling purposes will continue to be used during the next decade.

**The new Ten Year Solid Waste Management Plan includes a comprehensive set of recommendations in the areas of waste minimization, recycling, resource recovery (waste to energy), and landfilling:**

- 1) Continue using the MDE Source Reduction Credit Checklist as a planning guide in achieving the maximum 5% waste prevention credit each year.
- 2) Provide a transition to “single stream” recycling collection for all single family homes and town homes in the County.
- 3) Continue to mail four-year trash and recycling schedules, with program information, to all single family homes and town homes in the County.
- 4) Consider creating economic incentives for owners of multi-family developments (condominiums and apartments) to provide on-site recycling opportunities.
- 5) Publicize and expand recycling opportunities for residents in multi-family dwellings.
- 6) Expand the County’s electronics reuse/recycling collection program.
- 7) Assess yard materials recycling collection program cost-effectiveness, and make adjustments as appropriate.
- 8) Assess and expand the Baltimore County Government Facilities Recycling Program.
- 9) Promote recycling in the commercial and institutional sectors.

- 10) Closely monitor the construction and demolition (C&D) debris situation.
- 11) With respect to material generated during the planning period that is not minimized or recycled, the County will seek to maximize the use of waste to energy facilities, where on balance environmental, economic, fiscal, and technical considerations support this.
- 12) The County will seek to minimize the amount of material to be landfilled during the planning period, particularly the amount of material landfilled at ESL. To the extent feasible, any material the County does not manage by waste minimization, recycling, or resource recovery will be transferred out-of-County, rather than landfilled at ESL.
- 13) Expand and/or modify the transfer stations at ESL and BCRRF.
- 14) Continue to pursue useful ways to utilize byproducts of the landfill decomposition process.
- 15) Reassess the commercial tipping fee, and other fees, at the County's solid waste acceptance facilities on a periodic basis.

**Furthermore, the new Ten Year Plan includes a variety of other recommendations for improvements in areas that cut across solid waste management methods:**

- 1) Secure contract extensions and/or replacement capacity in advance of the expiration of arrangements for trash exportation with Waste Management of Pennsylvania (January 2010) and Wheelabrator Baltimore (December 2011).
- 2) Assess solid waste management equipment and vehicle needs on a comprehensive, ongoing basis, making repairs and new purchases in a timely manner.
- 3) Assess collection routes for efficiency on an ongoing basis, making adjustments as appropriate.
- 4) Complete a comprehensive review of all solid waste/recycling regulations, and submit a revised set of regulations for a public hearing and County Council review.
- 5) Revise the Bureau of Solid Waste Management's mission statement to emphasize that reducing the "toxicity" of the solid waste stream as well as its volume is a major County goal.
- 6) Expand the County's overall household hazardous waste (HHW) collection program during the planning period, consistent with feasibility and cost-effectiveness.
- 7) Install a customized, Cassworks software package designed to improve the Bureau of Solid Waste Management's ability to service its customers, particularly over the telephone.
- 8) Intensify overall public education outreach regarding the County's solid waste/recycling program to County residents, with a goal of reaching every County resident at least once each year with a waste prevention and/or recycling message.
- 9) Enhance the content and customer friendliness of the Bureau of Solid Waste Management website.
- 10) Provide the best available information to residents regarding the who, what, when, where, how, and whether items and materials may be delivered to the County's solid waste management facilities, and (where appropriate) non-County locations.
- 11) Publicize, on a yearly basis, basic tonnage and percentage data regarding the County's trash and recycling situation, including information on how much trash is being landfilled in and out of the County or handled by a waste to energy facility.
- 12) All sectors of the Baltimore County Government will coordinate with each other to maximize the quality and cost-effectiveness of the County's solid waste management program.
- 13) Baltimore County will build on a record of regional cooperation and legislative leadership in the solid waste management field.

- 14) Baltimore County, as part of its sustainability initiatives, will look for meaningful ways to participate in the growing dialogue regarding “product stewardship,” giving the County additional alternatives to consider for holding down waste and costs during the plan period and beyond.

## CONCLUSION

It is a truism that the only constant is change, and that is certainly the case with solid waste management in the 21<sup>st</sup> century. Long-range planning cannot begin or end with adoption of a ten-year plan. Only through ongoing attention and adaptation can Baltimore County maintain a safe and environmentally sound solid waste management program worthy of its citizens.

Ultimately, as with the County’s Renaissance initiative, the success of this ten year plan will be measured by the commitment of the *entire* County to the vision and goals embodied in it. This means residents, businesses, and non-government institutions, as well as County Government itself, must step up to the plate. The road map is clear – now is the time to move forward.

**Executive Summary - Attachment A**

**TABLE III-1**

**TRASH GENERATION AND POPULATION DATA**

<b>YEAR</b>	<b>POPULATION</b>	<b>RESID. TONS PER CAPITA</b>	<b>RESID. TRASH TONS</b>	<b>COMMER. TONS PER CAPITA</b>	<b>COMMER. TRASH TONS</b>
	(1)	(2)	(3)	(4)	(3)
1998	741,860	0.469	347,668	0.479	355,511
1999	748,076	0.484	361,720	0.474	354,923
2000	754,292	0.496	373,815	0.387	292,092
2001	762,203	0.504	383,962	0.454	345,828
2002	770,114	0.511	393,523	0.405	311,645
2003 (2&4)	778,024	0.553	430,061	0.358	278,262
2004 (2&4)	785,935	0.571	449,004	0.355	279,224
2005	793,846	0.523	415,337	0.468	371,715
2006	799,182	0.511	408,127	0.445	355,636
2007	804,517	0.516	415,131	0.445	358,010
2008	809,853	0.521	421,933	0.445	360,384
2009	815,188	0.526	428,789	0.445	362,759
2010	820,524	0.531	435,698	0.445	365,133
2011	822,995	0.536	441,126	0.445	366,233
2012	825,467	0.541	446,578	0.445	367,333
2013	827,938	0.546	452,054	0.445	368,432
2014	830,410	0.551	457,556	0.445	369,532
2015	832,881	0.556	463,082	0.445	370,632
2016	834,532	0.561	468,173	0.445	371,367
2017	836,183	0.566	473,280	0.445	372,102
2018	837,835	0.571	478,404	0.445	372,836
2019	839,486	0.576	483,544	0.445	373,571
2020	841,137	0.581	488,701	0.445	374,306
2021	841,992	0.586	493,407	0.445	374,686
2022	842,847	0.591	498,122	0.445	375,067
2023	843,701	0.596	502,846	0.445	375,447
2024	844,556	0.601	507,578	0.445	375,828
2025	845,411	0.606	512,319	0.445	376,208
2026	846,028	0.611	516,923	0.445	376,482
2027	846,644	0.616	521,533	0.445	376,757
2028	847,261	0.621	526,149	0.445	377,031
2029	847,877	0.626	530,771	0.445	377,305
2030	848,494	0.631	535,400	0.445	377,580



## Executive Summary - Attachment A

(1) Population figures are based on U.S. Census data (1990 and 2000) and March 2007 Baltimore County Office of Planning estimates/projections at five-year intervals starting with the year 2005. Estimates/projections for years not ending in zero or five are derived by linear interpolation (which means that straight-line increases are assumed between years where U.S. Census data or Office of Planning estimates/projections are available). In general, the rate of population growth in Baltimore County is expected to slow substantially through the year 2030.

(2) 2003 and 2004 residential tonnage generation rates, while included here, are not used for analysis or projection purposes because of the one-time impact of Tropical Storm Isabel (September 2003). Residential trash generation projections beyond 2006 are based on two factors – population and per capita generation projections. Per capita residential trash generation is projected to increase by about one half a hundredth of a ton (or ten pounds) per year above the 2006 level of 0.511 tons per year, consistent with the slight, general upward trend from 1998 to 2006.

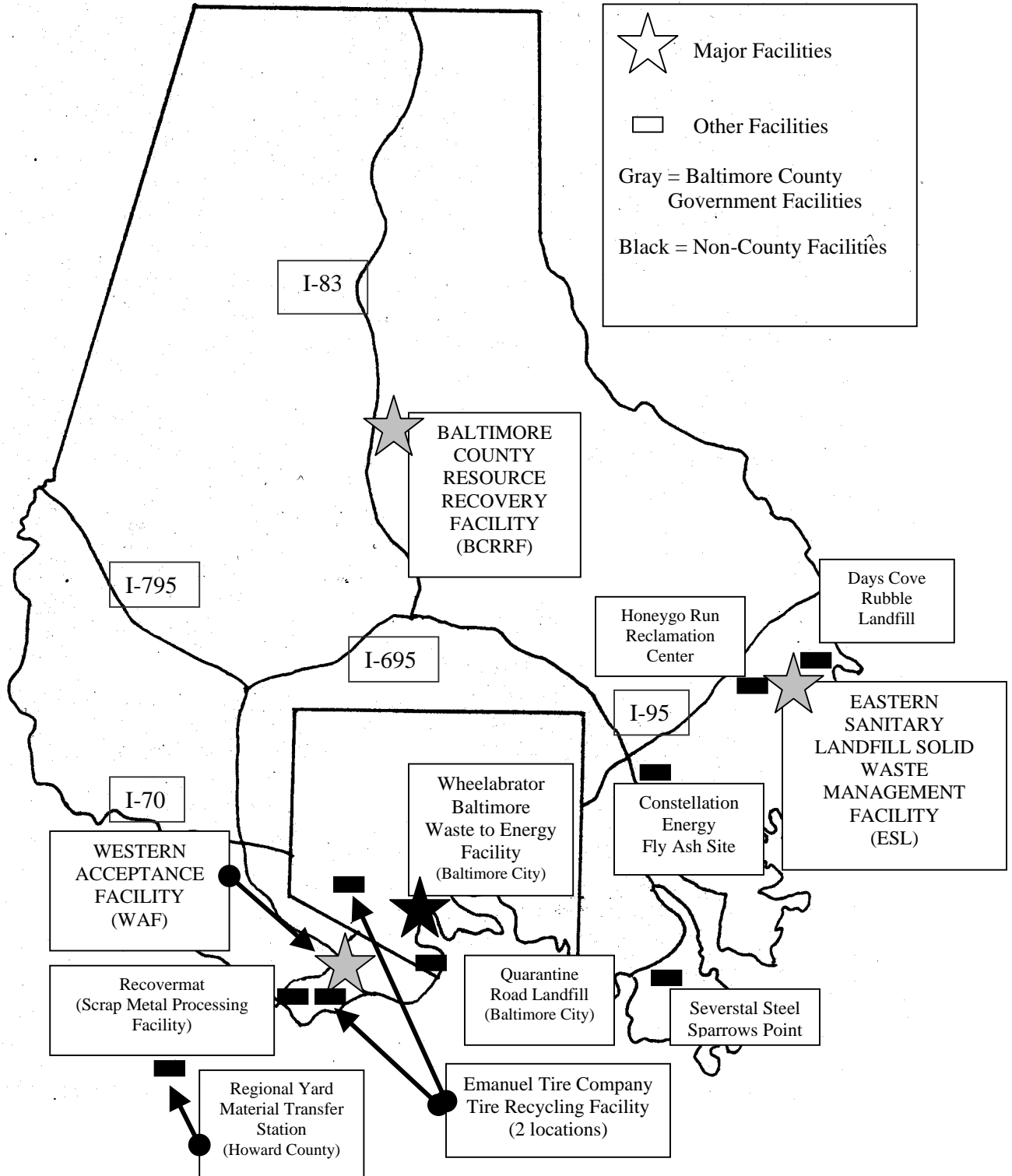
(3) The totals of residential and commercial trash tons through 2004 exclude materials collected for recycling, and correspond to data in Baltimore County's annual tonnage reports to the Maryland Department of the Environment (MDE). Residential trash tons through 2004 are best estimates obtained by averaging actual tonnages for the two applicable fiscal years (e.g., 2000 figure =  $0.5 \times [\text{FY00} + \text{FY01 tonnages}]$ ). Residential trash tons for 2005 and 2006 are actual. Commercial trash tons are best estimates based on allocations in MDE annual facility reports, but it is difficult to track trash entering or leaving the County precisely.

(4) 2003 and 2004 commercial tonnage generation rates, while included here, are not used for analysis or projection purposes because of the one-time impact of Tropical Storm Isabel (September 2003). Commercial trash generation projections beyond 2005 are based on two factors – population and a per capita generation rate assumed to remain at a constant level of 0.445 tons per year (the average for 1998 - 2002 and 2005). There is no consistent trend up or down regarding this data.

Executive Summary – Attachment B

MAP III-1

SELECTED SOLID WASTE FACILITIES USED BY BALTIMORE COUNTY AND/OR LOCATED IN BALTIMORE COUNTY



## Executive Summary - Attachment C

**Table IV-3**  
**"Worst Case Scenario" Projections Regarding ESL Capacity**  
**as of January 2019**

*This table illustrates a scenario in which no replacement capacity is found after Waste Management of Pennsylvania and Wheelabrator Baltimore arrangements expire.*

<b>Basic Assumptions</b>	
	Tons *
a. Projected Trash 2007-2018: <sup>1</sup>	5,381,802
b. Trash to Wheelabrator Baltimore Jan. 2007-Dec. 2011: <sup>2</sup>	-510,000
c. Trash to WM of Pennsylvania Jan. 2007-Jan. 2010: <sup>3</sup>	-648,107
d. Trash to ESL 2007-2018: <sup>4</sup>	4,223,695

\* All trash tons are residential trash.

<sup>1</sup> Source: Table III-1

<sup>2</sup> 102,000 tons/year multiplied by five years.

<sup>3</sup> Based on the tons transferred through the County's agreement with WM of Pennsylvania in 2006 (210,197) multiplied by three years, plus the average tons/month (17,516) to account for January 2010.

<sup>4</sup> Projected trash for 2007-2018 minus trash kept out of ESL through contracts ending January 2010/December 2011 as shown in b. and c.

<b>"Worst Case Scenario" Projection of Remaining ESL Capacity</b> <b>as of January 2019</b>		
	Tons *	Cubic Yds. **
e. Capacity Remaining at ESL as of January 2007: <sup>5</sup>	4,616,240	9,232,480
d. Trash to ESL 2007-2018: <sup>4</sup>	-4,223,695	-8,447,390
f. Capacity Remaining at ESL as of January 2019:	392,545	785,090

<sup>5</sup> Source: 2006 Solid Waste Tonnage Report for ESL as submitted to MDE and dated February 27, 2007 (see p. 8, footnote aa).

\*\* Conversion of tons to cubic yards based on conversion included in 2006 Solid Waste Tonnage Report for ESL as submitted to MDE and dated February 27, 2007.