



BALTIMORE COUNTY, MARYLAND TEN YEAR SOLID WASTE MANAGEMENT PLAN (2019-2028)

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 2019-2028, 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 December 2008, and the Maryland Department of the Environment (MDE) approved that Plan in April 2009.

Baltimore County's existing solid waste and 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 2028. Adoption of this Ten Year Solid Waste Management Plan will ensure that Baltimore County has a solid waste management strategy in place covering 2019-2028. Implementation of this Plan will also yield these very important benefits:

- Extend the life of Baltimore County's only operating landfill (already more than half full) by preventing waste and increasing recycling
- Improve the cost-effectiveness of the County's solid waste management and recycling program (when trash disposal costs are increasing)
- Enhance resident satisfaction with the County's solid waste management and recycling program

CHAPTER I: GOALS, ORGANIZATION, AND REGULATIONS

Consistent with 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 (of materials neither prevented nor recycled)
- Decreases the quantity and toxicity of solid waste requiring landfilling

The Bureau of Solid Waste Management is the County agency primarily responsible for solid waste management, particularly the residential sector. Major areas of responsibility include managing the County's waste prevention and recycling program, collecting residential trash and recyclables, and operating the Eastern Sanitary Landfill Solid Waste Management Facility (ESL), the Central Acceptance Facility (CAF), and the Western Acceptance Facility (WAF).

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

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 approximately 835,000 residents as of 2016 to approximately 860,000 residents by 2028. 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 2020 includes a "Vibrant Communities" section with a "Solid Waste Management/Recycling" sub-section. This sub-section emphasizes the importance of the three "Rs" (waste reduction, reuse, and recycling), as well as resource recovery to minimize the need for landfilling.

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 relatively steady trend in per capita residential generation (about 780 pounds per person, per year, based on tonnage figures from 2012-2015) and no change in per capita commercial generation above the estimated 2015 baseline of 802 pounds per person, per year. Attachment A to this Executive Summary is Table III-1 (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 2040.

The most significant imports of materials currently involve Harford County. Under an August 2013 agreement, Baltimore County currently accepts all of Harford County's single stream recyclables for sorting at CAF in Cockeysville. In addition, Baltimore County receives approximately 135,000 tons of trash per year from Harford County. This imported trash is taken to ESL in White Marsh, where the Harford County trash is then transferred out-of-County to Waste Management disposal sites. 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 one major out-of-County outlet for residential trash – through 2021 (with three contract renewal options), Baltimore County may take 215,000 tons of residential trash per year to the Wheelabrator Baltimore energy-from-waste facility.

39 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 commercial recycling and provides technical assistance and recognition to that sector. For information on the collection of institutional and other materials, please see the Ten Year Solid Waste Management Plan itself, **once it has been drafted.**

Please see Map III-1 (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 that is adequately handling all of the material currently being generated.

Baltimore County has made significant strides in the past decade to improve its recycling program, resulting in increased residential recycling rates and both environmental and fiscal benefits to the County. In February 2010, the County transitioned from its “dual stream” residential recycling program to a “single stream” model, allowing residents to mix all recyclables together in the same container for collection. This program began with single family homes and town homes, and expanded over the rest of 2010 to include most apartment and condominium units in the County as well. With the introduction of single stream recycling to all single family homes and town homes, and expansion to most apartments and condominiums, the County saw a significant increase in the amount of material being collected from residents for recycling – from 36,167 tons in 2009 to 47,182 tons in 2010, and 54,310 tons in 2015. In addition, Baltimore County opened its own single stream materials recovery facility (MRF) in November 2013, which enabled the County to retain the value of collected recyclables and maximize the financial benefits of its recycling program. From November 2013 into November 2016, 156,000 tons of recyclables were sold from the MRF, generating gross revenues of \$20.1 million and avoiding \$9.9 million in trash disposal costs.

In addition to “curbside” collection, Baltimore County provides additional outlets for residential trash and recycling in the form of three drop-off facilities, which have earned overall very high ratings from the residents using them. During a Summer 2016 survey, Baltimore County asked 700 residents to rate its drop-off facilities on a scale of one (very dissatisfied) to five (very satisfied). The Eastern Sanitary Landfill earned an average rating of 4.84, the Central Acceptance Facility earned an average rating of 4.71, and the Western Acceptance Facility earned an average rating of 4.68. In short, the County residents using the County’s three recycling drop-off centers are overwhelmingly very satisfied with the drop-off centers.

While County residential recycling tonnages have stayed relatively constant since 2011, residential trash tonnages have decreased over this same period – a promising trend. While it is difficult to pinpoint a specific reason for this decrease in trash tonnages, the shift could be

attributed to a number of factors, including “lightweighting” of packaging materials and increased residential recycling and waste prevention efforts.

As things stand now, Baltimore County’s only guaranteed outlet for trash after the year 2021 is the Eastern Sanitary Landfill (ESL) 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 taking advantage of three remaining, five-year contract renewal options with Wheelabrator Baltimore, the “worst case scenario” is that the County would lose 215,000 tons per year in trash outlets starting in 2022. The County is committed to securing adequate replacement capacity before this long-term, waste-to-energy contract expires, and expects to take advantage of the contract renewal periods until and unless better options emerge. Therefore, the County has every reason to expect that it will avoid the “worst case scenario” situation.

The Eastern Sanitary Landfill, with an estimated remaining trash capacity of about 10.4 million cubic yards as of January 2016, 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). Furthermore, in its 2015 annual Solid Waste Tonnage Report to MDE, the County estimated that ESL would not reach capacity until 2053.

The bottom line is that, for the most part, ESL’s longevity will continue to 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. Please see www.bcrecycles.com for a month to month analysis of the varying recycling rates around 44 different collection areas across the County. Though Baltimore County has seen progress over the past decade with an increase in residential recycling rates, there is much room for improvement. The County must continue to focus its efforts on the promotion of waste prevention and recycling in order to reduce stress on the County’s overall solid waste management system.

CHAPTER V: PLAN OF ACTION

At this preliminary stage of Ten Year Solid Waste Management Plan formulation, a good starting point for consideration is the Environmental Protection Agency’s recently issued list of 100 solid waste and recycling program options (www.epa.gov/transforming-waste-tool/managing-and-transforming-waste-streams-tool). Each of these options is assessed across multiple criteria, including the following: sector(s) involved, diversion potential, relative ease of obtaining local buy-in, and level of staff knowledge required for implementation.

Baltimore County also issued a Request for Proposals in January 2016 to test the waters regarding the possibility of shifting to a High Diversion Materials Recycling Facility (HD-MRF) approach. The HD-MRF approach involves residents setting out a mixture of all their trash, paper, bottles, cans, grass, and leaves for a single collection each week, with a facility sorting out and recovering the recyclable items.

CONCLUSION

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Executive Summary - Attachment A

TABLE III-1

TRASH GENERATION AND POPULATION DATA

YEAR	POPULATION	RESIDENTIAL TONS PER CAPITA	RESIDENTIAL TRASH TONS	COMMERCIAL TONS PER CAPITA	COMMERCIAL TRASH TONS
	(1)	(2)	(3)	(4)	(3)
2009	799,955	0.482	385,553	0.381	304,865
2010	805,029	0.437	351,863	0.426	342,844
2011	810,433	0.432	349,995	0.360	291,698
2012	815,837	0.390	318,297	0.422	344,570
2013	821,242	0.385	316,523	0.393	322,841
2014	826,646	0.383	316,822	0.425	351,073
2015	832,050	0.379	315,247	0.401	333,652
2016	835,040	0.390	325,666	0.401	334,851
2017	838,030	0.390	326,832	0.401	336,050
2018	841,020	0.390	327,998	0.401	337,249
2019	844,010	0.390	329,164	0.401	338,448
2020	847,000	0.390	330,330	0.401	339,647
2021	849,000	0.390	331,110	0.401	340,449
2022	851,000	0.390	331,890	0.401	341,251
2023	853,000	0.390	332,670	0.401	342,053
2024	855,000	0.390	333,450	0.401	342,855
2025	857,000	0.390	334,230	0.401	343,657
2026	858,040	0.390	334,636	0.401	344,074
2027	859,080	0.390	335,041	0.401	344,491
2028	860,120	0.390	335,447	0.401	344,908
2029	861,160	0.390	335,852	0.401	345,325
2030	862,200	0.390	336,258	0.401	345,742
2031	863,660	0.390	336,827	0.401	346,328
2032	865,120	0.390	337,397	0.401	346,913
2033	866,580	0.390	337,966	0.401	347,499
2034	868,040	0.390	338,536	0.401	348,084
2035	869,500	0.390	339,105	0.401	348,670
2036	871,750	0.390	339,983	0.401	349,572
2037	874,000	0.390	340,860	0.401	350,474
2038	876,250	0.390	341,738	0.401	351,376
2039	878,500	0.390	342,615	0.401	352,279
2040	880,750	0.390	343,493	0.401	353,181

(1) Population figures are based on July 2014 Baltimore County Office of Planning estimates/projections at five-year intervals starting with the year 2015. Projections not ending in zero or five are derived by linear interpolation (which means that straight-line increases are assumed between years where Maryland Department of Planning projections are available).

Executive Summary - Attachment A

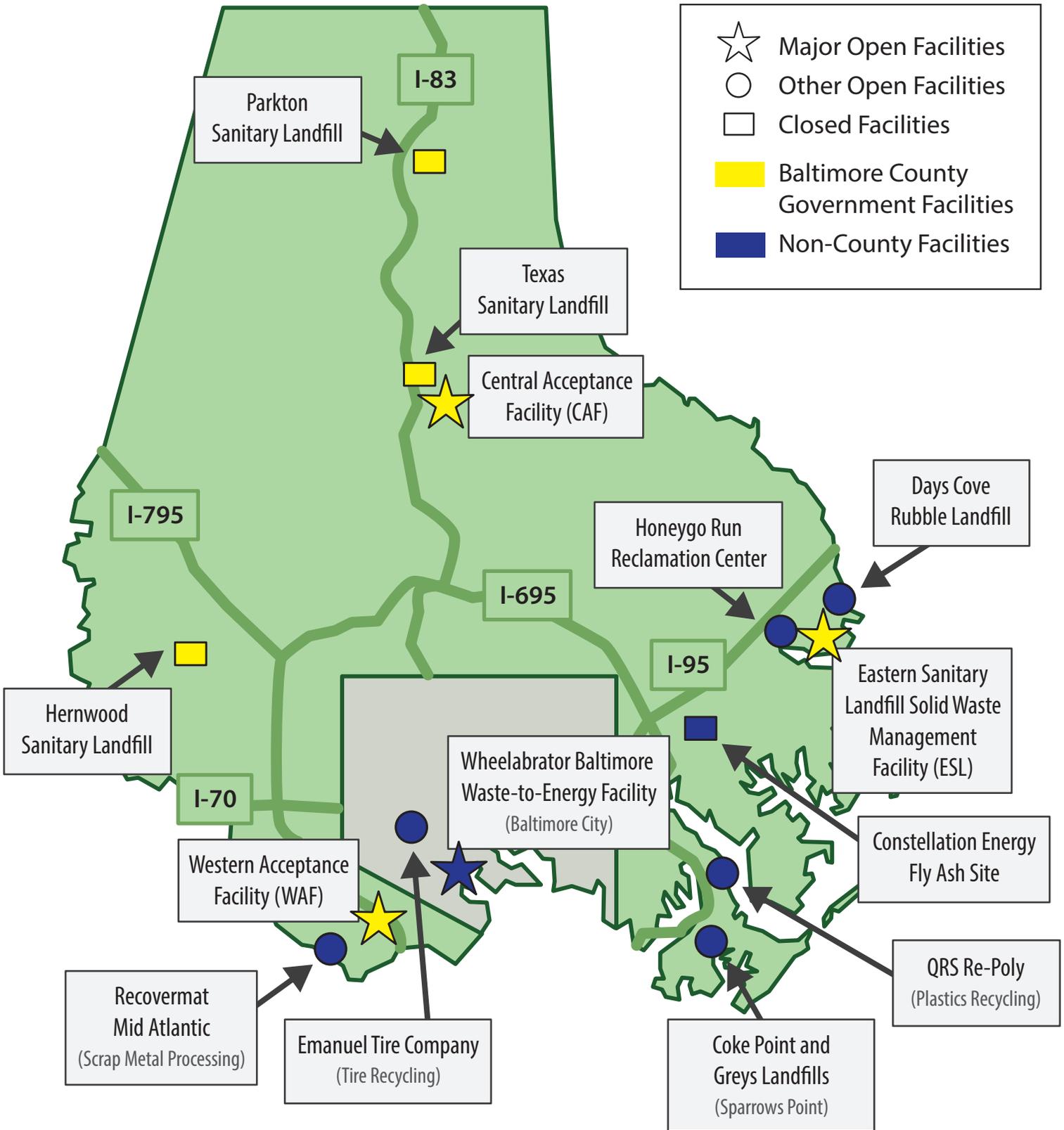
(2) Residential trash generation projections beyond 2015 are based on two factors – population and per capita generation projections. Per capita residential trash generation is projected to remain constant at 0.390 tons per year from 2016 through 2040. This projection is based on residential trash tons per capita being within a very close range from 2012 (0.390 tons per year) to 2015 (0.379 tons per year). To be conservative in estimating trash generation from 2016 and beyond, the higher end of the range is applied (0.390 tons per year).

(3) The totals of residential and commercial trash tons through 2014 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 for 2009 through 2015 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) Commercial trash generation projections beyond 2014 are based on two factors – population and a per capita generation rate assumed to remain at a constant level of 0.401 tons per year (the average for 2009-2014).

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 2029

This table illustrates a scenario in which no replacement capacity is found after Wheelabrator Baltimore arrangements expire.

Basic Assumptions	
	Tons*
a. Projected Trash 2016-2028: ¹	4,308,463
b. Trash to Wheelabrator Baltimore Jan. 2016-Dec. 2021: ²	-1,290,000
c. Trash to ESL 2016-2028: ³	3,018,463

* All trash tons are residential trash.

¹ Source: Table III-1

² 215,000 tons/year multiplied by six years.

³ Projected trash for 2016-2028 minus trash kept out of ESL through contracts ending January 2021 as shown in b.

"Worst Case Scenario" Projection of Remaining ESL Capacity as of January 2029		
	Tons*	Cubic Yds.**
d. Capacity Remaining at ESL as of January 2016: ⁴	4,990,093	10,417,730
c. Trash to ESL 2016-2028: ³	-3,018,463	-6,301,593
e. Capacity Remaining at ESL as of January 2029:	1,971,630	4,116,137

⁴ Source: Eastern Sanitary Landfill Solid Waste Management Facility Tonnage Report for the Calendar Year 2015 as submitted to MDE dated February 26, 2016.

** Conversion of tons to cubic yards based on conversion included in Eastern Sanitary Landfill Solid Waste Management Facility Tonnage Report for the Calendar Year 2015 as submitted to MDE dated February 26, 2016.