



Maryland
Department of
the Environment

**MARYLAND SOLID WASTE MANAGEMENT
and DIVERSION REPORT**
– 2018 –
(CY17 Data)

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Resource Management Program

Prepared for:
Senate Education, Health, and Environmental Affairs Committee
House Environment and Transportation Committee

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Overview

Introduction

The Maryland Department of the Environment (MDE) respectfully submits to the Governor, General Assembly, House Environment and Transportation Committee, and Senate Education, Health and Environmental Affairs Committee MDE's Annual Report describing how solid waste was managed in Maryland during CY17. Beginning in 2009, the Maryland Waste Diversion Activities Report and the Solid Waste Managed in Maryland Report have been combined into one report. This report is submitted in accordance with Section 9-204(n) of the Environment Article, Annotated Code of Maryland, which requires MDE to submit an annual report identifying the amount of solid waste, by weight or volume, disposed in the state during the previous year, and Section 9-1702(e), which requires MDE to submit an annual report detailing recycling in Maryland.

Part I – Waste Management by Permitted Solid Waste Acceptance Facilities, provides information regarding the management of solid waste, by weight or volume, which was captured by permitted solid waste acceptance facilities in the state during the previous calendar year. All permitted solid waste acceptance facilities must provide MDE with information needed to prepare this report on an annual basis, including: municipal landfills; rubble (construction and demolition (C&D) landfills; industrial waste landfills; land clearing debris (LCD) landfills; solid waste transfer stations; solid and medical waste processing facilities; solid waste processing facilities and transfer stations; municipal solid waste incinerator/waste-to-energy facilities; natural wood waste (NWW) recycling facilities; and composting facilities. The recycling data reported in Part I represents only the recycling activities conducted by Maryland permitted solid waste acceptance facilities.

Part II – Waste Diversion, provides information on programs covered by Maryland's waste diversion legislation, including local jurisdiction recycling and source reduction (SR) data for CY17, and an overview of the state's technical assistance activities during **FY18 (July 2017 through June 2018)**. Data contained in Part II comes from annual reports submitted to MDE by Maryland's 23 counties and Baltimore City, annual reports filed by Maryland permitted solid waste acceptance facilities, state government agencies participating in the All StAR (**All State Agencies Recycle**) Program, and newspaper and telephone directory publishers. Counties also provide MDE information on their collection programs, institutional recycling programs, public education efforts, source reduction activities, and disposal facilities.

Executive Summary

In 2017, Maryland counties and Baltimore City generated 13,607,871 tons of solid waste. A breakdown of the waste generated for each of Maryland's jurisdictions is presented in Table 1. The total represents solid waste managed by all sources, not just Maryland permitted solid waste acceptance facilities. This total is an increase of 13.7% over the 11,967,811 tons generated in 2016. The Maryland Recycling Act (MRA) outlines the types of waste that count a county's recycling rate. MRA waste is equal to municipal solid waste (MSW) plus industrial waste from non-private, industrial waste landfills. MRA waste is comprised of 2,999,049 tons of MRA recyclables +

3,996,573 tons of MRA waste disposed (without recycled MSW ash and backend scrap metal) for a total of 6,995,622 tons of MRA waste generated in Maryland in 2017.

A total of 9,048,074 tons of waste was accepted at Maryland-permitted solid waste acceptance facilities; of this amount, a total of 8,484,788 tons was managed by Maryland permitted solid waste acceptance facilities during 2017 by recycling, disposal (incineration and landfilling), or transportation out of state (see Table 3, page 6).

Table 1 – Maryland Waste Generation Totals

County	Total Waste (tons)
Allegany	480,841
Anne Arundel	1,267,595
Baltimore City	1,641,783
Baltimore County	1,855,808
Calvert	201,048
Carroll	625,995
Cecil	179,977
Charles	702,188
Dorchester	166,287
Frederick	398,109
Garrett	63,694
Harford	303,755
Howard	741,255
Mid-Shore *	427,018
Montgomery	1,490,169
Prince George's	1,796,655
Somerset	44,350
St. Mary's	133,244
Washington	194,976
Wicomico	278,060
Worcester	147,595
State Highways	467,471
MARYLAND TOTAL ^	13,607,873

* Mid-Shore Counties include Caroline, Kent, Queen Anne's, and Talbot.

^ Due to rounding the Maryland Total differs from the actual value of 13,607,870.71. County total is 13,256,805.33.

Maryland achieved a 48.4% MRA waste diversion rate. This was comprised of a 44.1% MRA recycling rate (2,999,049 tons of MRA recycling, plus 85,894 tons resource recovery facility credit) plus 4.3% (301,820 tons reduced) source reduction credit. An additional 4,293,444 tons of non-MRA recyclable materials (*e.g.*, scrap metal, asphalt, soils, etc.) that do not count towards the MRA recycling rate also were recycled for a grand total of 7,292,493 tons recycled in Maryland, including the resource recovery facility credit. (See Tables 17 and 18, pages 23-25)

Other highlights for 2017:

- * 2,651,197 tons (31%) of the waste managed by Maryland-permitted solid waste acceptance facilities were landfilled in Maryland; 1,024,132 tons (12%) were recycled/reused in Maryland;
- * 1,314,012 tons (16%) were incinerated in Maryland;
- * Maryland remains a significant exporter of solid waste and exports more waste than it imports. A total of 2,806,355 tons of waste was exported from Maryland, while only 327,100 tons of waste were imported to Maryland. (See Tables 14 and 15, pages 18 and 19)
- * 2,806,355 tons (33%) were exported to out-of-state facilities. (See Table 16, page 20)
- * Maryland landfills reported a total remaining capacity of 78,470,769 tons in 2017. (See Appendix C, tables C2 through C4.)

Part I – Waste Management by Permitted Solid Waste Acceptance Facilities

Introduction

This part of the report addresses waste managed by Maryland-permitted solid waste acceptance facilities. In accordance with Section 9-204(n) of the Environment Article, Maryland permitted solid waste acceptance facilities must provide MDE with the information needed to prepare an annual report detailing the amount of solid waste they managed. The annual report must identify:

- * The amount of solid waste managed in each of the following categories:
 - Municipal Solid Waste (MSW);
 - Construction & Demolition (C&D);
 - Landclearing Debris (LCD);
 - Industrial Waste;
 - Incinerator Ash;
 - Natural Wood Waste (NWW); and
 - Any other solid waste identified by MDE.
- * The amount of solid waste managed in the state that is generated outside the state.
- * The jurisdictions where the solid waste originated.
- * The amount of solid waste generated in Maryland that is transported outside the state for disposal.
- * An estimate of the amount of solid waste managed or disposed by:
 - Recycling;
 - Composting;
 - Landfilling; and
 - Incineration.

In addition to the mandatory information above, permitted solid waste acceptance facilities may submit optional information related to the economic benefits provided by those facilities to the community. Such information may include:

- * An accounting of the facility's economic benefits provided to the locality where the facility is located;
- * The value of disposal and recycling services provided to the locality at no cost or reduced cost;
- * Direct employment associated with the facility; and
- * Other economic benefits resulting from the facility during the preceding calendar year.

Solid Waste Disposal Data

To collect the information necessary to comply with the reporting requirements of Section 9-204(n) of the Environment Article, MDE has reviewed and compiled the data reported in the Annual Tonnage Reports submitted by permitted solid waste acceptance facilities that accepted solid waste in 2017. A solid waste acceptance facility is any landfill, incinerator, transfer station, or processing facility whose primary purpose is to dispose of, treat, or process solid waste. The reports are required as a condition of each facility's Refuse Disposal Permit and describe each facility's solid waste management activities for the preceding year. Appendix A, Table A1-Economic Benefits, provides a summary of the information that MDE received from the facilities that voluntarily chose to report economic benefits in the Annual Tonnage Report.

Recycling Data

To compile the required data summarizing recycling activities during 2017, MDE reviewed and analyzed the information contained in the Annual Tonnage Reports from permitted solid waste acceptance facilities. **The** recycling data reported in Part I of this report represents the recycling activities conducted by the permitted solid waste acceptance facilities. Statewide recycling information is available in Part II, "Waste Diversion," of this report.

Solid Waste Management by Solid Waste Acceptance Facilities in 2017

In 2017, 9.05 million tons of solid waste were accepted by Maryland-permitted solid waste acceptance facilities and NWW recycling facilities. The 9.05 million tons includes waste stored on site and waste sent from one facility to another. Of the 9.05 million tons accepted, 8.48 million tons were actually managed by storing, recycling, and disposal in Maryland, or transported out of state. Table 2 details the difference between the amounts of waste generated in Maryland, highlighted in green, and the waste managed by Maryland permitted solid waste acceptance facilities, highlighted in blue and yellow. Table 3 details the waste managed by Maryland-permitted solid waste acceptance facilities.

Table 2 – Waste Generated in Maryland vs. Waste Managed by Maryland Permitted Solid Waste Acceptance Facilities

Waste Detail		Tons
A	Total Waste Generated in Maryland (see Table 1, including “^” footer)	13,607,871
B	Total Maryland Waste Recycled (see Table 17, including “*” footer)	7,292,493
C	Total Maryland Waste Disposed (A – B)	6,315,378
D	Total Maryland waste recycled that was not managed through a Maryland permitted SWAF (7,292,493 (Table 17) – 1,278,784 (Table 3))	6,013,709
E	Total waste disposed by Maryland counties but not captured by a Maryland permitted solid waste acceptance facility ^	132,507
F	Natural Wood Waste Adjustment (see Table 12) ^^	220,565
G *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment ^^^	200,310
H	Total waste imported into Maryland (see Table 14)	327,100
I **	Disposed Ash, Back-End Scrap Metal, and By-Pass ^^^	275,158
Total Waste Managed by Maryland permitted solid waste acceptance facilities (A-D-E+F+G+H+I) (see Table 3)		8,484,788

Waste generated in Maryland	Waste generated vs. managed adjustments	Waste managed by Maryland Permitted Solid Waste Acceptance Facilities
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- * To avoid double-counting and accurately report the amount of waste generated in Maryland, the amount of recycled product material from the incineration process is subtracted from the amount of material sent to the incinerator. However, this material is managed by permitted facilities.
- ** To avoid double-counting and accurately report the amount of waste generated in Maryland, disposed product material from the incineration process is not counted as waste generated in Maryland. However, this material is managed by permitted refuse disposal systems.
- ^ Not reported separately in report. Reported by counties via the MRA Tonnage Reporting Survey (132,506.75 tons) and included in the 13,607,871 waste generated tons. Total also includes 467,471 tons of recycled road material.
- ^^ Waste disposed and recycled, but not reported by counties in the annual MRA Tonnage Reporting Survey, and managed by Natural Wood Waste Facilities in Maryland.
- ^^^ Reported by permitted solid waste acceptance facilities via the Solid Waste Tonnage Report (does not include coal ash). 179,201.65 tons of ash and bypass recycled + 21,108.38 tons of back-end scrap metal recycled = 200,310.03 tons. 210,926.13 tons of disposed ash, back-end scrap metal, & by-pass + 64,232 tons of coal ash disposed = 275,158.

The amount of out-of-state waste that was managed in Maryland in 2017 increased to 327,100 tons, compared to 273,296 tons in 2016. The quantity of solid waste accepted, processed, and disposed at the permitted refuse disposal systems in Maryland is similar to previous years. More than 2.65 million tons of waste were landfilled, and 1.31 million tons were incinerated in Maryland. Approximately 1.02 million tons of reclaimed recyclables were collected, sorted, and transferred to recycling facilities in Maryland. Figure 1 depicts the tons of waste managed by Maryland permitted facilities in previous years.

The use of out-of-state facilities for the disposal of Maryland-generated waste increased in 2017 to 2,806,355 tons compared to 2016 (2,563,325 tons).

Table 3 details the total amount of solid waste that Maryland solid waste acceptance facilities stored on site or managed via export, disposal (*i.e.*, landfilling and incineration), and recycling/reuse.

Table 3 – Waste Managed in 2017 by Maryland Permitted Solid Waste Acceptance Facilities

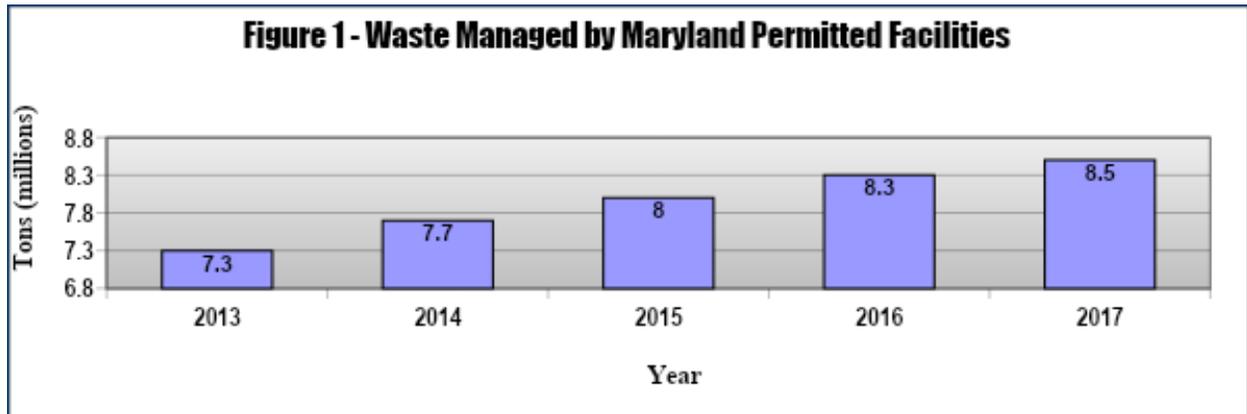
Solid Waste Category	Tons Accepted ¹	Tons Recycled/ Reused ²	Tons Disposed	Tons Stored	Tons Managed ³
Municipal Solid Waste	5,396,710	224,553	4,265,421	12,008	4,501,982
Construction & Demolition Debris	2,807,839	455,625	1,844,630	610,443	2,910,698
Natural Wood Waste	433,887	408,613	0	65,883	474,496
Industrial Waste	38,281	1,355	35,356	0	36,711
Land Clearing Debris	14,802	9,882	4,226	758	14,866
Other Wastes ⁴	92,395	0	92,121	0	92,121
Total Waste Received	8,783,914	1,100,028	6,241,754	689,092	8,030,874
Tons of Incinerator Ash	264,160	178,756	275,158	0	453,914
TOTAL REPORTED	9,048,074	1,278,784	6,516,912	689,092	8,484,788

¹ "Tons Accepted" includes all waste accepted by permitted facilities including waste sent from one Maryland permitted facility to another.

² Only includes recycling/reused waste that was captured by Maryland permitted solid waste acceptance facilities.

³ "Tons Managed" is equal to "Tons Recycled/Reused" + "Tons Disposed" + "Tons Stored". "Tons Managed" is waste that was managed both in Maryland and outside of Maryland (see Figures 3 and 4 and Tables 14 and 15).

⁴ "Other Wastes" includes special medical waste, asbestos, and sewage sludge.



Refuse Disposal Systems

Under Maryland law, a refuse disposal system ("System") includes an incinerator, transfer station, landfill system, landfill, solid waste processing facility, and any other solid waste acceptance facility. Appendix B (Table B-1) lists all permitted solid waste acceptance facilities. Appendix C provides details on permitted landfill capacities. Additional information on each type of facility is provided below.

Municipal Landfill

A municipal landfill, which also is known as a MSW landfill, is designed, constructed, and operated so that all types of waste generated by a community can

be accepted, except waste specifically prohibited by solid waste regulations. Municipal landfills report the total tons of MSW managed, but do not report a breakdown by material. According to the *Maryland Statewide Waste Characterization Study (2016)*, MSW disposed in Maryland is comprised of approximately 25.6% paper and paperboard, 17.9% food scraps, 15.3% construction & demolition debris (C&D), 14% plastics, 6.1% yard trimmings, 5.7% textiles, 3.9% metals, 2.3% glass, 0.4% Household Waste (HHW), 0.5% electronics, and 8.2% other (e.g., diapers, bulky items, tires).

During 2017, 24 Refuse Disposal Permits for municipal landfills were in effect. Of the 24 permits, 22 facilities have developed facilities, 21 of which accepted MSW, managed/disposed MSW, and/or transferred recyclables to the marketplace.

In 2017, the Cecil County Central Landfill (horizontal expansion) began its operations under a new refuse disposal permit. The Central Landfill's original landfill permit expired in 2017, and the landfill did not accept waste. The construction of the Montgomery County Site 2 Municipal Landfill as a back-up facility to handle the county's waste capacity in the future is currently on hold. The Mid-Shore Regional Solid Waste Municipal Landfill in Talbot County ceased its landfill operations, and did not accept any waste in 2017. Under a multi-jurisdictional agreement, waste from the four Mid-Shore counties (Caroline, Kent, Queen Anne's, and Talbot) currently is disposed at the Midshore II Landfill in Caroline County. Details of MSW landfill waste management practices are presented in Table 4.

Table 4 – Permitted MSW Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Allegheny	Mountainview Sanitary	Private	81,162	81,162	0
Anne Arundel	Millersville Resource Recovery Facility	County	187,250	150,913	17,666
Baltimore City	Quarantine Road	City	479,727	268,208	384
Baltimore	Eastern Sanitary	County	257,054	202,445	2,089
Calvert	Appeal Sanitary	County	3,696	562	1,578
Caroline	Midshore II	County	134,855	121,476	794
Carroll	Northern Municipal	County	44,433	44,006	427
Cecil	Cecil County Central-Horizontal Expansion	County	111,063	92,780	3,883
	Cecil County Landfill (Original)	County	0	0	0
Charles	Charles County Municipal	County	132,293	99,272	1,398
Dorchester	Beulah Municipal	County	104,685	53,832	0
Frederick	Fort Detrick Area B	Federal	6,702	134	0
	Reichs Ford/Site B	County	19,755	11,986	1,114

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	28,578	28,052	120
Harford	Harford Waste Disposal Center (Expansion)	County	13,296	8,646	4,650
Howard	Alpha Ridge Municipal	County	49,243	362	4,931
Montgomery	Montgomery County Site 2	County	0	0	0
Prince George's	Brown Station Road	County	291,359	274,588	1,996
St. Mary's	St. Andrew's Municipal	County	13,635	0	13,635
Somerset	Somerset County	County	25,996	25,649	347
Talbot	Midshore Regional Solid Waste Facility	County	0	0	0
Washington	Forty West Municipal	County	102,490	97,620	790
Wicomico	Newland Park Municipal	County	133,361	133,361	0
Worcester	Central Sanitary	County	56,378	50,914	1703
TOTAL			2,277,011	1,745,968	57,505

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Construction and Demolition (C&D) Landfill

A rubble (C&D) landfill is a solid waste acceptance facility that is restricted to accepting waste derived from building construction, demolition, or remodeling, such as wood, metal, bricks (excluding refractory type) and masonry, cement and concrete, glass, shingles and roofing material, plaster and plasterboard, carpets, floor and wall tile, asphalt, insulation material, pipes, wires, and appliances, and debris derived from land clearing operations such as tree stumps, root mats, brush and limbs, logs, topsoil, vegetation, and rock. Paper, cardboard packaging, and building materials are accepted, provided that they do not exceed 10% of the waste by volume. Empty paint containers and empty caulk or glaze containers are accepted, provided any remaining residual material is dried before being accepted and these items do not exceed 1% of the waste accepted at the rubble landfill by volume. Details of C&D landfill waste management practices are presented in Table 5 (page 9).

Industrial Waste Landfill

An industrial waste landfill is a solid waste acceptance facility restricted to the acceptance of only non-hazardous industrial waste. Industrial waste is defined as any liquid, gaseous, solid, or other waste substance, or combination thereof, resulting from (a) any process of industry, manufacturing, trade or business; or (b) the development of any natural resource, including agriculture. Industrial waste may include materials such as dusts, powders, or sludges from pollution control devices, residuals from filters or cleaning of items or areas, and residual materials from a variety of processes (e.g., sandblasting grit, paint sludge, oil/water separator

grit, etc). These materials must be characterized prior to disposal to ensure that they are not hazardous. Industrial waste also may be disposed in permitted MSW landfills. Details of industrial waste landfill waste management practices are presented in Table 6.

Table 5 – Permitted C&D Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Anne Arundel	Tolson & Associates Rubble Landfill	Private	72,857	68,397	316
Baltimore County	Days Cove Rubble Landfill Lateral Expansion	Private	177,413	176,783	630
	Honeygo Run Reclamation Center	Private	228,604	216,700	7
Prince George's	Ritchie Reclamation Phase I	Private	0	0	0
	Ritchie Reclamation Phase II	Private	347,237	341,317	5,920
Queen Anne's	Baker Rubble	Private	21,040	17,568	316
Washington	Washington County Rubble	County	0	0	0
TOTAL			847,151	820,765	7,189

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Table 6 – Permitted Industrial Waste Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Baltimore City	Fort Armistead Road-Lot 15	Private	64,200	64,200	0
	Hawkins Pt. Plant	Private	262	262	0
	W. R. Grace and Co. – Davison Chemical Division	Private	20,052	20,002	0
Frederick	Eastalco Aluminum Company	Private	0	0	0
	Essroc Cement Corporation	Private	0	0	0
TOTAL			84,514	84,464	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Landclearing Debris (LCD) Landfill

A LCD landfill is a solid waste acceptance facility that is restricted to acceptance of the following waste: earthen material such as clays, sands, gravels, and silts; topsoil; tree stumps; root mats; brush and limbs; logs; vegetation; and rock. Details of LCD landfill waste management practices are presented in Table 7.

Table 7 – Permitted Landclearing Debris Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Calvert	Hance Landclearing Debris	Private	1,153	0	0
	Howlin Landclearing Debris	Private	0	0	0
St. Mary's	Knott Landclearing Debris	Private	0	0	0
TOTAL			1,153	0	0

*Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Solid Waste Transfer Station

A solid waste transfer station is a solid waste acceptance facility where waste materials are taken from one collection vehicle (*e.g.*, compactor truck, etc.) and placed in another transportation unit (*e.g.*, over-the-road tractor-trailer, railroad gondola car, barge or ship, etc.) for movement to other solid waste acceptance facilities. Individuals and businesses can dispose of a wide variety of solid waste materials at a transfer station. A typical transfer station may accept MSW, C&D, metals, wood waste, yard waste, recyclables, etc. Details of solid waste transfer station waste management practices are presented in Table 8.

* Waste Accepted will not always equal the sum of the Waste Handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Table 8 – Permitted Solid Waste Transfer Stations

Jurisdiction	Facility Name (Transfer Station)	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore City	Northwest	Municipal	66,295	0	66,295
Baltimore County	Eastern	County	247,391	232	247,159
	Western Acceptance	County	196,069	0	196,193
Calvert	Appeal	Private	114,738	0	114,738
Cecil	Stemmers Run	County	477	0	477
	Woodlawn	County	1301	0	1,301
Howard	Workplace Essentials	Private	37	0	37
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	40,983	0	40,983
Washington	Agape Pet Services	Private	11	0	11

Jurisdiction	Facility Name (Transfer Station)	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Wicomico	Foskey Lane	Private	32	0	32
Worcester	Ocean City	Municipal	33,710	0	33,710
TOTAL			701,044	232	700,936

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2016, but not managed until 2017.

Solid or Medical Waste Processing Facility

A solid or medical waste processing facility is a facility where a combination of structures, machinery, or devices are used to reduce or alter the volume, chemical characteristics, or physical characteristics of solid waste. This can include sorting for diversion of recyclables. In general, processes are performed either to remove recyclables or to reduce the volume that the waste occupies during transport or at final disposal (*e.g.*, shredding). A wide variety of solid waste can be processed at these facilities. A typical solid waste processing facility accepts MSW, C&D, metals, wood waste, etc. Details of solid or medical waste processing facility waste management practices are presented in Table 9.

Table 9 – Permitted Solid and Medical Waste Processing Facilities

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore City	L & J Waste Recycling, LLC	Private	26,101	0	26,101
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0
Calvert	Southern Maryland Processing	Private	18,503	0	18,503
Carroll	Roll-Off Express, Inc.	Private	115,098	1	115,097
Montgomery	C&D Recovery Processing	Private	75,849	0	76,999
Prince George's	Dower House Recycling and Processing	Private	0	0	0
	Sun Services Processing & Recycling Center	Private	99,612	0	99,612
Wicomico	Peninsula Regional Medical Center **	Private	106	0	106
	Bennett Processing	Private	24,994	0	25,194
TOTAL			360,263	1	361,612

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

** Peninsula Regional Medical Center is the only processing facility reporting medical waste.

Solid Waste Processing Facility & Transfer Station

Solid waste processing facilities and transfer stations are facilities that perform the functions of both a transfer station and a processing facility. Details of solid waste processing facility & transfer station waste management practices are presented in Table 10.

Table 10 – Permitted Solid Waste Processing Facilities and Transfer Stations

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Allegany	Western Maryland Processing Facility and Transfer Station	Private	30,039	1	30,101
Anne Arundel	Annapolis Junction Recycling and Transfer Station	Private	584,608	0	584,608
	Biomedical Waste Services	Private	652	0	652
	Curtis Creek Recovery Systems	Private	266,010	0	266,010
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	0	0	0
	Stericycle, Inc.	Private	19,009	0	19,009
	Baltimore Recycling Center, LLC	Private	195,802	0	195,802
	Daniels Sharpsmart	Private	1,230	0	1,230
Baltimore County	Baltimore County Central Acceptance Facility	County	310,258	3,010	309,765
Carroll	Northern Municipal Landfill	County	77,491	0	77,491
Frederick	Reichs Ford Landfill	County	185,698	0	185,698
Harford	Auston Processing and Transfer Facility	Private	1,436	201	1,397
Howard	Alpha Ridge Municipal Processing & Transfer Facility	County	38,466	0	38,466
	Ameriwaste Processing and Transfer Station	Private	185,209	0	185,209
Montgomery	Montgomery County Solid Waste Transfer Station	County	746,851	0	746,851
Prince George's	Recycle One Processing & Transfer Station	Private	251,511	0	251,511

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
	Sheriff Road Processing Transfer Facility	Private	136,465	0	136,465
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0
Wicomico	CES-Connelly Road Processing & Transfer Station	Private	3,217	0	3,217
TOTAL			3,033,952	3,212	3,033,482

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Municipal Solid Waste Incinerator/Waste-to-Energy Facility

A MSW incinerator/waste-to-energy facility is equipped with a furnace or combustion unit that uses controlled flame combustion for the thermal destruction of MSW, industrial waste, or special medical waste. Incinerators that are “waste-to-energy” facilities use the heat generated by combustion to create steam that is either used directly for heat or to drive electrical powered generators. Details of MSW incinerator/waste-to-energy facility waste management practices are presented in Table 11.

Table 11 – Permitted Incinerator/Waste-to-Energy Facilities

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Incinerated	Waste Transported
Baltimore City	Wheelabrator Baltimore, LP.	Private	705,705	709,904	214,352
	Curtis Bay Energy	Private	25,695	25,695	10,998
Charles	Naval Support Facility Indian Head Incinerator	Federal	217	16	211
Frederick	Fort Detrick – Area B and Main Post	Federal	2,241	2,002	335
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	575,162	576,316	186,818
Somerset	Smith Island Incinerator	County	79	79	24
TOTAL			1,309,099	1,314,012	412,738

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Natural Wood Waste (NWW) Recycling Facility

NWW consists of trees and other natural vegetative materials, including tree stumps and limbs, brush, root mats, logs, leaves, grass clippings, and

unadulterated wood wastes. NWW does not include pallets, crates, lumber, wood chips, firewood, or other products that may be made from NWW, but subsequently have been processed. A facility owner or operator who recycles NWW must obtain a permit to operate under Code of Maryland Regulations (COMAR) 26.04.09. NWW recycling facility waste management practices are presented in Table 12. Details on NWW permits are provided in Appendix C. Additional information on Maryland’s NWW program is available at mde.maryland.gov/programs/LAND/SolidWaste/Pages/index.aspx or by contacting MDE’s Solid Waste Program at kaveh.hosseinzadeh@maryland.gov or 410-537-3315.

Table 12 – Permitted Natural Wood Waste Recycling Facilities

Jurisdiction	Facility Name	Permittee	Waste Accepted	Waste Handled	
				Waste Recycled*	Waste Marketed*
Allegany	Braddock Construction, LLC.	Braddock Construction, LLC.	13	10	0
Anne Arundel	A-A Recycle & Sand, Inc.	A-A Recycle & Sand, Inc.	24,414	17,386	19,539
	Bronson Contracting, Inc.	Bronson Contracting, Inc.	0	0	0
	L and W Recycling	L & W Recycling, Inc.	23,927	23,927	16,354
Baltimore County	Edrich Lumber, Inc.	Edrich Lumber, Inc.	19,005	19,005	34,192
	Hollins Organic Products, Inc.	Hollins Organic Products, Inc.	16,072	16,072	15,671
	Hollins Organic Products, Inc. 2	Hollins Organic Products, Inc.	0	0	0
	King Mulch and Pallet	Albert J. Bierman	4,051	4,045	2,996
	Northwest Recycling, LLC.	Northwest Recycling LLC.	9,531	9,948	9,198
	Wirtz & Daughters, Inc.	Wirtz And Daughters, Inc.	19,521	19,521	34,293
Calvert	A & L Natural Wood Waste Facility	A.H Hatcher Inc.	23,125	7,120	4,315
	231 Materials & Recycling Products, LLC.	231 Materials & Recycling Products, LLC.	0	0	0
Caroline	Cahall Construction, LLC	Cahall Construction, LLC.	1,029	0	0
Carroll	C. J. Miller, LLC.	C. J. Miller, LLC.	1,148	1,148	5,720
	Harvest RGI, LLC	Harvest RGI, LLC	16,897	16,740	16,740
	Hidey’s Landscape Supply Yard	Hidey’s Lawn Services LLC.	1,777	2,421	2,757

Jurisdiction	Facility Name	Permittee	Waste Accepted	Waste Handled	
				Waste Recycled*	Waste Marketed*
Cecil	Chesapeake Wood Recycling	Chesapeake Investment, Inc.	25	0	0
	Mountain Mulch Elkton, LLC	Mountain Mulch Elkton, LLC.	0	0	0
Charles	Beuchert Excavating, Inc.	Beuchert Excavating, Inc.	1,593	3,977	1,595
	Calvert Wood Recycling	Calvert Wood Recycling LLC.	7,209	7,209	7,241
	Chesapeake Environmental Materials	Chesapeake Environmental Materials	0	0	0
	Mona Recycling	Michael Mona Jr.	1,761	1,332	1,258
Frederick	Butler Wood Recycling	William Lee Butler	1,437	1,037	944
	Comus Stone-Woodsboro Operation	Comus Materials, LLC.	0	13,635	3,125
	Grant County Mulch	Grant County Mulch, Inc.	29,226	4,206	49,089
	Bussard Brothers Landscape	R. W. Bussard & Sons, Inc.	5,779	4,367	5,936
Harford	Brian Baker, Inc.	Brian Baker, Inc.	6,977	4,557	3,926
	Comer Construction, Inc	Comer Construction, Inc.	7,185	4,416	3,727
	Crouse Construction Company, Inc.	Crouse Construction Co., Inc.	0	0	0
	Harford Industrial Minerals, Inc.	Harford Industrial Minerals, Inc.	0	0	0
	Heston's Mulch	Arthur D. Heston	556	556	2,429
Howard	Level Land Lisbon Mulch Yard	Level Land, Inc.	8,215	4,875	6,912
	Oak Ridge Farm	Oak Ridge Farm, LLC.	3,009	560	2,469
	RLO Contractors, Inc.	RLO Contractors, Inc.	45,671	45,671	63,318
Kent	Sharp Lawn & Tree, Inc.	Sharp Lawn & Tree, Inc.	628	628	324
Montgomery	Allentuck Landscaping, Inc.	Allentuck Landscaping, Inc.	0	0	0
	Acme Biomass Reduction, Inc.	Acme Biomass Reduction, Inc.	19,740	16,781	13,939
	Country Nursery	Country Nursery	0	0	0
	Grant County Mulch Ground Covers	Grant County Mulch, Inc.	10,895	21,025	27,314
Prince George's	Cedarville Holdings LLC	Cedarville Holdings LLC	0	0	0

Jurisdiction	Facility Name	Permittee	Waste Accepted	Waste Handled	
				Waste Recycled*	Waste Marketed*
	Grant County Mulch Facility	Grant County Mulch, Inc.	103,543	120,317	115,172
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	2,833	2,831	745
	Grange Hall Yard	Cole Ventures, Inc.	3,846	0	2,474
	Pardoe's Lawn and Tree Service, Inc.	Pardoe's Lawn and Tree Service, Inc.	519	536	611
St. Mary's	Charlotte Hall Lumber Yard	Bay Works Wood Processing, LLC.	8,704	8,617	10,338
Talbot	Dependable Sand and Gravel Company, Inc.	Dependable Sand and Gravel Company, Inc.	3,098	3,209	3,103
Washington	Hess Road Recycling Center	Universal Contractor Inc.	8	8	0
Wicomico	Dunn's Tractor Service, Inc.	Dunn's Tractor Service Inc.	920	920	920
TOTAL			433,887	408,613	488,684

*Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2017, but not managed until 2018.

Composting Facilities

Composting means the controlled aerobic biological decomposition of organic waste material. Certain composting facilities are required to obtain composting permits as outlined in COMAR 26.04.11. Detailed information on composting in Maryland is available on MDE's *Organics Diversion and Composting* web page at mde.maryland.gov/composting.

Composting facility waste management practices are presented in Table 13.

Table 13 – Permitted Composting Facilities

Jurisdiction	Facility Name	Permittee	Facility Tier*	Feedstocks	
				Accepted	Composted
Anne Arundel	Millersville Landfill & Resource Recovery Composting Facility	Anne Arundel County DPW	Tier 1	8,641	5,213
Baltimore County	Eastern Sanitary Landfill	Baltimore County DPW	Tier 1	21,149	17,650
Caroline	Twin Maple Compost Facility	Mid-Atlantic Organic Resource Company, LLC	Tier 2	5,930	5,930
Carroll	Harvest RGI	Harvest RGI, LLC	Tier 1	37,092	37,092

Jurisdiction	Facility Name	Permittee	Facility Tier*	Feedstocks	
				Accepted	Composted
Cecil	Cecil County Central Landfill	Cecil County DPW	Tier 1	11,351	11,351
	West Coast Mushrooms Facility	West Coast Mushrooms Inc.	Tier 2	16,220	16,220
Charles	Calvert Wood Recycling Facility	Calvert Wood Recycling, LLC	Tier 1	2,878	2,878
Frederick	Comus Materials Facility	Comus Materials, LLC	Tier 1	0	0
	Reichs Ford Site B Landfill	Frederick County DPW	Tier 1	10,726	10,726
Harford	Harford Mulch and Compost Facility	Maryland Environmental Service	Tier 1	7,153	7,153
	Veteran Compost Facility	Garrity Renewables, LLC	Tier 2	3,901	3,901
Howard	Composting Facility at Alpha Ridge Landfill	Howard County DPW	Tier 2	6,646	6,646
	Level Land Lisbon Mulch Yard	Level Land, Inc.	Tier 1	563	563
Montgomery	Montgomery County Yard Trim Composting Facility	Maryland Environmental Service	Tier 1	60,093	60,093
	ACME Biomass Reduction Facility	ACME Biomass Reduction, Inc.	Tier 1	10,650	10,650
	Aspen Nursery	Aspen Landscape Contractors, Inc.	Tier 1	1,400	1,400
Prince George's County	City of College Park Composting Facility	City of College Park DPW	Tier 1	3,905	3,905
	Cedarville Holdings Composting Facility	Cedarville Holdings, LLC	Tier 1	0	0
	Prince George's County Organics Composting Facility	Maryland Environmental Service	Tier 2	61,003	61,003
Washington	Forty West Landfill	Washington County DPW	Tier 1	4,079	4,079
TOTAL				273,380	266,453

*Tier 1 facilities only accept yard trimmings, while Tier 2 facilities may accept yard trimmings and certain additional materials, such as food scraps and animal manure.

Imported Solid Waste

Table 14 compares the tonnage of solid waste, by category, which was imported into the state to the total amount of solid waste managed at permitted solid waste acceptance facilities in Maryland. Figure 2 illustrates the amount of imported versus Maryland-generated solid waste managed at permitted solid waste acceptance facilities. In 2017, Maryland's permitted solid waste acceptance facilities accepted waste from Alabama, California, Canada, Delaware, Florida, Maine,

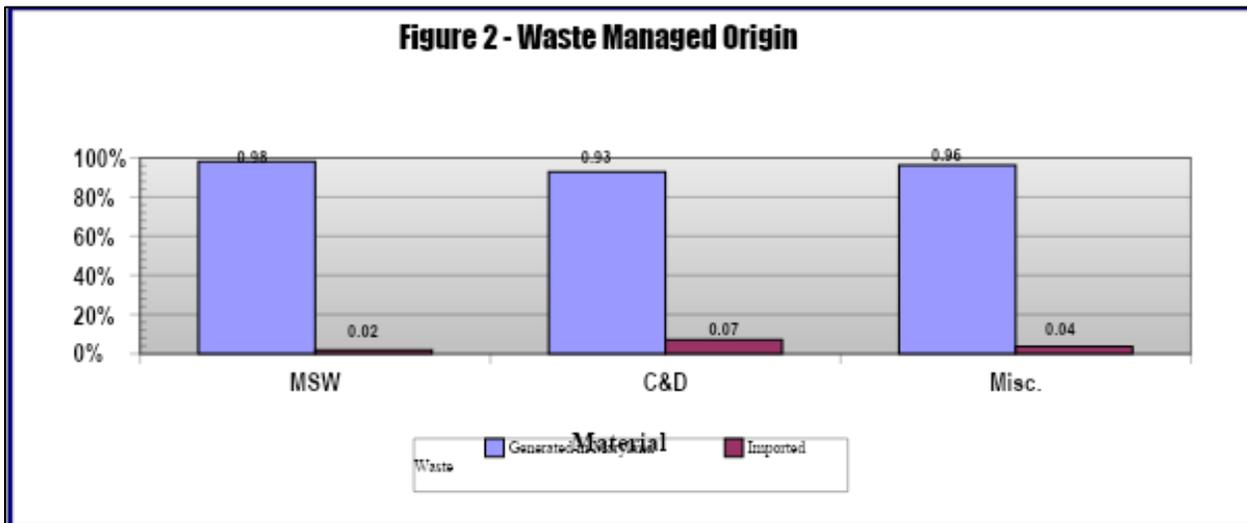
Massachusetts, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, Virginia, Washington D.C., and West Virginia. Highlights include:

- * There was an increase of approximately 20% in the amount of solid waste imported (327,100 tons) into Maryland compared to CY16 (273,296 tons).
- * The solid waste imported into Maryland comprises 3.85% of the 8.48 million tons of solid waste managed at permitted Maryland solid waste acceptance and Natural Wood Waste Recycling facilities.
- * Mountainview Sanitary Landfill in Allegany County and Recycle One Processing & Transfer Station in Prince George’s County received the bulk (25,901 tons and 24,081 tons respectively) of the imported MSW to Maryland. Recycle One disposed the MSW in Virginia and Pennsylvania, and the Mountainview Sanitary Landfill disposed the MSW in its facility in Allegany County.
- * C&D waste that was imported into Maryland was disposed at privately owned rubble landfills, or was processed into segregated recyclables that were then transferred to mid-Atlantic recycling facilities.

Table 14 – Maryland Imported Waste

Solid Waste Category	Tons of Solid Waste Imported Into Maryland	Jurisdictions Where the Solid Waste Originated	Total Tons Managed
MSW	80,750	DE, NC, NY, NY, OH, PA, VA, WASHINGTON DC, WV	4,501,982
C&D	206,233	DE, NJ, PA, VA, WASHINGTON DC	2,910,698
Miscellaneous *	40,117	AL, CA, CT, CANADA, DE, FL, ME, MA, NH, NJ, NY, NC, PA, RI, SC, TX, VA, WASHINGTON DC, WV	1,072,108
TOTAL	327,100		8,484,788

*Includes special medical waste, incinerator ash, non-hazardous industrial waste, asbestos, wastewater treatment plant sludge, natural wood waste and other wastes imported into Maryland for disposal/recycling.



Exported Solid Waste

Due to economic considerations and the desire to conserve disposal capacity in Maryland landfills, most of the counties (17) and Baltimore City transport some of their solid waste out of state for recycling or disposal. There was an increase of 9.4% in the amount of Maryland solid waste exported in 2017 (2,806,355 tons) compared to the amount of waste exported in 2016 (2,563,325 tons). Forty-two of the 71 permitted solid waste acceptance facilities that accepted waste in 2017 exported waste to 16 states and the District of Columbia. One facility exported waste to Germany.

Virginia was the most prevalent export destination for Maryland waste, accepting approximately 78% (2,198,631 tons) of our total exported waste. Figure 3 illustrates, by percentage, where solid waste captured by Maryland's permitted solid waste acceptance facilities was managed. Table 15 shows a destination breakdown of solid waste exported by Maryland permitted solid waste acceptance facilities.

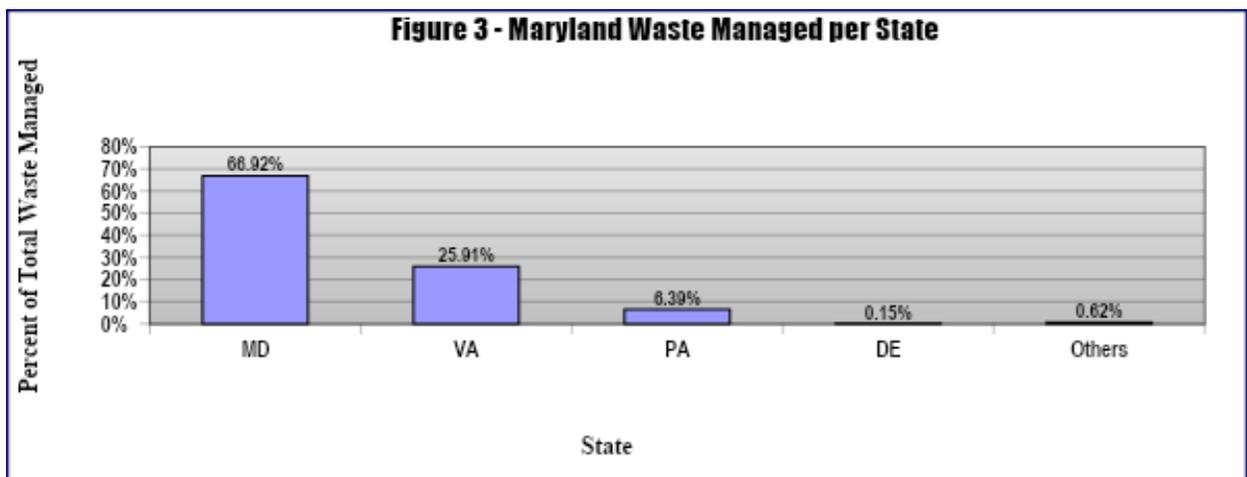


Table 15 – Maryland Exported Material Tonnage by State Destination

Solid Waste Category	Virginia	Pennsylvania	Delaware	Other	Total (Tons)
MSW	1,363,828	413,227	4,115	49,699	1,830,869
C&D	641,214	104,422	8,564	3,090	757,290
Miscellaneous *	193,589	24,539	16	52	218,196
TOTAL (Tons)	2,198,631	542,188	12,695	52,841	2,806,355

* Includes special disposed medical waste, incinerator ash, non-hazardous industrial waste, asbestos, wastewater treatment plant sludge, and other wastes.

Solid Waste Management Practices

In 2017, the solid waste accepted at Maryland permitted solid waste acceptance facilities was managed by transporting the waste out of state or by landfilling, incinerating, or recycling/reusing the waste in Maryland. Table 16 breaks down the management practices by the Maryland permitted solid waste acceptance facilities.

Table 16 – Maryland Solid Waste Management Practices

Solid Waste Management Method	Tons	Percentage of Total Solid Waste Managed
Landfilled in Maryland	2,651,197	31.2%
Exported and Disposed	2,551,703	30.1%
Incinerated in Maryland	1,314,012	15.5%
Recycled/Reused in Maryland	1,024,132	12.1%
Stored in Maryland Facilities	689,092	8.1%
Exported and Recycled	254,652	3.0%
TOTAL	8,484,788	100%

Part II – Waste Diversion

Introduction

In Maryland, waste diversion is defined as the amount of waste recycled and the amount of waste diverted from entering the waste stream through source reduction activities. Waste diversion saves energy, reduces greenhouse gases, and other pollutants generated in the manufacturing process and at disposal facilities, saves natural resources, and reduces the amount of waste disposed at solid waste acceptance facilities (*e.g.*, incinerators, landfills, etc.). MDE promotes and encourages waste diversion throughout Maryland by partnering with Maryland's jurisdictions, and the public and private sectors. MDE collaborates with other state agencies to increase the volume of materials that are diverted from landfills.

In this part, the quantities of waste disposed are gathered from two sources: (1) the Maryland Recycling Act (MRA) Tonnage Reporting Surveys, submitted by the counties and Baltimore City that contain information about solid waste known to the counties or Baltimore City to be exported directly out of state without passing through a Maryland permitted facility; and (2) the Solid Waste Tonnage Reports, submitted by Maryland permitted facilities.

Maryland's Legislative Mandate

In 1988, the Maryland Recycling Act (MRA) (Chapter 536) mandated that Maryland reduce the overall amount of solid waste disposal in the state through improved management, education, and regulation. Each county, including Baltimore City, is required to develop and periodically update a recycling plan addressing certain topics. The plan must be reviewed and approved by MDE. The MRA has been amended since its original passage. Currently, a county with a population greater than 150,000 is required to recycle 35% or more of its waste, and a county with a population of less than 150,000 is required to recycle 20% or more of its waste. The MRA excludes from its scope scrap metal, land clearing debris, construction and demolition debris, sewage sludge, hospital wastes, and waste generated by a single individual or business and disposed in a facility dedicated solely for that entity's waste.

Sustainable Materials Management

On June 27, 2017, Governor Hogan signed Executive Order 01.01.2017.13, *Resource Recovery Plan for Maryland*. The order reaffirms Maryland's commitment to waste reduction and recycling by emphasizing collaboration across state and local agencies, the private recycling sector, and citizens in order to establish and make meaningful progress toward waste diversion goals. The executive order establishes a sustainable materials management policy for the state as follows:

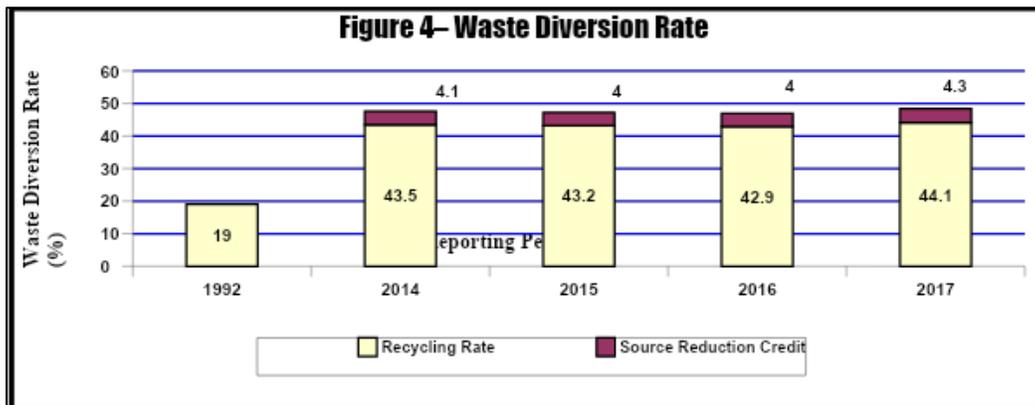
It is the policy of the State that solid waste and recycling planning should, to the extent practicable, seek to:

- 1) Minimize the environmental impacts of materials management over their entire life cycles, including from product design to production, consumption, and end-of-life management;
- 2) Conserve and extend existing in-State disposal capacity through source reduction, reuse, and recycling;
- 3) Capture and make optimal use of recovered resources, including raw materials, water, energy, and nutrients; and
- 4) Work toward a system of materials management that is both environmentally and economically sustainable in the long term.

The order directed MDE to initiate a stakeholder consultation process to establish ambitious but achievable goals and to ensure tracking of complete materials management data. More information about the executive order and sustainable materials management is available at mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/Waste-Reduction-and-Resource-Recovery-Executive-Order.aspx.

Maryland’s 48.4% Waste Diversion Rate

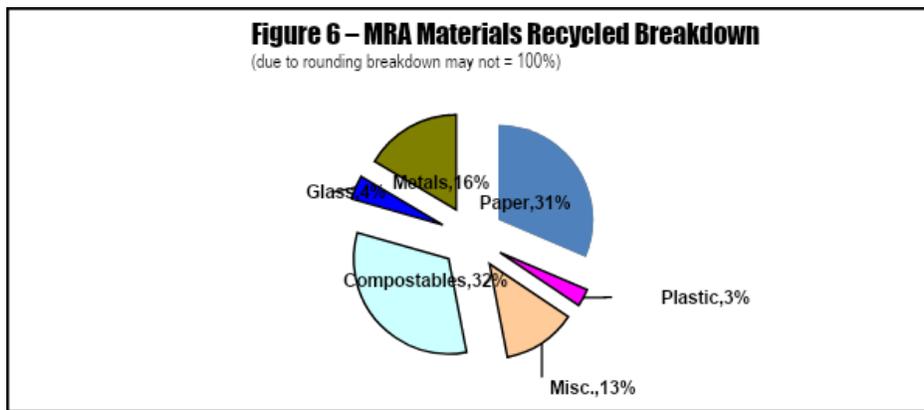
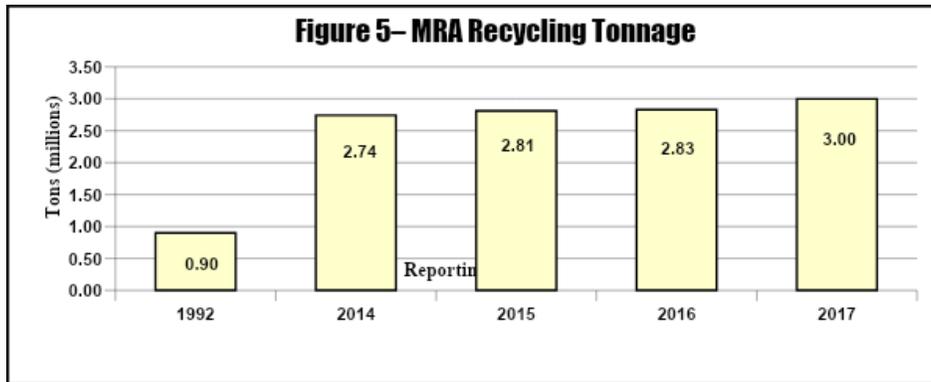
The recycling rate plus the source reduction (SR) credit make up the waste diversion rate. Through the efforts of citizens, businesses, and government agencies, Maryland achieved a statewide waste diversion rate of 48.4% in 2017. The 48.4% waste diversion rate was composed of a 44.1% MRA recycling rate and a 4.3% SR credit. This exceeds the voluntary MRA 40% waste diversion goal targeted for 2005 in 2000’s Senate Joint Resolution 6, but is less than the 60% voluntary waste diversion goal for 2020 established in 2012 under § 9-1706.1 of the Environment Article. Figure 4 provides a historical breakdown of Maryland's waste diversion rate.



Maryland’s 44.1% Recycling Rate

In 2017, Maryland residents and businesses recycled 44.1% of the municipal solid waste generated. The MRA recycling rate is calculated as: $(\text{MRA recycling tonnage} + \text{resource recovery facility credit}) \div (\text{MRA recycling tonnage} + \text{MRA waste disposed})$. The resource recovery facility (RRF) credit is provided under the MRA in Environment Article, Section 9-1703(d), Annotated Code of Maryland. The provision specifies that a 5% recycling credit applies to each county that “achieves a reduction of at least 5% in the volume of its waste through the utilization of one or more resource recovery facilities in operation as of January 1, 1988.” Only Baltimore City and Dorchester County did not meet the mandatory county recycling rate of 20 or 35%, based on population. See Table 17.

Figure 5 summarizes the tons of recycling over the past several years, compared with recycling in 1992. Figure 6 shows the total MRA tons recycled by material in CY17. Compostables and paper materials constituted the largest portion of materials recycled. Table 17 details recycling and waste diversion totals for each of Maryland's jurisdictions.



Estimated Material-Specific Recycling Rates

A more detailed look at the MRA materials recycled reveals varying degrees of recycling success. Using data compiled by MDE’s *Maryland Statewide Waste Characterization Study*, MDE is able to estimate the amount of specific materials disposed in Maryland. This, along with data on the tons of each material recycled in Maryland (reported by the counties) allows for calculation of an estimated recycling rate for specific MRA materials. The data shows that Maryland recycled:

- * 76% of metal;
- * 57.2% of glass;
- * 50.3% of compostables:
 - 84.5% of yard trimmings;
 - 20.4% of food scraps;
- * 47.9% of paper products; and
- * 13.9% of plastic.

Table 17 – County Recyclables by Commodity in Tons for CY17

Compiled by the Maryland Department of the Environment from Reports Submitted for CY17

County	MRA Rate ² (%)	Mandatory Recycling Rate (%)	Waste Diversion Rate ³ (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables ⁴	Total Recycling *
				Compostables	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	42.15	20.00	45.15	13,260	585	9,384	10,711	1,475	8,220	43,635	362,813	406,448
Anne Arundel	40.99	35.00	45.99	96,528	22,463	13,822	134,670	11,599	8,664	287,746	372,996	660,742
Baltimore City	23.95	35.00	27.95	32,861	5,446	10,237	43,051	10,783	20,287	122,665	513,615	636,280
Baltimore Co.	39.30	35.00	44.30	73,614	11,401	91,512	148,580	12,252	29,824	367,183	492,748	859,931
Calvert	22.84	20.00	22.84	2,082	800	2,104	7,783	732	1,795	15,296	97,571	112,867
Carroll	47.40	35.00	52.40	39,857	8,714	7,929	10,762	6,133	41,632	115,027	350,746	465,773
Cecil	55.16	20.00	59.16	66,097	688	6,740	5,455	1,715	604	81,299	2,611	83,910
Charles	46.25	35.00	50.25	37,745	2,964	10,291	14,680	2,041	1,504	69,225	458,393	527,618
Dorchester	8.77	20.00	9.77	815	343	127	1,356	241	278	3,160	57,551	60,711
Frederick	42.12	35.00	47.12	32,797	3,738	5,199	40,665	2,435	8,621	93,455	99,464	192,919
Garrett	48.31	20.00	49.31	9,877	356	2,938	3,738	175	1,990	19,074	15,997	35,071
Harford	40.91	35.00	45.91	35,559	5,262	11,882	29,627	3,738	12,483	98,551	30,604	129,155
Howard	44.06	35.00	49.06	124,041	6,193	17,231	74,827	7,900	9,304	239,496	74,104	313,600
Mid-Shore¹	53.47	20.00	53.47	47,996	3,892	8,367	33,657	2,639	38,357	134,908	132,380	267,288
Montgomery	55.91	35.00	60.91	171,382	25,990	106,031	128,928	10,992	173,409	616,732	123,415	740,147
Prince George's	55.81	35.00	60.81	114,252	17,715	162,838	189,890	9,758	12,060	506,513	472,626	979,139
Somerset	35.57	20.00	35.57	8,505	169	375	212	45	223	9,529	8,445	17,974
St. Mary's	29.91	20.00	32.91	9,438	2,318	6,749	4,302	1,276	1,586	25,669	27,418	53,087
Washington	49.54	35.00	49.54	1,285	673	13,897	52,924	717	1,486	70,982	26,239	97,221
Wicomico	28.05	20.00	28.05	31,508	652	5,877	3,204	1,551	3,936	46,728	81,327	128,055
Worcester	32.75	20.00	32.75	22,928	2,656	1,162	2,799	1,874	759	32,178	24,910	57,088
State Highways of Additional Asphalt and Concrete Recycled											467,471	467,471
TOTAL*	44.10	N/A	48.35	972,427	123,018	494,692	941,821	90,071	377,022	2,999,051	4,293,444	7,292,495

* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values (i.e., MRA Recyclables = 2,999,049.33, Non-MRA Recyclables = 4,293,443.72 tons, Total 7,292,493.05 tons. The MRA recycling rate includes an additional 85,894 tons for the RRF credit that is not included in this table).

1 Mid-Shore Regional Recycling Program includes Caroline, Kent, Queen Anne's and Talbot Counties.

2 MRA Recycling Rate = (MRA recycling tonnage + RRF credit tonnage) ÷ (MRA recycling tonnage + MRA waste) x 100

3 Waste Diversion Rate = Recycling Rate + Source Reduction (SR) Credit (based on voluntary reporting of SR activities). **Bolded** rates include both recycling and SR activities. SR activities theoretically reduced the amount of waste generated by 301,820.22 tons.

4 Column includes materials, such as construction and demolition debris, land clearing debris and recycled fluids, which fall outside the scope of the standard MRA Recycling Rate, but are reported by the counties as recycled materials

Maryland's 39.4% U.S. Environmental Protection Agency (EPA) Recycling Rate

State recycling laws determine which types of materials count towards a state's recycling rate. The differences in state laws make the comparison of recycling activities between states difficult. In an effort to compare state data and generate a U.S. recycling rate, the EPA has developed recycling criteria that standardizes which materials count toward the recycling rate. This can then be used to compare data across states. The major differences between the EPA and Maryland recycling rates relate to Maryland allowing certain industrial materials and the reuse of certain materials (e.g., retread tires, refurbished pallets, etc.) to count toward the MRA recycling rate. Based upon the information currently available to MDE, adjusting Maryland's recycling rate to EPA protocol reduces the amount of material allowed to count toward the recycling rate by 426,752 tons to 2,572,298 tons. Still, Maryland's EPA recycling rate of 39.4% exceeds the overall U.S. recycling rate of 34.7% for 2015 (EPA's most recent available statistics).

Maryland's 4.3% Source Reduction Credit

In 2017, 15 of Maryland's jurisdictions were able to add from 1 to 5 points to their waste diversion rates by conducting Source Reduction (SR) activities as a waste reduction strategy. They accomplished this by utilizing internet resources, demonstration sites (*i.e.*, backyard food waste and yard waste composting), and publications on reuse practices and yard waste reduction. A complete list of SR activities and a breakdown of Maryland SR activities is available on MDE's Recycling web page at mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/recyclingrates.aspx.

Beyond the Maryland Recycling Act

Table 18 – Recycling of Non-MRA Materials in Tons
*Compiled by the Maryland Department of the Environment
 from Reports Submitted for CY17*

MATERIAL	TONS RECYCLED
Antifreeze	2,135
Asphalt & Concrete	1,991,558
Coal Ash	341,840
Construction/Demolition Debris	512,515
Landclearing Debris	55,197
Scrap Automobiles	164,113
Scrap Metal	615,194
Sewage Sludge	96,877
Soils	446,291
Waste Oil	42,041
Other Materials	25,683
TOTAL	4,293,444

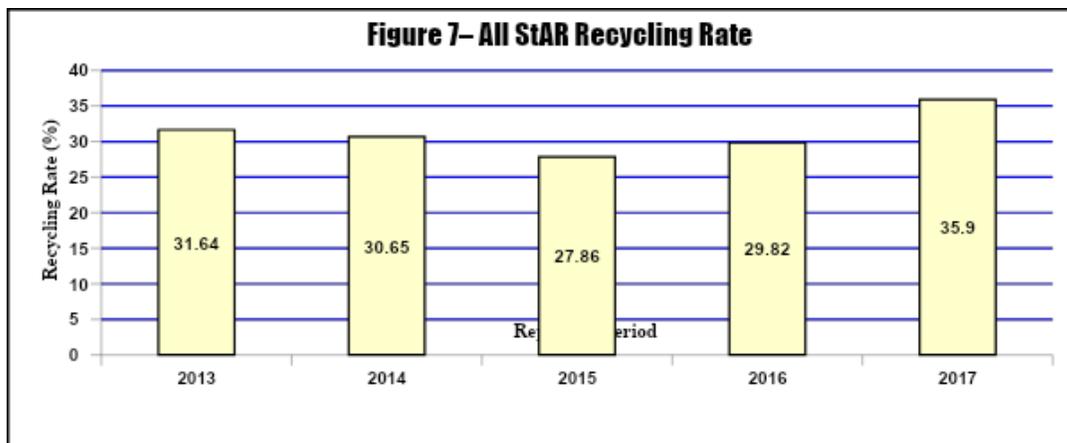
MDE encourages the recycling of all materials because of the environmental and economic benefits provided. Local governments continue to seek recycling opportunities beyond those that apply toward the MRA rate, while businesses are constantly looking for recycling opportunities to reduce the cost of waste disposal. However, since these “non-MRA recyclables” do not count toward a county’s mandated recycling rate, counties place varying levels of importance on gathering this information. This should be taken into account when assessing the completeness of non-MRA recyclables data. Nearly 4.3 million tons of non-MRA materials were reported as recycled in 2017. Table 18 offers a breakdown by category of the non-MRA materials reported as recycled in 2017.

Maryland’s 35.9% All StAR Recycling Rate

The All StAR (**All State Agencies Recycle**) Program is the name of the state government agency recycling program that is designed to help Maryland state government reach its recycling goals. Each All StAR agency designates a Recycling Coordinator to manage recycling activities at their various sites throughout Maryland. Recycling Coordinators provide technical support to encourage recycling and to facilitate reporting on collection activities.

Maryland State government is required under Section 9-1706 of the Environment Article, Annotated Code of Maryland to achieve a recycling rate of at least 30%, or an amount that is determined "practical and economically feasible," but in no case less than 15%. State agencies are required to have recycling plans that address the placement of collection bins and the recycling of aluminum, glass, paper, and plastic at all state-owned or state-operated buildings where it is determined to be practical and economically feasible. Each state agency’s recycling plan is on file with MDE. Individual site recycling plans are maintained by each agency recycling coordinator and at each state facility.

In 2017, state agencies recycled 31,089 tons of MRA materials for an overall MRA recycling rate of 35.9%. Figure 7 charts a 5-year history of Maryland's All StAR recycling rate and Figure 8 summarizes the recycling tonnages since 2013. Table 19 summarizes the performance of each state agency participating in the All StAR program.



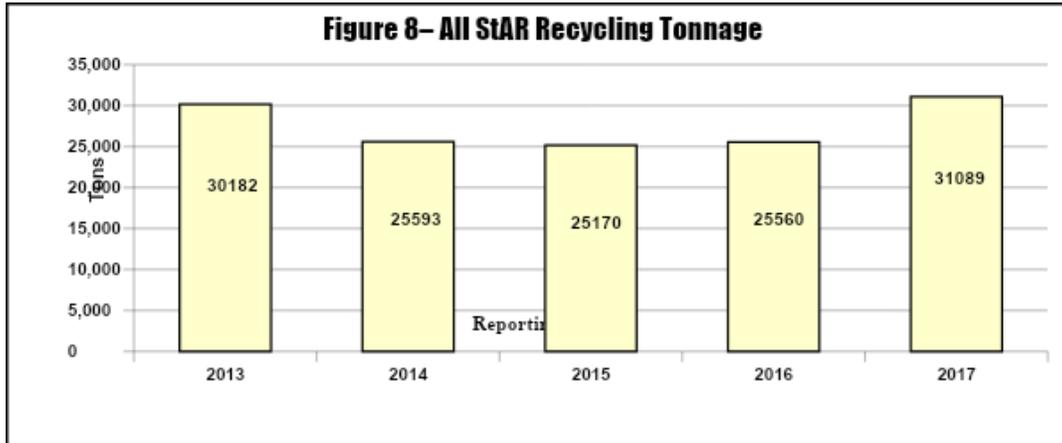


Table 19 – Maryland State Agencies' 2017 Recycling Rates

Compiled by the Maryland Department of the Environment from Reports Submitted for CY17

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2017 (tons)	2017 MRA Recycling Rate (%)
Baltimore City Community College	1	1	0	0	0
Comptroller of the Treasury	1	1	800	112.36	79.60
Department of Agriculture	2	2	222	26.30	19.61
Department of Assessments and Taxation	15	13	1,053	18.54	29.77
Department of Budget and Management	1	0	0	0	0
Department of Education	30	22	1,414	51.53	18.61
Department of General Services	23	23	8,228	159.06	14.21
Department of Health and Mental Hygiene	18	5	6,545	401.69	9.61
Department of Human Resources	33	23	5,514	324.13	22.12
Department of Juvenile Services	15	15	2,954	414.10	16.47
Department of Labor, Licensing & Regulation	14	6	1,338	133.01	9.70
Department of Natural Resources	6	2	537	6.02	5.35
Department of the Environment	5	5	1,009	39.39	30.87
Department of Transportation	83	83	25,988	16,782.97	54.56
Department of Veterans Affairs	12	7	866	169.32	20.81
Dept. of Housing and Community Development	3	0	0	0	0
Dept. of Public Safety and Correctional Services	35	5	25,415	1,008.55	11.78
Judiciary of Maryland	2	2	407	92.93	34.12
Maryland Automobile Insurance Fund	1	1	520	134.71	39.31
Maryland Department of Disabilities	1	1	27	0.10	1.07
Maryland Department of Planning	1	1	185	7.09	10.86
Maryland Environmental Service	4	4	298	16.25	61.51
Maryland Food Center Authority	1	1	1,327	284.63	4.62

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2017 (tons)	2017 MRA Recycling Rate (%)
Maryland General Assembly	1	1	852	131.70	42.94
Maryland Insurance Administration	1	1	242	0	0
Maryland Military Department	33	33	502	37.82	5.56
Maryland Public Broadcasting Commission	1	1	211	93.46	14.86
Maryland School for the Deaf	2	2	989	132.10	32.33
Maryland Stadium Authority	2	2	2,500	1,020.99	42.90
Maryland State Archives	1	1	84	2.08	18.77
Maryland State Police	28	28	1,959	251.66	21.23
Morgan State University	1	1	1,241	179.69	14.17
St. Mary's College of Maryland	1	0	0	0	0
Subsequent Injury Fund	1	1	17	3.54	61.46
University System of Maryland	17	17	127,125	9,053.05	42.79
TOTAL	396	311	220,369	31,088.77	35.92

^ The 1988 Maryland Recycling Act mandates a State Government recycling rate of at least 30%.

Bold Type = Agencies that have satisfied the 30% recycling rate.

Also, state government recycled 201,197 tons of non-MRA materials, including construction and demolition debris, antifreeze, motor oil, scrap metal, land clearing debris, concrete, and asphalt, that do not count toward the MRA Recycling Rate. A complete breakdown of the 2017 All StAR statistics is available under "State Agency Recycling" on MDE's Waste Diversion in Maryland web page at mde.maryland.gov/recycling. MRA tonnages reported by state agencies are included in the 2017 recycling totals reported by the counties (Table 21).

MDE provides technical support and publishes the *All StAR News*, a newsletter devoted to recycling in state government; see Appendix E-1 for an example. Finally, MDE acts as an information clearinghouse by forwarding any relevant recycling information to the appropriate state offices.

The ability to contract with a recycling contractor for recycling pick-up service at a reasonable price is the largest obstacle to increasing the All StAR recycling rate. Companies that process and collect recyclables are in business to make a profit. It is easier to contract with recyclables collectors for large offices or offices in metropolitan areas where the quantity of recyclables generated makes it economically feasible to offer recycling pick-up service. In small offices or offices in rural areas, insufficient recyclables may be generated to make it economically feasible for recycling pick-up service. To address this issue, state office leases issued through the Lease Management and Procurement Division of the Department of General Services (DGS) are required to include recycling in state office space leases and janitorial contracts. This requirement, effective in 2013, is being phased in as old leasing contracts expire.

Greenhouse Gases and Energy Consumption

Using the EPA's Waste Reduction Model (WARM), Tables 20 and 21 detail greenhouse gas (GHG) emissions and energy use scenarios over the lifecycle of common recyclable materials when comparing alternative solid waste management methods to the landfilling of a product (*i.e.*, from production of a glass bottle → use of a glass bottle → disposal/recycling of glass bottle → production of a new glass bottle). In all cases where either recycling or source reduction is used instead of landfilling, there are reductions in GHG emissions and energy used. Only when combusting a material instead of landfilling it were there increases in GHG emissions or energy used.

Table 20 – Per Ton Greenhouse Gas Emissions

Material	MTCO ₂ E* – Landfilled	MTCO ₂ E* – Source Reduced	MTCO ₂ E* – Recycled	MTCO ₂ E* – Combusted
Aluminum Cans	0 **	(4.93) **	(9.13) **	0.02 **
Compostables	0 **	N/A **	(0.36) **	(0.36) **
PET Plastic Bottles	0 **	(2.22) **	(1.14) **	1.19 **
Newspaper	0 **	(3.95) **	(1.93) **	0.24 **
Glass	0 **	(0.55) **	(0.30) **	0.01 **

* MTCO₂E = Metric tons of carbon dioxide equivalent. It is a measure of carbon dioxide emissions and is equal to a unit of mass equal to 1,000 kg (2,205 lbs.).

** Values vs. the landfilling of the material. Assigns MTCO₂E – Landfilled a value of 0. A **negative value** (*i.e.*, a value in parentheses) indicates an emission reduction, while a **positive value** indicates an emission increase compared to the landfilling of a material.

Table 21 – Per Ton Energy Use

Material	BTU [^] (million) – Landfilled	BTU [^] (million) – Source Reduced	BTU [^] (million) – Recycled	BTU [^] (million) – Combusted
Aluminum Cans	0 **	(89.96) **	(153.03) **	0.33 **
Compostables	0 **	N/A **	0.52 **	(2.32) **
PET Plastic Bottles	0 **	(50.53) **	(32.14) **	(10.40) **
Newspaper	0 **	(36.51) **	(16.54) **	(7.58) **
Glass	0 **	(7.17) **	(2.4) **	0.23 **

[^] BTU = 1 BTU is a unit of power that is equal to the amount of energy needed to heat 1 pound of water 1° F. It is also used to describe the heat value (energy content) of fuels.

** Values vs. the landfilling of the material. Assigns BTU (million) – Landfilled a value of 0. A **negative value** (*i.e.*, a value in parentheses) indicates a reduction in energy consumption, while a **positive value** indicates an increase in energy consumption compared to the landfilling of a material.

Tables 22 and 23 detail product lifecycle GHG emissions and energy use with and without waste diversion activities in Maryland in 2017. In Table 22, for example, the GHG emissions associated with the lifecycle of glass is 8,187 metric tons of CO₂ equivalent without waste diversion (*i.e.*, recycling and source reduction) activities, and -42,548 metric tons of CO₂ equivalent with Maryland's waste diversion activities, for a total savings of 50,735 (*i.e.*, 8,187 + 42,548) metric tons of CO₂ equivalent. Additional information on EPA's WARM is available at epa.gov/warm.

Table 22 – Maryland Waste Diversion and Greenhouse Gas Emissions for CY17

MRA Material	MTCO ₂ E* NWD [^]	MTCO ₂ E* WD ^{^^}	MTCO ₂ E* Savings	MTCE** NWD [^]	MTCE** WD ^{^^}	MTCE** Savings
Compostables	231,870	140,347	(91,523)	63,237	38,277	(24,960)
Glass	8,187	(42,548)	(50,735)	2,233	(11,604)	(13,837)
Metals	(222,573)	(2,357,625)	(2,135,052)	(60,702)	(642,989)	(582,287)
Paper	(205,250)	(4,307,191)	(4,101,942)	(55,977)	(1,174,689)	(1,118,711)
Plastic	405,563	170,605	(234,958)	110,608	46,529	(64,079)
Miscellaneous	24,977	(251,656)	(276,633)	6,812	(68,633)	(75,445)
TOTAL	242,774	(6,648,068)	(6,890,843)	66,211	(1,813,109)	(1,879,319)

* MTCO₂E = Metric Tons of Carbon Dioxide Equivalent

** MTCE = Metric Tons of Carbon Equivalent

[^] NWD = No Waste Diversion (baseline = 66.86% landfilled and 33.14% incinerated)

^{^^} WD = Waste Diversion from Maryland CY17 Waste Diversion Totals

Note: A negative value (i.e., a value in parentheses) indicates an emission reduction; a positive value indicates an emission increase.

Table 23 – Maryland Waste Diversion and Energy Use for CY17
(in million BTUs)

MRA Material	BTUs* NWD [^]	BTUs* WD ^{^^}	BTU* Savings
Compostables	(1,695,226)	(840,423)	854,803
Glass	124,521	(335,460)	(459,982)
Metals	(2,386,126)	(35,460,456)	(33,074,329)
Paper	(5,690,790)	(17,917,970)	(12,227,180)
Plastic	(4,369,397)	(9,938,082)	(5,568,685)
Miscellaneous	(1,651,719)	(5,159,026)	(3,507,307)
TOTAL	(15,668,737)	(69,651,417)	(53,982,680)

* BTU = British Thermal Unit – the amount of energy needed to heat one pound of water one degree Fahrenheit

[^] NWD = No Waste Diversion (baseline = 66.86% landfilled and 33.14% incinerated)

^{^^} WD = Waste Diversion from Maryland CY17 Waste Diversion Totals

Note: A negative value (i.e., a value in parentheses) indicates a reduction in energy consumption; a positive value indicates an increase in energy consumption.

The 6.9 million metric tons of CO₂ equivalent emissions savings produced by Maryland’s waste diversion activities in 2017 (Table 22) are the equivalent of removing 1.45 million passenger cars from the roadway each year or conserving 775 million gallons of gasoline, or 287 million cylinders of propane used for home barbeques. The 53.98 trillion British Thermal Unit (BTU) energy savings reported in Table 23 are the equivalent of the annual energy consumption of 469,405 households (i.e., 19.2% of the estimated 2,448,984 households in Maryland in 2017), or the amount of energy contained in 9.3 million barrels of oil or 435 million gallons of gasoline. These reductions are important to meeting our climate change goals in Maryland.

Promoting Recycled Products

The collection, sorting, and use of recycled materials in the manufacturing of new products are just part of the recycling process. Once manufacturers turn recyclables into products, it becomes every citizen's responsibility to "close the loop" and buy products made of recycled material. MDE works to create demand for these products by promoting a "Buy Recycled" training manual and program developed by the Maryland Environmental Service (MES) for government purchasing agents. The training manual provides information on increasing purchases of products made with recycled materials.

State government supports the use of products made with recycled materials through the following procurement initiatives:

- * Participating on the Maryland Green Purchasing Committee. The committee was created on Oct. 1, 2010 (Chapters 593 & 594, Acts of 2010), and provides information, assistance, and guidelines for environmentally preferable purchasing, so that Maryland government is procuring goods and services that have less impact on human health and the environment.
- * Working with the Maryland Department of General Services (DGS) to promote government purchasing of materials with recycled content.
 - In FY18, buying paper products made with recycled content paper was the rule, not the exception, with nearly all of the paper products (*e.g.*, bond paper, computer paper, etc.) purchased made from recycled content paper.
 - Details on state procurement guidelines along with lists of products available with recycled content such as picnic tables, park benches, and re-refined motor oil are available on the DGS web page at dgs.maryland.gov/Pages/Procurement/index.aspx. Local jurisdictions in Maryland are able to piggyback on state procurement contracts.
 - Boilerplate language stating, "All products used in packing to cushion and protect during the shipment of commodities are to be made of recycled, recyclable, and/or biodegradable materials" is included in all Maryland Invitation to Bid Solicitations and Purchase Orders.

Special Programs

From July 2017 through June 2018, MDE continued implementing special programs designed to expand recycling and protect public health and the environment.

Newsprint

Maryland law mandates that, on a state-wide basis, newspapers distributed in Maryland shall contain at least 40% recycled content newsprint. To determine compliance with the law, publishers are required to file quarterly and annual reports with MDE. In the year following a reporting period (each reporting period is comprised of the current calendar year and the immediately preceding two calendar years) where the statewide recycled content percentage requirement is not met, each newspaper publisher who distributes a newspaper in Maryland is required to satisfy the recycled content percentage requirement or pay a fee of \$10 for each ton a publisher

falls below the 40% requirement. In the reporting period ending 2017, the newsprint recycled content percentage was 39.75%.

Table 24 contains 49 known publishers that distribute 140 different newspapers in Maryland. MDE continues to seek increased compliance from publishers who did not comply with the reporting requirements.

Table 24 – Maryland Newspaper Publishers

Publisher	Content %	Publisher	Content %
A&C Business News	NR	Herald-Mail	NR
Afro-American Newspapers	0.0	Independent Newspapers, Inc.	0.0
Ascend Communications	NR	Korea Daily	1.45
Asian Fortune	NR	Latin American Times	NR
Baltimore Business Journal	NR	Legal Times	NR
Baltimore Sun Media Group	44.77	Maryland Coast Dispatch	NR
Baltimore Times Publications	NR	Morgan Messenger	NR
Bay Weekly	0.04	New York Daily News	1.17
Capital-Gazette Newspapers	NR	The New York Times Company	0.63
Carroll Publishing Company	NR	News Journal, Wilmington	0.01
Catholic Review	0.0	Post Newsweek Media	1.91
Chatsworth Enterprises	NR	Prince George's Post	0.02
Chesapeake Publishing Corporation	1.71	Randall Family, LLC	2.01
Citizen Communications, Inc.	NR	Sentinel Newspapers	0.08
City Paper	NR	Sincell Publishing Company	NR
Connection Publishing	NR	Southern Maryland Publishing Co.	NR
Courier	0.0	USA Today	0.0
Cumberland Times News	0.23	Washington Business Journal	NR
Daily Record	NR	Washington County Pickett	NR
Dow Jones & Company	1.03	Washington Newspaper Company	NR
Express Publications Company, LLC	2.46	Washington Post	22.78
Flag Communications	0.81	Washington Times	NR
FT Publications, Inc.	NR	Western Montgomery Bulletin	NR
Gannett Company, Inc.	0.04		
Gay & Lesbian Community Ctr. Of Baltimore	0.0		
Greenbelt Cooperative Publishing	NR	Statewide	39.75
NR – Did not report		% based upon partial reporting period data	

Telephone Directory

The MRA requires telephone directory publishers that in the previous calendar year used at least 50 tons of directory stock in telephone directories distributed in Maryland to use directory stock with a recycled content of at least 40%, by weight. If a publisher does not meet 40% recycled content, it is required to pay a fee of \$10 per ton for each ton the publisher falls below the 40% requirement. Publishers of telephone directories must submit to MDE an annual report detailing the recycled directory stock content used in their directories. Any publisher that fails to submit the required report is deemed to have failed to meet the percentages established.

There are four known publishers of telephone directories distributed in the State of Maryland. In 2017, recycled content for these directories was reported as follows:

- * Berry – Distributes less than 50 tons of directory stock, therefore is exempt from reporting requirements;
- * Dex Media – 0% recycled content;
- * Hibu – 30% recycled content; and
- * Ogden Directories, Inc. – Distributes less than 50 tons of directory stock, therefore is exempt from reporting requirements.

In 2017, Dex Media was granted a 1-year exemption from meeting the 40% recycled content requirement.

Electronics Recycling (eCycling)

Computers, televisions, and other consumer electronics are a rapidly growing part of the waste stream. The potential environmental and health threats posed by



discarded computers and other consumer electronics that may contain toxic materials such as lead, mercury, cadmium, and chromium, continue to raise concerns about disposing these products.

In 2005, Maryland became the third state to enact electronics recycling legislation. The Statewide Electronics Recycling Program (SERP) requires manufacturers of covered electronic devices (CED) to register with, and pay an annual registration fee to MDE in order to sell their products in Maryland. The annual registration fee is based upon the number of CEDs sold in Maryland the previous year. A reduced registration fee is available for manufacturers who have a MDE-approved takeback program. Registration fees may be used by MDE to award grants to counties and municipalities to conduct CED recycling activities.

One-hundred eighteen manufacturers registered with the MDE and were authorized to sell their products in Maryland in 2017. Fifty seven manufacturers have MDE-approved free takeback programs. 3M Company, Acer America, TCT Mobile, American Network Solutions, ASUS, BenQ, Blu Products, Curtis International, Cyberpower, Dell, DPI, Elitelux Technologies, Elo Touch Solutions, Envision Peripherals, Fujitsu, General Digital, GiiNii Tech, Google, HTC America, Huawei Device USA, Hyundai IT, Hewlett Packard, Hisense USA, Hitachi America, Igaming, JVCKENWOOD, Kidz Delight, Kyocera Communications, Mattel, Mitac Digital, Motorola Mobility, MSI Computer, Nintendo of America, Nook Digital, Nvidia, Panasonic, Philips, Planar Systems, PLR IP Holding, Premio, Rakuten Kobo, Sony Electronics, Summer Infant, SunBrite TV, TMAX Digital, TTE Technology, Tomtom, Tong Fang Global, Transcosmos, Ultimate Technology, Venturer Electronics, ViewSonic, Vizio, Wacom Technology, Vtech Electronics, Voxx International reported recycling 185.6 tons of electronics through their free recycling programs in 2017.

MDE performed 607 inspections at 463 electronics retailers during FY18. The inspection coverage rate was 60% (463 retailers inspected of the total

772 known sites). The inspections resulted in the issuance of 20 Site Complaints against retailers for selling unregistered manufacturer brands. All Site Complaints were successfully resolved.

Cumulative highlights of eCycling in Maryland include:

- * 319 special collection events (*i.e.*, 1 or 2-day collection events) have been held in 24 jurisdictions over the life of Maryland’s eCycling program from October 2001 through December 2017.
- * There were 12 special events in 2017, a decrease from the 18 collection events in 2016.
- * Permanent collection programs have been established in Allegany, Anne Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Frederick, Garrett, Harford, Howard, Montgomery, Prince George’s, St. Mary’s, and Washington counties, Midshore Region and Baltimore City.
- * Regularly scheduled eCycling collection events are held in the cities of College Park, Laurel, and Salisbury.

Information on Maryland’s eCycling program is available at mde.maryland.gov/ecycling. Table 25 shows a breakdown of the electronics equipment collected in 2017. Figure 9 summarizes the electronics tonnage totals collected since collection began in 2001. An additional 3,489 tons of electronics from commercial businesses were reported by the counties in 2017 as having been recycled. These were not part of residential eCycling programs.

Table 25 – eCycling Collection Programs

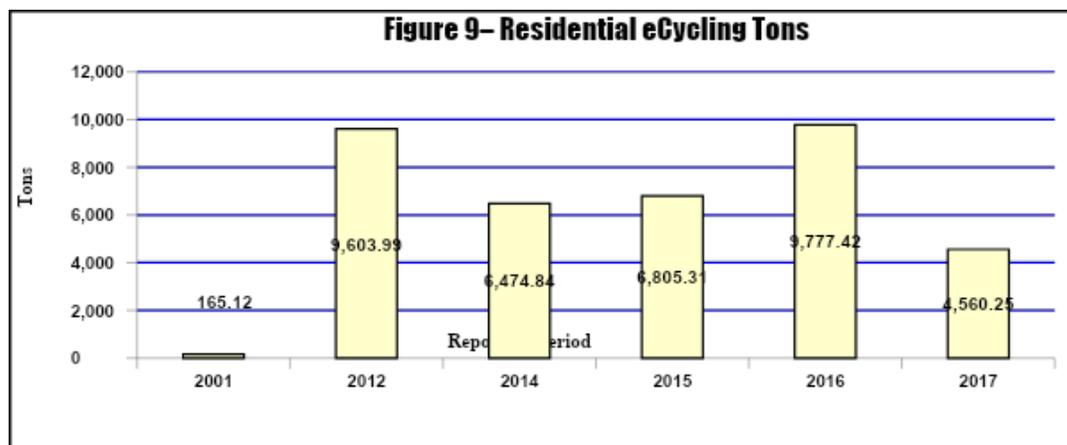
County	Population (2017)	Type	Date(s)	No. of participants	Tons collected ^	Pounds collected ^	Pounds/participant
Subtotal Maryland	6,095,910	–	2001-2016	–	87,318.51	174,637,085	–
eCycling Special Events in 2017							
Midshore (2)	147,010	1-day	Apr, Nov	728	23.8	47,596	65
Prince George's * (6)	906,010	1-day	Jan, Apr, Apr, Jul, Oct, Oct	1,723	30.82	61,641	36
Washington (2)	154,840	1-day 2-day	Nov Jan	500	26.31	52,628	105
Worcester (2)	54,180	1-day	Apr, Dec	332	1.79	3,580	11
Subtotal Events	1,262,040	–	2017	3,283	82.72	165,445	50
Permanent eCycling in 2017							
Allegany	74,850	–	2017	–	5.96	11,920	–
Anne Arundel	567,760	–	2017	–	246.97	493,939	–
Baltimore City	611,648	–	2017	–	65.24	130,480	–
Baltimore County	838,030	–	2017	–	323.21	646,412	–
Calvert	92,230	–	2017	–	390.13	780,260	–
Carroll	171,490	–	2017	–	67.98	135,960	–
Cecil	105,600	–	2017	–	26.00	52,000	–
Charles	164,000	–	2017	–	241.76	483,520	–
Frederick	253,620	–	2017	–	173.89	347,780	–
Garrett	30,300	–	2017	–	24.67	49,340	–
Harford	254,660	–	2017	–	125.13	250,260	–
Howard	318,330	–	2017	–	639.00	1,278,000	–

County	Population (2017)	Type	Date(s)	No. of participants	Tons collected ^	Pounds collected ^	Pounds/participant
Midshore Region	147,010	-	2017	-	41.22	82,433	-
Montgomery **	1,048,400	-	2017	-	1,511.83	3,023,664	-
Prince George's **	906,010	-	2017	-	247.24	494,486	-
St. Mary's	118,400	-	2017	-	281.09	562,180	-
Washington	154,840	-	2017	-	66.21	132,420	-
Subtotal Permanent	6,000,066	-	2017	-	4,477.53	8,955,054	-
TOTALS (2001 - 2017) ^				4,011 (2017)	91,878.76	183,757,584	50 (2017)

^ Due to rounding, tons to pounds conversion doesn't exactly = x 2,000.

* The totals for special events in the City of College Park were included in Prince George's County's special events total.

** Totals from the City of Takoma Park's permanent eCycling program were included in Montgomery County's permanent total. Totals from the City of Laurel's and College Park's permanent eCycling program were included in Prince George's County's permanent total. Totals from the Ocean City's permanent eCycling drop-off were included in Worcester County's permanent total.



Mercury Recycling

Mercury legislation enacted in 2001, Environment Article Section 6-905.1, prohibits the sale of mercury-containing thermometers, except those sold in hospitals or other places where medical services are provided by medical service professionals, beginning in 2002. Additional legislation enacted in 2006, Environment Article Section 6-905.2, prohibits the sale of mercury-containing thermostats by Oct. 1, 2007.

Household Hazardous Waste (HHW)

Environment Article Section 9-1801 Annotated Code of Maryland, defines Household Hazardous Waste (HHW) is any waste material, including garbage or trash, derived from a household that would be listed as a hazardous waste under the Resource Conservation and Recovery Act but for the fact that the waste is derived from a household. Household hazardous waste may include: gardening chemicals, cleaning agents and solvents, motor oils, paint, pesticides, and preservatives.

Maryland does not regulate HHW as hazardous waste and federal law allows for the disposal of HHW in household trash. However, due to the potential of HHW to cause physical injury, contaminate septic tanks or wastewater treatment systems, and present hazards to children and pets, MDE recommends the proper recycling/disposal of HHW materials at local HHW collection programs. Information on HHW programs in Maryland is available at mde.maryland.gov/hhw

Recycling Resources

MDE provides assistance to businesses that are interested in participating in Maryland's recycling program by guiding them through the state regulatory framework, consulting on recycling program implementation, and providing information on the markets for recyclable materials. The following provides a more detailed description of these activities.

Recycling Markets

Recycling Market Directory – The success of Maryland's recycling programs is linked to finding markets for the materials collected. The state's material recovery facilities (MRFs) are strategically located to ensure materials reach their market economically.

Businesses can access the Recycling Market Directory directly at mdrecycles.org to find a market for recyclable materials. The website is designed to promote commercial recycling in Maryland and is searchable by commodity. Additional links to other companies are available on the MDE's recycling web pages for the specific commodity in question.

Automobile Tires – The Scrap Tire Recycling Act authorized the Maryland Environmental Service (MES) to establish a scrap tire recycling system, to address scrap tires generated in Maryland, that includes scrap tire collection facilities and scrap tire haulers. MDE maintains a list of approved scrap tire facilities and haulers at mde.maryland.gov/programs/LAND/RecyclingandOperationsprogram/Pages/scraptire.aspx.

A detailed report on scrap tires in Maryland is available in the *Maryland Scrap Tire Program's Annual Report* at mde.maryland.gov/programs/LAND/Page/LandPublications.aspx.

Batteries – The metals and plastics contained in batteries can be recycled and used to make other products, including new batteries. In addition, the recycling of batteries allows the collection of hazardous metals so that they can be more easily managed. Specific HHW information is available through each county. County contact information is available at the household hazardous waste web page, mde.maryland.gov/hhw. Old automobile batteries can be returned to a retail establishment where a replacement battery is purchased and rechargeable battery collection locations can be found by calling 800-8BATTERY (822-8837).

Additional battery recycling resources for residents and businesses are available by accessing the Recycling Market Directory at mdrecycles.org.

White Goods – White goods are defined as large household appliances such as refrigerators, stoves, air conditioners, and washing machines. Once collected, environmentally- detrimental materials (*e.g.*, chlorofluorocarbons, etc.) are removed for proper disposal, and the remaining materials (usually metal) from white goods are sold for scrap and made into new products. Every county and Baltimore City accepts white goods from residents for recycling. Contact each jurisdiction for details and any questions concerning the proper collection procedures. Contact information is available at mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/default.aspx. Also, resources for residents and businesses are available under “Metals” in the “Recycling Market Directory” available on MDE’s recycling web page.

Permitting Guidance

MDE provides and regularly updates documents to assist recycling and composting businesses in understanding environmental permitting procedures and requirements.

MDE Guide to Environmental Permits and Approvals – This Guide to Permits and Approvals is housed at mde.state.md.us/programs/Permits/Pages/busguide.aspx. It contains important information about the different types of permits, licenses, and approvals issued by MDE. These permits affect businesses and individuals ranging from well drillers, dry cleaners, and gas stations, to power plants and other large industrial facilities. MDE developed this guide as part of its continued commitment to provide excellent service to its permitting customers. The information in this guide can help businesses determine their permitting needs.

Composting Facilities Permitting Guidance Specific information on composting in Maryland, and required permits and approvals, is available on MDE’s composting web page at mde.maryland.gov/composting.

Innovative Reuse and Beneficial Use of Dredged Material Guidance Document This document outlines regulatory considerations for various potential uses of dredged materials, including in-water beneficial uses (beach nourishment, marsh creation, island restoration, and other in-water beneficial uses) and innovative reuse applications on land (Brownfield clean up, landfill daily cover, engineered fill/soil). It is available on MDE’s dredged materials web page at: mde.maryland.gov/programs/Marylander/Pages/dredging.aspx.

Waste Diversion Guide

Commercial Waste Diversion Implementation Guide – This document assists local recycling coordinators working with businesses to promote recycling and source reduction. Case studies detailing successful commercial waste diversion efforts are provided. The guide is available on MDE’s web page at

Public Resources

As waste diversion programs continue to mature, it is important for MDE to keep the public informed of waste diversion programs in the state. From July 2017 through June 2018, MDE provided assistance and public education through efforts such as America Recycles Day, web resources, and county solid waste and recycling managers meetings.

America Recycles Day (ARD)

America Recycles Day (ARD) is a national event that promotes recycling, source reduction, and buying products made from recycled materials as objectives for a more sustainable society. MDE hosted the 16th Annual "Rethink Recycling" Sculpture Contest on November 30, 2017 at MDE headquarters.

The contest featured 61 entries from 21 Maryland high schools. It challenged students to innovatively and artistically use recycled or reused materials as a solution to waste reduction. With instruction to create a sculpture that promotes America Recycles Day, students created artworks from items such as plastic bottles, cans, scrap metal, compact discs, and other materials. Participants were judged based on creativity, use of materials, and workmanship. Contest details are available on MDE's *Education and Outreach* web page at mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/EducationandOutreach.aspx.

MDE's Website

Information on Maryland's waste diversion (*i.e.*, recycling and source reduction) activities is on MDE's waste diversion web page at mde.maryland.gov/recycling. The page includes information on state and county recycling programs; source reduction; special projects (*e.g.*, electronics and mercury recycling, composting, and household hazardous waste, etc.); setting up recycling programs at work and school; All StAR recycling; educational resources; and links to other sites MDE's website also offers Maryland's residents and businesses the opportunity to email questions or comments on recycling.

County Recycling & Solid Waste Managers Meetings

MDE organizes regular joint County Solid Waste and Recycling Managers meetings throughout the year. These meetings offer managers the opportunity to network, share ideas, and gain insight to promote efficient solid waste management and recycling programs. MDE reports on the latest recycling activities, trends, and legislative and regulatory changes. Speakers from industry and government are invited to educate local governments on related issues. MDE periodically surveys county managers to keep the meetings relevant to stakeholders.

Partnerships

MDE recognizes the value of being an active partner with local and regional groups that focus on waste management issues. The following is a description of MDE's partnerships.

The Association of State and Territorial Solid Waste Management Officials, Inc. (ASTSWMO) – ASTSWMO (astswmo.org) works to enhance and promote effective programs and affect policies for waste and materials management, environmentally sustainable practices, and environmental restoration.

Electronics Recycling Coordination Clearinghouse (ERCC) – ERCC (cycleclearinghouse.org) was launched in 2010 by two leading nonprofit organizations advancing recycling efforts across the country - the National Center for Electronics Recycling (NCER) and the Northeast Recycling Council (NERC). The ERCC is a forum for coordination and information exchange among the state/local agencies that are implementing electronics recycling laws and all impacted stakeholders.

Maryland Environmental Service (MES) – MES (menv.com) recognizes that recycling is an element of effective waste management. MES assists MDE-led All StAR program and local governments by offering program planning and implementation, facility management and operation, and marketing of recyclable materials. MES administers the Maryland Used Oil Recycling Program on behalf of MDE. Additional information is available at 1-800-4RECYCLE.

Maryland Recycling Network (MRN) – The MRN is a nonprofit, volunteer organization (marylandrecyclingnetwork.org) committed to promoting waste reduction, recycling and the conservation of natural resources. MRN is dedicated to promoting partnerships and cooperation between the private and public sectors. MDE supports the mission of the MRN through staff participation, funding, projects, and by providing regular status briefings and reports to MRN board members and attendees.

Northeast Maryland Waste Disposal Authority (NMWDA) – The NMWDA (nmwda.org) provides solid waste and biosolids management to its members – Anne Arundel, Baltimore, Carroll, Frederick, Harford, Howard, and Montgomery counties, and Baltimore City. The Authority manages three waste-to-energy facilities and a facility that converts sewage sludge into compost.

Northeast Recycling Council (NERC) – The NERC (nerc.org/) is a multi-state nonprofit organization promoting sustainable materials management by focusing on waste prevention, toxics reduction, reuse, recycling and organics recovery.

County Waste Diversion Programs

County waste diversion programs are the key to the success of waste diversion in Maryland. MDE works cooperatively with each county to ensure that valuable market and program information is shared, analyzed, and discussed. Table 26 illustrates the elements of Maryland counties' individual recycling programs. Unless otherwise noted in Table 26, all counties collect

“core” recyclables that include mixed paper (*i.e.*, all paper types, envelopes, books, cardboard, magazines, newspaper, and telephone books), containers (*i.e.*, glass, metal, and plastic), white goods (*i.e.*, appliances), and organics (*i.e.*, yard trimmings and Christmas trees). Highlights of county programs in 2017 include:

- * Eighteen counties achieved waste diversion rates greater than the 2005 40% waste diversion goal.
- * Four counties (Cecil, Montgomery, Prince George’s, Wicomico) achieved a recycling rate greater than the 55% recycling goal for the year 2020. Fifteen counties earned SR credits. Eight of these counties, Anne Arundel, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery, and Prince George’s earned the maximum 5% SR credit.
- * Twenty-two counties accept fluorescent lights for recycling.
- * Fourteen counties accept expired medications for proper disposal.
- * Twenty counties had permanent electronic drop-off locations.
- * Eighteen eCycling collection events were held in 7 counties.
- * Seventeen counties operated textile collection programs.
- * Nineteen counties maintained mercury thermometer drop-off locations.
- * Sixteen counties collected paint for recycling.
- * Twenty counties operated HHW programs.

Waste diversion programs are constantly changing. Appendix F includes contact information for Maryland’s recycling coordinators, who can provide the most current information about waste diversion in their jurisdictions. For additional information, visit MDE’s waste diversion web page at mde.maryland.gov/recycling.

Table 26 -- County Residential Recyclables by Commodity

County	Fluorescent Lights	Medicine	Lead-Acid Batteries	Oil/Antifreeze	Established Electronic Drop-offs	Paints	Textiles	Hg°	HHW~	Comments/Additional Materials^
Allegany ^p	✓	✓	✓	✓/✓	✓				✓	batteries, hardcover books, tire, propane tanks, oil, antifreeze, plastic bags and stretch wrap, and vinyl siding
Anne Arundel ^{cs}	✓	✓	✓	✓/✓	✓	✓	✓		✓	cooking oil, wood pallets, tires, propane tanks, rubble, vinyl siding, asphalt shingles, scrap metal, oyster/clam shells, empty fuel containers; Police Stations accept medications 24/7
Baltimore City ^{cs}	✓		✓	✓/✓	✓	✓		✓	✓	Leaves, Christmas trees, tires, books, oyster shells, rigid plastics, scrap metal, white goods, plastic bag take-back events
Baltimore County ^{cs}	✓	✓	✓	✓/✓	✓	✓		✓	✓	cooking oil, propane tanks, usable building material
Calvert	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	cooking oil, printer cartridges, oil filters, tires, propane tanks, Freon units, oyster/clam shells, rigid plastic, scrap metal, rechargeable batteries, cell phones
Caroline	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore program, eCycling event, paint on HHW Day
Carroll ~		✓	✓	✓/✓	✓		✓	✓	✓	scrap metal, vinyl siding, cooking oil, usable building material, #6 Styrofoam, rigid plastic. HHW Events collect Fluorescent bulbs/Oil based paint and Stains
Cecil ^{cs}	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	Lead acid & rechargeable batteries, latex paint, oil filters, scrap metal, tires, textiles/ clothing, & fluorescent lamps,
Charles ^{cps}	✓*	✓*	✓	✓/✓	✓	✓*	✓	✓*	✓	cooking oil, household batteries, oil filters, propane tanks, tires, Medicine drop off at Sheriff's Office, Latex Only Paint, Hg° and Fluorescent lights accepted at HHW events only,
Dorchester	✓		✓	✓/✓			✓	✓		No books,
Frederick ^{cs}	✓		✓	✓/✓	✓				✓	No books, pesticide containers, scrap metal, tires, flexible foam, yard waste, white goods, wood pallets
Garrett ^m	✓			✓/✓	✓					#1 & 2 plastic only, inkjet & toner cartridges, oil filters
Harford ^{cps}	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	Yard trim, scrap metal, ecycle, mattresses, agricultural plastics, lead acid/rechargeable batteries, tires, fluorescent lamps, gasoline, pesticide containers, oil filters, propane tanks, inkjet cartridges
Howard ^{cs}	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	propane tanks, scrap metal, reusable building materials, vegetable oil, polystyrene, mattresses, flags, bicycles, food scraps, oyster shells
Kent	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore program, eCycling event, pesticide containers, boat shrink-wrap; auto tires, cooking oil, Freon units, scrap metal, yard waste Mid-shore program, paint on HHW Day
Montgomery ^c	✓		✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; confidential paper shredding/recycling events; bicycles, books, cooking oil, scrap metal, oil filters, propane tanks, tires, reusable building materials, rubble recycling (concrete, asphalt, brick, block, stone, and soil), yard trim, bulky rigid plastic recycling drop-off
Prince George's ^{cs}	✓	✓	✓	✓/✓	✓	✓		✓	✓	eCycle event; cooking oil, mattress foam, tires, rigid plastics, White Goods.
Queen Anne's	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore program, eCycle event; boat shrink-wrap, passenger tires; gasoline collection and vegetable oil recycling, paint on HHW Day
St. Mary's ^s	✓		✓	✓/✓	✓	✓	✓		✓	oil filters, ink jet cartridges, cooking oil, rechargeable batteries, propane tanks, tires, scrap metal, oyster shells, yard waste
Somerset ^s	✓		✓	✓/✓			✓	✓		pesticide containers, oil filters, tires
Talbot	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore program, eCycling event, pesticide containers, paint on HHW Day
Washington			✓	✓/✓	✓			✓		propane tanks, cooking oil, tires, yard waste, polystyrene, rechargeable batteries
Wicomico ^c	✓		✓	✓/✓			✓	✓	✓	Oyster/clam shell, scrap metal, white goods, tires, wood pallets, yard waste, propane tanks, Freon units
Worcester	✓		✓	✓/✓			✓	✓	✓	Lead acid batteries, propane tanks, tires, yard waste, wood pallets, scrap metal, white goods,

c Curbside recycling collection (in Wicomico Co., only in Salisbury); p Pay-As-You-Throw Program (in Harford Co., only in Aberdeen); s Single-stream Recycling (in Calvert Co. only some individual towns offer single-stream); ° Have established Mercury Thermometer Drop-offs; ~ Household Hazardous Waste Collection Day. Contact the County for details including materials accepted. ^ In this section, eCycle = electronics recycling

APPENDIX

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APPENDIX A

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Economic Benefits of Permitted Solid Waste Acceptance Facilities

This table provides information that was voluntarily reported by permitted solid waste acceptance facilities in 15 political jurisdictions describing the economic benefits of the facilities to the host communities. While the economic benefits identified in the table are significant, the information does not fully represent the total economic benefits to Maryland’s communities that are provided by all permitted solid waste acceptance facilities. **The facilities that updated their information in 2017 are highlighted by (*)**.

Table A1 – Economic Benefits

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Allegany	Mountainview Sanitary Landfill (Privately Owned)	Provides county residents and businesses an environmentally safe disposal site for county solid waste at reasonable rates. The facility has eliminated the need for Allegany Co. to fund and operate its own solid waste disposal facility.	Allegany County uses Mountainview Landfill as a collection site for recycling materials, including glass, cardboard, plastic, aluminum cans, newspapers, and magazines. The facility also provides an ash disposal area for citizen use during the winter months.	No information provided.	The Mountainview Landfill purchased supplies and materials from Allegany County businesses. Also has on-site used oil, cardboard, and aluminum recycling programs to boost recycling in Allegany County.
Allegany	Western Maryland Processing and Transfer Station* (Privately Owned)	More jobs for the community and more taxes for the county. Alternative cost effective waste collection option.	Reduced Carbon footprint due to less travel time to the county landfill.	4 full time positions	Increase of taxes paid to the county
Anne Arundel	Annapolis Junction Recycling and Transfer Station (Privately Owned)	Facility pays Host Community Fee to county for each ton of solid waste received. Tip fee charged county is below	Highway traffic from tractor trailer trucks is reduced due to rail transfer of solid waste. Allows Anne Arundel and Howard counties	24 employees.	No information provided.

		the area's rates for disposal.	to conserve disposal capacity in county landfills.		
Baltimore City	BFI Baltimore Processing and Transfer Center (Privately Owned)	Paid local taxes.	Convenient location for C&D haulers to offload.	12 employees, mostly operators and a few sorters.	No information provided.
Baltimore City	Wheelabrator Baltimore LP. (Privately Owned)	Extends life of landfills by reducing MSW volume through incineration.	Sponsors several community outreach and partnership programs.	68 employees including professionals and skilled workers.	No information provided.
Baltimore City	L & J Waste Recycling, LLC* (Privately Owned)	The facility is located in a rehabilitated location and generates revenue through its solid waste recycling by turning waste into valuables. Also, the facility adds to the local economy through personal and business tax revenue annually.	The facility diverted 77% of its waste accepted at the site for recycling and saves costs of disposal.	\$400,000/18 employees.	The business intends to expand in the future and continue to provide solid waste and recycling services for the community.
Baltimore City	Daniels Sharpsmart Inc. (Privately Owned)	Local employment, rent and other direct local purchases to support business.	Not provided.	14 employees. Salary and benefit valued at \$500,000.	Goods & services purchased locally for \$393,000. Other operational costs \$5,363.
Baltimore City	Baltimore Recycling Center, LLC* (Privately Owned)	The facility pays in excess of \$62,400 in taxes per year.	The business has invested five million dollars in the property and equipment to run a C&D recycling facility at no cost to Baltimore City. Baltimore receives recycling credit for these efforts and property builders get LEED credits for waste recycling.	Excess of \$2,000,000/66 employees.	Purchased local goods and services for \$1.8 million. Fuel for \$330,000. Paid \$38,000 for Tags and permits. Revenues of recycled material is in excess of \$1.2 million.

Baltimore City	Northwest Transfer Station (Publicly Owned)	Not Provided	Provides curbside collection of mixed refuse and recycling services.	17 employees.	Not Provided
Calvert	Howlin Land Clearing Debris Landfill (Privately Owned)	Tax incentive.	Assisting county in disposing county solid waste.	3 employees.	No information provided.
Calvert	Southern Maryland Processing Facility (Privately Owned)	Assisting county in handling solid waste & promoting recycling.	Not provided.	4 employees.	\$10,000 annual purchase of goods and services, recycled products.
Calvert	Appeal Sanitary Landfill/Transfer Station* (County Owned)	The landfill is the sole county operated facility for the final disposition of county and out-of-county waste. The transfer station provides value to Calvert County by allowing the Division of Solid Waste to extend the useful life of the Appeal Municipal Landfill by at least 20 years, providing a tangible economic benefit.	Revenues are collected from users of the landfill via user fees and excise taxes. County residents may use the convenience centers free of charge, and for chargeable items, county residents pay a lower fee at the landfill than commercial haulers for disposal. The transfer station is complementary to the Appeal Municipal Landfill, and is operated in conjunction with ongoing solid waste refuse collection, landfilling and recycling operations.	The landfill operations and convenience centers are supported by a group of 46.8 full time positions with \$1,892,417 in salaries.	The landfill capital and operational projects have hired various contractors and vendors within Calvert County and surrounding jurisdictions.
Carroll	Roll-Off Express, Inc. (Privately Owned)	\$54,000/year paid in real estate, personal property and sales taxes.	\$2.25 million investment for facilities.	\$275,000/17 employees including equipment	\$375,000 annual purchase of goods and services.

				operators, drivers, laborers.	
Cecil	Cecil County Central Landfill* (County Owned)	The County landfill accepts municipal and commercial waste originating in Cecil County. The facility allows residents to bring in recyclables and MSW.	Provides waste disposal and recycling opportunities for Cecil County's population. The facility works in conjunction with two transfer stations owned by Cecil County to accept MSW originating within the county.	\$1,250,000/20 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$2,700,000. Estimated value of materials recycled for the year: \$190,000.
Cecil	Stemmers Run Transfer Station* (County Owned)	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Total Salaries paid \$ 55,000/1	Estimated value of goods and services purchased from the locality for the facility: \$30,000. Estimated value of materials recycled for the year: \$5,000
Cecil	Woodlawn Transfer Station* (County Owned)	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	\$190,000/3 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$30,000. Estimated value of materials recycled for the year: \$15,000.
Frederick	Essroc Industrial Waste Landfill	Land Assessment taxes paid for the industrial complex	Not Applicable	1-2 employee	None
Frederick	Reichs Ford/Site B Municipal Sanitary Landfill/Transf er Station* (County Owned)	Free curbside recycling for 78,122 residents, a recycling drop- off center for remaining households, HHW collection, free mulch, yard waste grinding & sampling and analysis of 29 off- site residential water wells adjoining landfill property.	Disposal of C&D and MSW.	\$3.2 Million/43 employees.	Spent \$3.4 million on various recycling contracts and programs.

Harford	Harford Waste Disposal Center* (Publicly Owned)	Provides county residents with disposal and recycling services. In addition, the facility acquires goods and services from local vendors. Further, the facility employs external contractors for various routine and non-routine services.	The facility is owned by the county and operated by the Maryland Environmental Service. Provides county residents with nonprofit disposal methodology and hierarchy. Provides recycling services at “no cost.”	\$1.8 Million/37 full time employees.	For 2017: Estimated value of savings to Harford County: Free Single Stream Recycling - \$207,792, Free recycling for additional materials – \$123,192, Free yard trim recycling – \$1,100,490.
Howard	Work Place Essentials Transfer Station (Privately Owned)	Paid taxes and provides waste collection services to locality.	Assists county in providing collection of sanitary waste products originating from commercial restrooms in Baltimore, Howard, Anne Arundel Counties and others.	\$800,000/18 employees.	No information provided.
Howard	AmeriWaste Processing and Transfer Station (Privately Owned)	Payment of real estate, personal property and sales taxes to Howard County.	Facility supplements County facilities for solid waste disposal.	12 employees. Jobs include 53 equipment operators, 2 clerks, and 5 laborers.	\$200,000 in purchase from local vendors, \$19,000 in value of recycled items.
Montgomery	Montgomery County Solid Waste Transfer Station (Publicly Owned)	Strategically located for easy access to accommodate residential, industrial and commercial use.	No information provided.	18 full time County employees. 63 full time Covanta Montgomery, Inc., 9 full time MES and 10 Temp employees.	Revenue from some materials partially offsets operating costs, allowing fees to remain relatively flat over the past several years.
Prince George’s	Lawrence Street C & D Processing Facility	Benefits include taxes that support local infrastructure, jobs, and access to a facility close by for local users.	Strategically located for local customers.	Employs 10 people for estimated budget of \$650,200.	Goods and services purchased is approximately \$1.5 million, \$1.8 Million in recycled products produced.

St. Mary's	St. Andrew's Municipal Landfill (Publicly Owned)	Tipping fees waived during emergency/storm damage situations and other approved nonprofit organization projects. Provides mulch made from yard and wood waste free to county residents.	Processes county's residential yard waste into mulch. Provides location for disposal of appliances and up to five (5) tires per trip, free of charge. Future expansion of area C (36.8 acres) permitted landfill, if required.	\$700,000/21 employees includes a manager, 4 equipment operators, 2 scale house operators, and 14 attendants (full & part time).	\$300,000 - County subsidy of Recycling. \$1.3 million - County subsidy for residential solid waste disposal.
Washington	Forty West Municipal Landfill* (Publicly Owned)	Centrally located in County for easy access to accommodate residential, industrial, and commercial use.	Facility owned and operated by Washington County for the solid waste disposal needs of County residents.	\$2,000,930/29 employees. Jobs include: deputy director (1), assistant director (1), recycling coordinator (1), office staff (2), weigh clerk full time (3) and part time (5), equipment operators (6), mechanics (2), residential drop-off attendants (4), part time drop off attendants (2), inmate crew guards (2),	Approx. \$6.3 million annual operating budget spent locally for the purchase of materials, services, equipment, and wages.
Wicomico	Bennett Construction Inc. (Privately Owned)	Creates a larger tax base to the local community and the only waste collection facility in the area. Provides employment opportunities in the area.	Expanding the value of the facility in the county for other opportunities.	\$ 328,000/15 employees.	Fuel and Maintenance Cost to the local economy - \$238,000/year. Offers lower tipping fees to the customers.
Worcester	Ocean City Transfer Station (Publicly Owned)	Provides for the consolidation of solid waste collected in the Town of Ocean City for transport 26 miles to the county's MSWLF.	No information provided.	No information provided.	No information provided.

APPENDIX B

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Permitted Solid Waste Acceptance Facilities

Table B1 – Permitted Solid Waste Acceptance Facilities*

County	Facility Name	Type	Owner Type	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
Allegany	Mountainview Sanitary Landfill	WMF	PRI	2016-WMF-0010	5/4/2021	40 / 396	13300 New George's Creek Road, Frostburg, MD 21532.
	Western Maryland Processing Facility and Transfer Station	WPT	PRI	2014-WPT-0632	10/30/2019	- /5.85	13810 Hazmat Drive Cumberland, MD 21502
Anne Arundel	Annapolis Junction Recycling and Transfer Station	WPT	PRI	2016-WPT-0158	3/24/2021	- / 17	8077 Brock Bridge Road, Jessup, MD 20794.
	Biomedical Waste Services Inc. Processing Facility and Transfer Station	WPT	PRI	2016-WPT-0676	4/17/2022	- / 1.40	7610 Energy Parkway, Curtis Bay, 21226
	Curtis Creek Processing Facility and Transfer Station	WPT	PRI	2013-WPT-0539	12/19/2018	- / 12.8	23 Stahl Road, Baltimore MD 21226. Accepts C&D Waste.
	Millersville Landfill and Resource Recovery Facility	WMF	CTY	2017-WMF-0240	10/5/2022	330 / 567	389 Burns Crossing Road, Severn MD 21144.
	Tolson & Associates Rubble Landfill	WRF	PRI	2003-WRF-0580	11/23/2019	72/184	1451 Capital Raceway Road, Crofton, MD 21114.
Baltimore City	Baltimore Processing and Transfer Center	WPT	PRI	2013-WPT-0627	2/24/2019	- / 15.6	5800 Chemical Road, Baltimore MD 21226.
	Baltimore Recycling Center LLC Processing Facility and Transfer Station	WPT	PRI	2014-WPT-0631	12/28/2019	- / 12.5	1030 Edison Highway, Baltimore MD 21213. Accepts Only C&D Waste.
	Daniel's SharpSmart Special Medical Waste Processing Facility	WPT	PRI	2015-WPT-0633	2/9/2020	- / <1	6611 Chandlery Street Baltimore, MD 21224 Accepts only Special Medical Waste.
	Curtis Bay Energy Medical Waste Incinerator	WMI	PRI	2017-WMI-0036	6/12/2022	- / 4.0	3200 Hawkins Point Road, Baltimore MD 21226. Formerly Phoenix Services.
	Fort Armistead Road – Lot 15 Industrial Landfill	WIF	PRI	2011-WIF-0653	9/26/2018	32 / 65	3601 Fort Armistead Road, Baltimore MD 21226.
	Hawkins Pt. Plant Industrial Landfill	WIF	PRI	2015-WIF-0527A	12/3/2020	57 / 95	3901 Fort Armistead Road, Baltimore MD 21226.
	L & J Waste Recycling, LLC. Processing Facility	WPF	PRI	2016-WPF-0634	2/16/2022	- / <1	222 N. Calverton Road Baltimore MD 21223
	Northwest Transfer Station	WTS	MUN	2015-WTS-0038	1/18/2021	- / 6.6	5030 Reisterstown Road, Baltimore MD 21215.
	Quarantine Road Landfill	WMF	MUN	2014-WMF-0325	11/9/2019	126 / 153	6100 Quarantine Road, Baltimore MD 21226.
	Stericycle Medical Waste Processing Facility and Transfer Station	WPT	PRI	2014-WPT-0591	12/10/2019	- / 2.4	5901 Chemical Road, Baltimore MD 21226.
	Wheelabrator Baltimore, LP Waste-to-Energy Facility	WTE	PRI	2016-WTE-0030	3/2/2022	- / 15	1801 Annapolis Road, Baltimore MD 21230. Formerly BRESKO.
	W.R. Grace and Co. Industrial Landfill	WIF	PRI	2017-WIF-0613	2/15/2022	10.7/157	5500 Chemical Road, Baltimore MD 21226
	Baltimore	Central Acceptance Facility	WPT	CTY	2017-WPT-0657	12/6/2022	6.0 / 7.3
Days Cove Rubble Landfill – Lateral Expansion		WRF	PRI	2014-WRF-0592	10/13/2019	35.6 / 99	6425 Days Cove Road, White Marsh MD 21162.
Eastern Sanitary Landfill		WMF	CTY	2015-WMF-0052A	7/14/2020	200 / 367	6259 Days Cove Road, White Marsh MD 21162.
Eastern Sanitary Transfer Station		WTS	CTY	2013-WTS-0665	4/9/2020	- / 4	6260 Days Cove Road, White Marsh MD 21162.

	Honeygo Run Reclamation Center	WRF	PRI	2014-WRF-0579A	10/13/2019	77/117	10710 Philadelphia Road, Perry Hall MD 21128. Expansion of Existing Landfill.
	Recovermat Mid-Atlantic Processing Facility	WPF	PRI	2015-WPF-0341	1/6/2021	- / 8.5	2202 Halethorpe Farm Road, Baltimore MD 21227. Approved to accept C&D. Currently, only accepts scrap metal.
	Western Acceptance Facility Transfer Station	WTS	CTY	2017-WTS-0679	6/30/2022	- / 5.3	3310 Transway Road, Halethorpe MD 21227.
Calvert	Appeal Municipal Landfill	WMF	CTY	2017-WMF-0531	6/12/2022	30 / 350	401 Sweetwater Road, Lusby MD 20678.
	Appeal Transfer Station	WTS	PRI	2017-WTS-0519	12/13/2022	- / 1	401 Sweetwater Road, Lusby MD 20678.
	Hance Landclearing Debris Landfill	WLC	PRI	2015-WLC-0252	11/23/2020	10.2 / 23.6	1/4 mile west of MD Rtes 2 & 506, Prince Frederick MD 20678.
	Howlin Landclearing Debris Landfill	WLC	PRI	2013-WLC-0577	5/28/2018	3.0 / 32.7	8580 Nursery Road, Lusby MD 20657.
	Southern Maryland Processing Facility	WPF	PRI	2014-WPF-0597	3/19/2020	- / 0.2	7659 Binnacle Lane, Owings MD 20736
Caroline	Midshore II Solid Waste Regional Municipal Landfill	WMF	MES	2013-WMF-0608	2/4/2019	71.3 - / 224	12236 River Road Ridgely MD 21660.
Carroll	Northern Municipal Landfill	WMF	CTY	2015-WMF-0066	10/12/2020	80 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Northern Municipal Landfill Processing Facility and Transfer Station	WPT	CTY	2013-WPT-0541	3/9/2019	3 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Roll-Off Express, Inc. Processing Facility	WPF	PRI	2012-WPF-0159	6/9/2018	- / 6.8	2900 Dede Road, Finksburg MD 21048.
Cecil	Cecil County Central Landfill – Horizontal Expansion	WMF	CTY	2008-WMF-0629	4/22/2019	81.6 / 418	758 East Old Philadelphia Road, Elkton MD 21921
	Cecil County Central Landfill	WMF	CTY	2012-WMF-0532	11/13/2017	81.5 / 418	758 East Old Philadelphia Road, Elkton MD 21921 Ceased Operations
	Stemmer's Run Transfer Station	WTS	CTY	2015-WTS-0072	11/5/2020	- / 9.7	45 Stemmer's Run Road, Earleville MD 21919.
	Woodlawn Transfer Station	WTS	CTY	2015-WTS-0074	11/5/2020	- / 30	Fire Tower & Waibel Roads, Port Deposit MD 21904.
Charles	Charles County Municipal Landfill	WMF	CTY	2014-WMF-0076A	4/30/2019	70 / 114	12305 Billingsley Road, Waldorf MD 20602.
	Naval Support Facility Indian Head Incinerator	WIN	FED	2014-WIN-0529	9/4/2019	- / 2,500	101 Strauss Avenue, Indian Head MD 20640.
Dorchester	Beulah Municipal Landfill	WMF	CTY	2014-WMF-0628A	9/21/2020	27 / 59	6812 East New Market-Ellwood Road, Hurlock MD 21643.
Frederick	Eastalco Aluminum Company Industrial Landfill	WIF	PRI	2014-WIF-0537	11/30/2019	10.2 / 20	5601 Manor Wood Road, Frederick MD 21703.
	Essroc Cement Corporation. Industrial Landfill	WIF	PRI	2016-WIF-0640	10/5/2021	25/50	4120 Buckeystown Pike, Frederick, MD 21717. Limited to Essroc Waste Only. Planned Construction
	Fort Detrick – Area B & Main Post Municipal Landfill	WMF	FED	2015-WMF-0327	8/26/2020	61 / 297	Area B - Rosemont Avenue & Shookstown Road. Fort Detrick Waste Only.
	Fort Detrick – Area B & Main Post Incinerator	WIN	FED	2015-WIN-0341	3/24/2021	- / 1	Area A - East off Beasley Drive. Limited To Waste Only From Fort Detrick.
	Reichs Ford/Site B Municipal Landfill	WMF	CTY	2013-WMF-0582	6/11/2018	58 / 184	9031 Reichs Ford Road, Frederick MD 21704.
	Reichs Ford/Site B Processing Facility & Transfer Station	WPT	CTY	2016-WPT-0604	5/30/2021	10 / 184	9031 Reichs Ford Road, Frederick MD 21704.
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	WMF	CTY	2011-WMF-0094A	4/10/2018	32 / 188	3118 Oakland-Sang Run Road, Oakland MD 21550.
Harford	Auston Processing Facility & Transfer Station	WPT	PRI	2012-WPT-0616	4/14/2018	3.0 / 6.01	1202 Pauls Lane, Joppa MD 21085.
	Harford Waste Disposal Center Municipal Landfill Expansion	WMF	CTY	2017-WMF-0570	10/9/2022	77.4 / 286	3241 Scarboro Road, Street MD 21154.

Howard	Alpha Ridge Municipal Landfill	WMF	CTY	2016-WMF-0110	5/2/2021	195 / 590	2350 Marriottsville Road, Marriottsville MD 21104.
	Alpha Ridge Processing Facility and Transfer Station	WPT	CTY	2017-WPT-0578	2/11/2023	4 / 590	2350 Marriottsville Road, Marriottsville MD 21104.
	AmeriWaste Processing Facility and Transfer Station	WPT	PRI	2016-WPT-0572	11/13/2021	- / 3.09	7150 Kit Kat Road, Elkridge MD 21075. Accepts Only C&D Waste.
	Workplace Essentials Transfer Station	WTS	PRI	2015-WTS-0594	6/4/2020	- / 0.21	7184 Troy Hill Drive, Suites J & K, Elkridge MD 21075. Accepts Diapers & Other Special Sanitary Wastes.
Montgomery	C & D Recovery Processing Facility	WPF	PRI	2014-WPF-0581	5/26/2019	- / 10.8	24120 Frederick Road, Clarksburg MD 20871.
	Montgomery County Resource Recovery Facility	WTE	CTY	2013-WTE-0538	12/26/2018	- / 35	21204 Martinsburg Road, Dickerson MD 20842.
	Montgomery Co. Site 2 Municipal Landfill	WMF	CTY	2014-WMF-0237	5/11/2019	125 / 650	3 miles southwest of Dickerson, MD 20842. Landfill Not Constructed.
	Shady Grove Processing Facility & Transfer Station	WPT	CTY	2016-WPT-0617	7/5/2022	- / 43	16101 Frederick Road, Derwood MD 20850.
Prince George's	Brown Station Road Municipal Landfill	WMF	CTY	2015-WMF-0589	11/11/2020	134 / 164	3500 Brown Station Road, Upper Marlboro MD 20772.
	Dower House Recycling and Processing Center	WPF	PRI	2015-WPF-0563	10/26/2020	- / 10	5900 Dower House Road, Upper Marlboro MD 20772. Facility Not Constructed.
	Recycle One Processing Facility and Transfer Station	WPT	PRI	2010-WPT-0647	9/15/2019	1.8/2.85	4700-A Lawrence Street. Hyattsville MD 20781
	Ritchie Reclamation Rubble Landfill Phase I	WRF	PRI	2015-WRF-0590	12/3/2020	78 / 258	2001 Ritchie Marlboro Road, Upper Marlboro MD 20772.
	Ritchie Reclamation Rubble Landfill Phase II	WRF	PRI	2015-WRF-0126	6/1/2020	78 / 258	2001 Ritchie Marlboro Road, Upper Marlboro MD 20772.
	Sheriff Road Processing Facility & Transfer Facility	WPT	PRI	2018-WPT-0218	2/19/2023	- / 1.5	5800 Sheriff Road, Fairmont Heights MD 20743. Accepts Only C&D Waste.
	Sun Services Processing Facility	WPF	PRI	2016-WPF-0639	3/30/2021	4.3	11220 Somerset Ave Beltsville, MD 20705
Queen Anne's	Baker Rubble Landfill	WRF	PRI	2013-WRF-0622	4/24/2018	15.9 / 18.5	501 4-H Park Road, Queenstown MD 21658. Serves Mid-Shore Counties.
St. Mary's	Knott Landclearing Debris Landfill	WLC	PRI	2016-WLC-0134	5/11/2021	4.3 / 55	1/4 mile North - Flat Iron Rd 2 & Boothe Road, Great Mills MD 20634.
	St. Andrews Municipal Landfill	WMF	CTY	2015-WMF-0138	11/18/2020	36.8 / 55	44825 St. Andrews Church Road., California MD 20619. Landfill Operating as a Processing & Transfer Station.
	St. Andrews Processing Facility & Transfer Station	WPT	CTY	2013-WPT-0624	1/23/2019	1 / 55	44861 St. Andrews Church Road, California MD 20619 Facility Not Constructed
Somerset	Somerset County Landfill – Fairmount Site	WMF	CTY	2014-WMF-0268	6/24/2019	26.4 / 33	8716 James Ring Road, Westover MD 21871.
	Smith Island Incinerator	WIN	CTY	2016-WIN-0140	4/7/2021	- / 0.50	Smith Island Road, Ewell MD 21824.
Talbot	Midshore Regional Municipal Landfill	WMF	MES	2015-WMF-0144	2/24/2020	67 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties.
	Midshore Transfer Station	WTS	MES	2015-WTS-0549	5/11/2020	0.5 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties
Washington	Agape Pet Services	WTS	PRI	2015-WTS-0672	5/1/2022	- /41.16	19712 Shepherdstown Pike, Boonsboro, MD 21713
	Forty West Municipal Landfill	WMF	CTY	2014-WMF-0266A	10/28/2019	189 / 425	12630 Earth Care Road, Hagerstown MD 21740.
	Washington County Rubble Landfill	WRF	CTY	2014-WRF-0270	10/28/2019	75 / 100	11112 Kemps Mill Road Williamsport MD 21740. Landfill Not Operating.
Wicomico	Bennett Processing Facility	WPF	PRI	2016-WPF-0658	9/10/2022	5 /14.3	513-515 South Camden Ave., Fruitland MD 21826.

	Connelly Mill Processing Facility & Transfer Station	WPT	PRI	2015-WPT-0675	10/13/2021	- /14.9	29790 Connelly Mill Road, Delmar MD 21878.
	Foskey Lane Transfer Station	WTS	PRI	2015-WTS-0673	5/30/2021	- /3.66	29631 Foskey Lane, Delmar MD 21875
	Newland Park Municipal Landfill	WMF	CTY	2015-WMF-0283	7/16/2020	60 / 125	7161 Brick Kiln Road, Salisbury MD 21801.
	Peninsula Regional Medical Center	WPM	PRI	2011-WPM-0505	4/12/2018	- / 23	100 East Carroll Street, Salisbury MD 21801.
Worcester	Central Sanitary Landfill	WMF	CTY	2012-WMF-0663	9/6/2021	230 / 725	7091 Central Site Lane, Newark MD 21841.
	Ocean City Transfer Station	WTS	MUN	2015-WTS-0156	6/7/2020	- / 2.2	306 - 65th Street, Ocean City MD 21842. Accepts Only MSW.

Table B2 – Summary of Permitted Solid Waste Acceptance Facilities

Type Of Facility	Number of Facilities
WMF: Municipal Solid Waste Landfill	24
WRF: Construction & Demolition Landfill	7
WLC: Landclearing Debris Landfill	3
WIF: Industrial Landfill	5
WIN: MSW or Special Medical Waste Incinerator	3
WMI: Medical Waste Incinerator	1
WPF: Processing Facility	8
WPM: Special Medical Waste Processing Facility	1
WTS: Transfer Station	11
WPT: Processing Facility & Transfer Station	19
WTE: Waste to Energy/MSW Incinerator	2
TOTAL	84

Type of Ownership	Number of Facilities
CTY: County Government	32
PRI: Private (Commercial)	43
MUN: Municipal Government	3
FED: Federal Government	3
MES: Maryland Environmental Service	3
TOTAL	84

Table B3 – Permitted Solid Waste Acceptance Facilities NOT in Operation

Jurisdiction	Site Name	Facility Type	Ownership Type	Status
Cecil	Cecil County Landfill (Original)	Municipal Landfill	County	Inactive
Frederick	Essroc Cement Corporation	Industrial Landfill	Private	Not Built
Montgomery	Montgomery County Site 2 Municipal Landfill	MSW Landfill	County	Not Built
Prince George's	Dower House Recycling and Processing Facility	Processing Facility	Private	Not Built
St. Mary's	St. Andrew's Municipal Landfill	MSW Landfill	County	Inactive
	St. Andrew's Waste Processing and Transfer Station	Processing Facility and Transfer Station	County	Not Built
Talbot	Midshore Regional Solid Waste Facility	MSW Landfill	County	Inactive
Washington	Washington County Rubble Landfill	C&D Landfill	County	Inactive

APPENDIX C

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Permitted Landfills' Capacity

Each landfill in Maryland is required to report the cubic yards (CYs) of available disposal capacity and the life expectancy of the facility at the current disposal rate. Using the average compaction factor, based upon historical data, this remaining capacity is converted to tons.

MSW landfills (Table C1) reported a total available capacity of 56,789,727 tons with 1,745,968 tons being disposed in 2017. Thus, at the current disposal rate, there would be 33 years (56,789,727 tons ÷ 1,745,968 tons) of available MSW landfill capacity in Maryland. However, this calculation does not account for population changes, changes in waste generation or disposal rates, or the closing of older MSW disposal facilities. Nor does it include facilities for which permits may have been issued, but which have not yet been built and are not accepting waste.

Table C1 – MSW Landfill Capacity

Municipal Landfill Facility Name	Permitted Capacity (CY)	Landfilled to Date (CY)	Landfilled to Date (Tons)	Remaining Capacity (CY)	Remaining Capacity (Tons)	Year Reach Capacity	Landfilled in 2017 (CY)	Landfilled in 2017 (Tons)	Used in 2017 ^
Alpha Ridge Municipal Landfill	13,521,900	5,964,477	3,280,462	7,557,423	4,156,583	2055	496	362	0.00%
Appeal Municipal Landfill	2,799,290	615,267	369,929	2,184,023	1,309,645	2332	668	562	0.02%
Beulah Sanitary Landfill	2,360,325	1,736,031	1,715,198	624,294	616,803	2018	54,487	53,832	2.31%
Brown Station Road Landfill	16,505,000	13,354,653	9,118,250	3,150,347	2,113,402	2029	425,219	274,588	2.58%
Cecil County Central Landfill	6,527,539	5,122,407	3,075,105	1,405,132	844,895	2026	0	0	0.00%
Cecil County Central Landfill – Horizontal Expansion **	16,800,000	157,401	92780	16,642,599	9,987,220	2065	157,401	92,780	0.94%
Central Sanitary Landfill	4,800,000	2,359,719	1,651,804	2,440,281	1,708,196	2051	72,735	50,914	1.52%
Charles County Municipal Landfill	4,374,700	2,281,875	1,586,602	2,092,825	1,586,798	2037	136,850	99,272	3.13%
Eastern Sanitary Landfill	23,513,000	13,652,341	6,341,619	9,860,659	4,580,583	2040	363,995	202,445	1.55%
Fort Detrick – Area B & Main Post	1,000,900	135,550	106,988	865,350	686,725	2186	6,194	134	0.62%
Forty West Municipal Landfill	24,752,000	4,443,847	1,832,875	20,308,153	7,758,525	2085	254,672	97,620	1.03%
Garrett County Solid Waste Disposal & Recycling Facility	2,568,470	1,273,642	745,875	1,294,828	733,137	2041	45,448	28,052	1.77%
Harford Waste Disposal Center	4,870,330	889,855	368,186	3,980,475	1,763,114	2135	33,636	8,646	0.69%
Midshore Regional Solid Waste Facility	3,924,994	3,684,695	2,032,481	240,299	126,266	2020	0	0	0.00%
Midshore II Regional Solid Waste Facility	7,800,000	1,481,653	812,007	6,318,347	3,867,993	2052	200,969	121,476	2.58%
Millersville Landfill & Resource Recovery Facility	14,156,000	5,806,053	3,483,632	8,349,947	5,009,968	2043	340,840	150,913	2.41%
Montgomery County Site 2**	0	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	4,260,000	3,781,976	2,870,520	478,024	362,820	2022	106,933	81,162	2.51%
Newland Park Municipal Landfill	7,200,000	4,057,903	2,191,268	3,142,097	1,696,732	2032	246,965	133,361	3.43%
Northern Municipal Landfill	3,504,187	752,313	1,094,009	2,751,874	1,375,937	2102	72,444	44,006	2.07%
Quarantine Road Landfill	18,320,779	15,003,044	18,117,577	3,317,735	3,317,735	2026	317,000	268,208	1.73%

Municipal Landfill Facility Name	Permitted Capacity (CY)	Landfilled to Date (CY)	Landfilled to Date (Tons)	Remaining Capacity (CY)	Remaining Capacity (Tons)	Year Reach Capacity	Landfilled in 2017 (CY)	Landfilled in 2017 (Tons)	Used in 2017 ^
Reichs Ford/Site B Municipal Sanitary Landfill	7,326,426	3,848,878	2,165,009	3,477,548	1,956,106	2045	21,309	11,986	0.29%
St. Andrews Municipal Landfill*	1,500,000	0	0	1,500,000	750,000	2034	0	0	0
Somerset County Landfill – Fairmount Site	1,610,000	909,632	313,246	700,368	480,544	2031	39,318	25,649	2.44%
Totals	193,995,840	91,313,212	63,365,422	102,682,628	56,789,727		2,897,579	1,745,968	1.49%

* St. Andrews Municipal Landfill closed in 2001. The current permit (2016-WMF-0138) was issued for a new landfill that was never constructed. St. Mary's County uses permit 2015-WMF-0138 to operate the closed St. Andrews Municipal Landfill as a transfer station. Cecil County's Central Landfill's original permit (2012-WMF-0532) expired in November 2017.

** Montgomery County Site 2 Landfill's construction is on hold until the county needs landfill space in the future.

^ Equal to Landfilled in 2017 (CY) ÷ Permitted Capacity (CY)

Construction and Demolition (C&D) Debris landfills (Table C2) reported a total available capacity of 12,983,063 tons with 820,765 tons disposed in CY17. At the current disposal rate, there would be approximately 16 years (12,983,063 tons ÷ 820,765 tons) of available C&D landfill capacity in Maryland.

Table C2 – C&D Landfill Capacity

Landfill Facility Name	Permitted Capacity (CY)	Landfilled to Date (CY)	Landfilled to Date (Tons)	Remaining Capacity (CY)	Remaining Capacity (Tons)	Year Reach Capacity	Landfilled in 2017 (CY)	Landfilled in 2017 (Tons)	Used in 2017 ^
Baker Rubble Landfill	820,000	728,409	414,659	91,591	20,341	2020	33,117	17,568	4.04%
Days Cove Rubble Landfill – Lateral Expansion	3,192,000	3,095,410	1,926,706	96,590	233,294	2018	217,302	176,783	6.81%
Honeygo Run Reclamation Center	11,723,461	5,541,609	3,679,273	6,181,852	3,487,576	2037	416,875	216,700	3.56%
Ritchie Land Reclamation Partnership Phase I	5,600,000	5,600,000	5,600,000	0	0	2016	0	0	0
Ritchie Land Reclamation Partnership Phase II	7,055,800	2,665,376	2,090,425	4,390,424	2,634,254	2025	568,861	341,317	8.00%
Tolson & Associates	5,762,060	151,916	71,949	5,610,144	5,690,111	2042	148,364	68,397	8.06%
Washington County Rubble Landfill	2,201,664	166,390	83,345	2,035,274	917,487	2061	0	0	0.00%
TOTALS	36,354,985	17,949,110	13,866,357	18,405,875	12,983,063		1,384,519	820,765	3.80%

^ Equal to Landfilled in 2017 (CY) ÷ Permitted Capacity (CY)

Industrial landfills (Table C3) reported a total available capacity of 8,608,724 tons. At a current disposal rate of 84,464 tons, there would be approximately 102 years (8,608,724 tons ÷ 84,464 tons) of available industrial landfill capacity in Maryland.

Table C3 – Industrial Landfill Capacity

Landfill Facility Name	Permitted Capacity (CY)	Landfilled to Date (CY)	Landfilled to Date (Tons)	Remaining Capacity (CY)	Remaining Capacity (Tons)	Year Reach Capacity	Landfilled in 2017 (CY)	Landfilled in 2017 (Tons)	Used in 2017 ^
W.R. Grace and Co. – Davison Chemical Division	495,000	197,721	234,488	297,279	260,512	2030	16,131	20,002	3.26%
Eastalco Aluminum Company	380,000	152,365	184,142	227,635	300,008	2017	0	0	0.00%
Essroc Cement Corporation	273,000	0	0	273,000	273,000	N/A	0	0	0.00%
Hawkins Point Plant	3,228,044	2,288,941	2,662,305	939,103	1,502,565	2077	214	262	0.01%
Fort Armistead Road – Lot 15	6,300,000	597,601	657,361	5,702,399	6,272,639	2053	58,364	64,200	0.93%
TOTALS	10,676,044	3,236,628	3,738,296	7,439,416	8,608,724		74,709	84,464	1.79%

^ Equal to Landfilled in 2017 (CY) ÷ Permitted Capacity (CY)

Landclearing Debris landfills (Table C4) reported a total available capacity of 89,255 tons. Based on CY15 disposal rate of 1,179 tons, there would be approximately 76 years (89,255 tons ÷ 1,179 tons) of landclearing debris landfill capacity in Maryland.

Table C4 – Landclearing Debris Landfill Capacity

Landfill Facility Name	Permitted Capacity (CY)	Landfilled to Date (CY)	Landfilled to Date (Tons)	Remaining Capacity (CY)	Remaining Capacity (Tons)	Year Reach Capacity	Landfilled in 2017 (CY)	Landfilled in 2017 (Tons)	Used in 2017 ^
Howlin Landclearing Debris Landfill	64,120	49,633	62,041	14,487	18,109	2020	0	0	0.00%
Knott Landclearing Debris Landfill	94,500	75,805	6,894	18,695	1,106	2020	0	0	0.00%
Hance Landclearing Debris Landfill	267,053	126,973	63,486	140,080	70,040	2044	0	0	0.00%
TOTALS	425,673	252,411	132,421	173,262	89,255		0	0	0.22%

^ Equal to Landfilled in 2017 (CY) ÷ Permitted Capacity (CY)

APPENDIX D

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Permitted Natural Wood Waste Acceptance Facilities

Table D1 – Permitted Natural Wood Waste Acceptance Facilities*

County	Facility & Location	Permit Type	Permit Numbers	Site Acreage	Expiration Date	Phone Number	Fax Number
Allegany	Braddock Construction, LLC. 14000 New Georges Creek, SW Midland, MD 21542	GP	2017-NWW-GP01	19.71	9/28/2022	(301) 689-5979	(301) 689-8826
Anne Arundel	A-A Recycling, Inc. 8217 Baltimore-Annapolis Blvd., Pasadena, MD 21122	GP	2016-NWW-GP01	9.90	9/11/2021	(410) 437-7718	(410) 437-7718
	Bronson Contracting, Inc. 1000 Kembo Road Baltimore, MD 21126	GP	2014-NWW-GP01	8.00	5/6/2019	(410) 360-8587	(410) 360-1243
	L and W Recycling, Inc. 8316 Lokus Road Odenton, MD 21113	GP	2016-NWW-GP01	12.00	9/11/2021	(410) 670-0860	(410) 670-0863
Baltimore	King Mulch and Pallet 1114 Hengemihle Avenue Essex, MD 21221	GP	2017-NWW-GP01	5.90	4/24/2022	(410) 682-2992	(410) 574-0123
	Edrich Lumber, Inc. 9700 Old Court Road Baltimore, MD 21244	IP	2015-NWW-0003	12.00	2/28/2021	(410) 922-5959	(410) 521-2778
	Hollins Organic Products, Inc. 6247 Falls Road Baltimore, MD 21209	GP	2015-NWW-GP01	2.00	6/14/2020	(410) 828-0210	(410) 823-7645
	Hollins Organic Products, Inc. 10155 Beaver Dam Road Cockeysville, MD 21030	IP	2016-NWW-0004	4.5	12/11/2021	(410) 771-1499	(410) 771-1911
	Northwest Recycling, LLC 212 Cockeys Mill Road Baltimore, MD 21136	GP	2015-NWW-GP01	5.00	11/3/2020	(410) 833-9369	(410) 833-3963
	Wirtz & Daughters, Inc. 6275 Days Cove Road White Marsh, MD 21162	IP	2015-NWW-0552	14.00	5/28/2020	(410) 335-0400	(410) 592-6248
Calvert	A&L Natural Wood Waste Recycling Facility 7185 Sawmill Road Lusby MD 20657	GP	2016-NWW-GP01	11.25	5/1/2021	(410) 586-3404	(410) 586-2843
	231 Materials & Recycling Products, LLC 171 Skipjack Road Prince Frederick, MD 20678	GP	2016-NWW-GP01	4.00	6/12/2021	(410) 535-7666	(410) 968-2391
Caroline	Cahall Construction, LLC	GP	2017-NWW-GP01	24.49	9/19/2022	(410) 479-5384	(301) 479-5387
Carroll	C.J. Miller, LLC 390 Vision Way Westminster, MD 21158	GP	2016-NWW-GP01	40.00	9/1/2021	(410) 239-8006	(410) 239-4204
	Harvest RGI, LLC 7901 Kabik Court Woodbine, MD 21797	GP	2016-NWW-GP01	30.00	5/30/2021	(301) 674-6689	(301) 942-6734
	Hidey's Landscape Supply Yard 3112 Ridge Road, Westminster, MD 21157	GP	2016-NWW-GP01	9.00	9/28/2021	(410) 875-0289	(410) 875-0289
Cecil	Chesapeake Wood Recycling 1726 East Old Philadelphia Road Elkton, MD 21421	GP	2015-NWW-GP01	25.00	6/2/2020	(410) 392-0770	(410) 392-2317
	Mountain Mulch Elkton, LLC 505 Blue Ball Road, Lot 9 Elkton, MD 21921	GP	2014-NWW-GP01	4.80	2/6/2019	(610) 652-2485	(610) 652-2485
Charles	Beuchert Excavating, Inc. 12340 Crain Highway Newburg MD 20664	GP	2014-NWW-GP01	12.50	3/24/2019	(301) 399-5088	(301) 274-2454
	Calvert Wood Recycling 6585 Ripley Road Ripley, MD 20646	GP	2016-NWW-GP01	8.50	4/3/2021	(301) 518-2306	(301) 934-1536
	Chesapeake Environmental Materials, LLC 12110 Forgotten Farm Place St. Charles, MD 20602	GP	2017-NWW-GP01	11.7	11/15/2022	(443) 968-2381	(443) 968-2381
	Mona Recycling 6970 Our Place Port Tobacco, MD 20677	IP	2014-NWW-0002	7.00	11/19/2019	(301) 440-1145	(301) 440-1145
Frederick	Butler Wood Recycling	GP	2014-NWW-GP01	58.00	5/18/2019	(301) 607-4541	(301) 874-8348

	4039 Tuscarora Road Point of Rocks, MD 21777							
	Bussard Brothers Landscape Supply-5307-B Green Valley Rd Monrovia, MD 21770	GP	2014-NWW-GP01	2.00	11/19/2019	(301) 865-3925	(301) 865-8496	
	Comus-Stone Woodsboro Operation	GP	2016-NWW-GP01	12.00	9/28/2021	(301) 340-0550	(301) 340-0550	
	Grant County Mulch Inc. 6720 Manor Road Frederick, MD 21703	GP	2017-NWW-GP01	3.00	11/1/2022	(301) 732-5194	(301) 732-5195	
Harford	Arthur D. Heston 2304 Whiteford Road Whiteford, MD 21169	GP	2017-NWW-GP01	3.67	10/23/2022	(410) 692-2673	(410) 692-2253	
	Brian Baker, Inc. 2001 Conowingo Road Bel Air, MD 21014	GP	2014-NWW-GP01	2.89	9/23/2019	(410) 937-2164	(410) 937-2164	
	Comer Construction, Inc 900 Circelli Court Aberdeen, MD 21001	GP	2013-NWW-GP01	6.00	11/25/2018	(410) 879-6094	(410) 638-0289	
	Crouse Construction Co. 1001 Philadelphia Road Aberdeen, MD 21001	GP	2015-NWW-GP01	25.00	6/8/2020	(410) 879-1822	(410) 893-0045	
	Harford Industrial Minerals, Inc. 40 Fort Hoyle Road, Joppa, MD 21085	GP	2016-NWW-GP01	5.00	12/13/2021	(410) 679-9191	(410) 679-9191	
Howard	Level Land Lisbon Mulch Yard 1100-1281 Madison Street Lisbon, MD 21765	GP	2013-NWW-GP01	5.00	8/8/2018	(410) 489-5206	(410) 489-4316	
	Oak Ridge Farm 2700 Woodbine Road Woodbine, MD 21797	GP	2014-NWW-GP01	4.2	9/18/2019	(410) 287-5758	(410) 287-5758	
	R.L.O Contractors Inc. 7531 Cemetery Lane Elkridge, MD 21075	GP	2015-NWW-GP01	15.00	9/18/2019	(410) 471-4450	(410) 471-4450	
Kent	Sharp Lawn & Tree Inc. 10010 Lakeside Lane Chestertown, MD 21620	GP	2016-NWW-GP01	3	4/7/2021	(410) 778-6302	(410) 778-3509	
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville, MD 20833	GP	2013-NWW-GP01	107.50	12/16/2019	(301) 540-2968	(301) 540-9630	
	Allentuck Landscaping, Inc. 24320 Frederick Road Clarksburg, MD 20841	GP	2014-NWW-GP01	1.20	1/16/2019	(301) 516-1900	(301) 516-1900	
	Country Nursery 3330 Spencerville Road Burtonsville, MD 20866	GP	2013-NWW-GP01	11.5	6/16/2018	(301) 421-9593	(301) 421-9593	
	Grant County Mulch Inc. 24420 Frederick Road Clarksburg, MD 20841	GP	2014-NWW-GP01	6.35	4/10/2019	(304) 749-7451	(304) 749-7451	
Prince George's	Grant County Mulch Inc. 5402 Van Dusen Road Laurel, MD 20707	GP	2016-NWW-GP01	25	8/15/2021	(800) 749-7451	(800) 749-7451	
	Cedarville Holdings, LLC 9120 Cedarville Road Brandywine, MD 20613	GP	2017-NWW-GP01	8	11/8/2022	(760) 500-8245	(760) 500-8245	
Queen Anne's	Baker Rubble Landfill 501 4-H Park Road Queenstown, MD 21658	IP	2016-NWW-0620	3.00	1/8/2022	(410) 827-8831	(410) 827-8831	
	Pardoe's Lawn & Tree Service, Inc. 112 Deep Landing Road Chestertown, MD 21620	GP	2016-NWW-GP01	15.98	4/7/2021	(410) 778-2016	(410) 778-2022	
	Grange Hall Yard 437 Grange Hall Road Centreville, MD 21617	GP	2015-NWW-GP01	9.06	9/7/2020	(410) 974-0397	(410) 974-0397	

St. Mary's	Charlotte Hall Lumber Yard	GP	2015-NWW-GP01	3.51	8/11/2020	(301) 481-7304	(301) 481-7304
Talbot	Dependable Sand and Gravel Company, Inc. 13155 Ocean Gateway Queen Anne, MD 21657	GP	2015-NWW-GP01	343	10/8/2020	(410) 822-6363	(410) 820-7789
Washington	Hess Road Recycling Center 6502 Hess Road Hancock, MD 21750	GP	2017-NWW-GP01	4.00	3/29/2022	(410) 796-7676	(3010) 379-0112
Wicomico	Dunn's Tractor Services, Inc. 9042 Taylor Road Delmar, MD 21875	GP	2014-NWW-GP01	10.00	8/19/2019	(410) 742-7429	(410) 742-7429
General Permits (GP):							43
Individual Permits (IP):							5
TOTAL							48

* The status of the facilities is current as of June 30, 2017 – the period of time covered by the report.

APPENDIX E

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Summer 2017

All-STAR News

All State Agencies Recycle

MD Department of the Environment
Land Management Administration
www.mde.state.md.us

David Mrgich, Chief
Waste Diversion Division

Christy Bujnovszky
Recycling Unit

Source Reduction: Preventing Waste Before It Happens

Source reduction, also known as waste prevention or pollution prevention, is the elimination of waste before it is created. Due to its environmental benefits, source reduction is the highest strategy in the solid waste management hierarchy. Coupled with recycling and reuse, they together represent an environmentally sound materials management strategy.

The practice of source reduction benefits the environment through reduced energy consumption and pollution, and conservation of natural resources (by using less material in manufacturing. It can also have economic benefits by reducing costs associated with transportation, disposal or recycling of waste. Below are a few examples of source reduction that can be practiced at your office:

- Make double-sided copies
- (Executive Order 01.01.1991.20 states "To the greatest extent practicable, within State Agencies, photocopied and printed reproductions of original multi-page documents should be made utilizing both sides of a sheet of paper")



- Circulate one copy of a memo rather than issuing one copy to every employee or circulate electronically
- Request that your office be removed from catalog and junk fax mailing lists
- Post announcements on bulletin boards or e-mail announcements to employees
- Submit documents electronically instead of paper copies.
- Utilize online reporting if possible.
- Use the back of old letterhead and memos for copies of drafts and internal documents.
- Compose, edit, and submit for approval all documents on computer prior to printing
- Edit and store documents on

Eleven State Agencies Reach 30 Percent Recycling Rate in 2016

State government, as a whole, is required to recycle 30 percent of its waste. In 2016, eleven State agencies recycled at least 30 percent of their waste and eight agencies recycled more than 40 percent. State government, as a whole, recycled 30.09 percent of the waste it generated.

The following State agencies reached a recycling rate of at least 30 percent in 2016:

- Comptroller of Maryland;
- Dept. of Assessments & Taxation;
- Dept. Of Environment;
- Dept. of Transportation;
- Maryland General Assembly;
- Maryland Automobile Insurance Fund;
- Maryland Environmental Service;
- Maryland Insurance Administration;
- Maryland Stadium Authority;
- Subsequent Injury Fund; and
- University System of Maryland.

Results, as of August 31, 2016, for all State Agencies are available on

Continued on Page 2

Continued on Page 2

1800 Washington Boulevard | Baltimore, MD 21230-1719 | www.mde.maryland.gov/recycling
410-537-3314 | 800-633-6101 x3314 | TTY Users: 800-735-2258
Larry Hogan, Governor | Boyd K. Rutherford, Lt. Governor | Ben Grumbles, Secretary

Continued from page 1

Google drive instead of using paper files

- Update distribution lists
- Replace towel dispensers with hot air hand dryers
- Donate unused furniture and equipment
- Use rechargeable batteries

The Maryland Department of the Environment (the "Department") has an Environmental Management System Team (EMS). The team meets quarterly and has been empowered by the Office of the Secretary to make significant source reduction changes at the Department. For example, the EMS Team has been very active in promoting paper reduction projects. In March 2015, it sent a Department-wide survey asking about current and potential paper reduction practices. The survey results provided over 80 practical ideas. The EMS team has implemented 12 of these to date and undertakes a number of new initiatives each year while also monitoring efforts among individual departments. Some of these practices include the following:

- The Department encourages employees to reduce printing and faxing by viewing documents online and requesting information (bid, proposals, data, etc.) in electronic format. The Department also encourages employees to use Fortis, a document management system that has been in use at the Department since 1998. Fortis has a proven track record of success in streamlining

administrative processes and reducing paper use and more programs at the Department are adopting this system.

- The mail room at the Department's headquarters collects more than 520 pounds of unwanted mail each year, including mail to former employees. One of the Department's summer interns worked through several bins of this mail to remove the Department's address from mailing lists. Department employees have also been encouraged to remove their names from mailings that they are no longer interested in receiving by calling directly or through www.dmchoice.org or the online app PaperKarma.
- Each of the Department's fax machines receives up to 150 pages of junk faxes per year. With about 35 fax machines at Montgomery Park alone, that's nearly 10 reams of paper. Our summer intern made phone calls to remove the Department fax extensions from a number of unwanted fax lists and the Department's employees were encouraged to do the same. The Department is also actively exploring how to phase out fax machines.
- The Attorney General's Office at the Department uses the electronic filing option provided by county courts and provides electronic records to opposing counsel to reduce paper use.
- The Department successfully initiated a rule change to Maryland Rule 7-202 to allow state agencies to give electronic notice to interested parties of

the filing for a petition for judicial review, if the person has consented to electronic notice. The prior rule required notice by first class mail. The rule was signed on December 13, 2016 and will have a significant impact on paper usage.

- In 2014, the Department instituted a new All StAR online reporting system to capture the annual recycling data, replacing the paper version of the annual report.

Other source reduction activities employed by the Department include:

- Reusable plates, cups and utensils are used for all agency-wide meetings and social events.
- Unwanted office supplies are redistributed through the Department's Swap Area and unwanted office equipment is sent to a government surplus site for reuse.
- The Department also holds regular freecycle events that allow employees to give away and exchange items from home.

Continued from page 1

the Maryland State Agencies 2016 Recycling Rates Table (see attached table).

Further details are available on the Department's State Agency recycling webpage accessible at

mde.maryland.gov/recycling

Continued from page 1

Google drive instead of using paper files

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Continued from page 1

the Maryland State Agencies 2016 Recycling Rates Table (see attached table).

Further details are available on the Department's State Agency recycling webpage accessible at

mde.maryland.gov/recycling

Agency Name	No. of Sites	No. of Sites Reporting	Total MRA Recycling 2016 (tons)	2016 MRA Recycling Rate (%)
Baltimore City Community College	1	1	7.50	1.09
Comptroller of the Treasury	1	1	107.48	78.87
Department of Agriculture	2	2	31.37	24.06
Department of Assessments and Taxation	15	13	29.93	43.76
Department of Budget and Management	1	0	0	NR
Department of Education	28	30	61.11	19.76
Department of General Services	23	23	163.34	15.48
Department of Health and Mental Hygiene	18	8	569.97	12.23
Department of Human Resources	33	26	579.24	19.01
Department of Juvenile Services	15	15	493.02	18.02
Department of Labor, Licensing & Regulation	14	9	158.58	23.69
Department of Natural Resources	5	2	6.97	10.23
Department of the Environment	5	5	38.98	37.17
Department of Transportation	83	83	10,033.20	42.20
Department of Veterans Affairs	12	7	195.58	23.53
Dept. of Housing and Community Development	3	0	0	NR
Dept. of Public Safety and Correctional Services	35	9	1985.44	21.34
Gov's Office Crime Control Prevention	1	0	0	NR
Judiciary of Maryland	2	2	41.20	27.39
Maryland Automobile Insurance Fund	1	1	139.02	40.06
Maryland Department of Disabilities	1	1	0.10	1.26
Maryland Department of Planning	1	1	8.20	12.35

Agency Name	No. of Sites	No. of Sites Reporting	Total MRA Recycling 2016 (tons)	2016 MRA Recycling Rate (%)
Maryland Environmental Service	4	4	16.88	58.73
Maryland Food Center Authority	1	1	262.81	3.49
Maryland General Assembly	1	1	115.10	37.53
Maryland Insurance Administration	1	1	23.68	61.28
Maryland Military Department	33	33	59.26	9.25
Maryland Public Broadcasting Commission	1	1	70.00	18.60
Maryland School for the Deaf	2	2	117.38	29.25
Maryland Stadium Authority	2	2	10,01.63	36.20
Maryland State Archives	1	1	1.20	12.00
Maryland State Police	28	28	222.13	18.23
Morgan State University	1	1	181.95	10.90
St. Mary's College of Maryland	1	0	0	NR
Subsequent Injury Fund	1	1	4.67	81.08
University of Maryland System	17	17	9012.18	40.27
TOTAL	394	332	24,749.1	30.09

APPENDIX F

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County Recycling Coordinators

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