



Maryland
Department of
the Environment

MARYLAND SOLID WASTE MANAGEMENT and DIVERSION REPORT – 2021 (CY20 data) –

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Land and Materials Administration

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 (Department or MDE) submits to the Governor and General Assembly, MDE's Annual Report, describing how solid waste was managed in Maryland during calendar year (CY) 2020. Beginning in 2009, the Maryland Waste Diversion Activities Report and Solid Waste Managed in Maryland Report were 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 prepare 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 prepare an annual report detailing recycling in Maryland.

Part I of the report addresses solid waste managed by permitted solid waste acceptance facilities and 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 CY. All permitted solid waste acceptance facilities must provide MDE with the 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 permitted solid waste acceptance facilities.

Part II of the report addresses waste diversion (i.e., recycling and source reduction) in Maryland, and provides information on programs covered by Maryland's waste diversion legislation, including local jurisdiction recycling and source reduction (SR) data for CY20, and an overview of the state's technical assistance activities during Fiscal Year (FY) 2021. Data contained in Part II comes from annual reports submitted to MDE by Maryland's 24 jurisdictions, annual reports filed by Maryland permitted solid waste acceptance facilities, state government agencies participating in the All State Agencies Recycle (All StAR) Program, and newspaper and telephone directory publishers. Jurisdictions also provide MDE information on their collection programs, institutional recycling programs, public education efforts, source reduction activities, and disposal facilities.

Executive Summary

In CY20, Maryland counties and Baltimore City generated 11,673,472 tons of solid waste (see Table 1 – Maryland Waste Generation Totals, including footnotes, for details). The total represents solid waste managed by all sources (permitted facilities, non-permitted facilities, recycling data, and materials sent directly out-of-state). This total is a decrease of 13.6% from the 13,511,215 tons generated in CY19. The Maryland Recycling Act (MRA) outlines the types of waste that count toward 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

comprises 2,522,304 tons of MRA recyclables, and 4,326,468 tons of waste disposed (without recycled MSW ash and backend scrap metal), for a total of 6,848,771 tons of MRA waste generated in Maryland.

A total of 9,472,618 tons of waste was accepted at Maryland permitted solid waste acceptance facilities. Of that total, 8,980,974 tons was managed by Maryland permitted solid waste acceptance facilities during CY20 by recycling, disposal (incineration and landfilling), or transportation out-of-state (see Table 3).

Table 1 – Maryland Waste Generation Totals

County	Total Waste (tons)
Allegany	334,706
Anne Arundel	1,144,695
Baltimore City	1,344,788
Baltimore County	1,555,516
Calvert	175,575
Carroll	491,209
Cecil	309,206
Charles	313,272
Dorchester	66,058
Frederick	499,892
Garrett	63,129
Harford	415,909
Howard	623,149
Midshore *	369,293
Montgomery	1,496,250
Prince George's	1,555,246
Somerset	40,475
St. Mary's	175,764
Washington	204,062
Wicomico	349,573
Worcester	144,180
State Highways	1,525
MARYLAND TOTAL ^	11,673,472

* Midshore Counties include Caroline, Kent, Queen Anne's, and Talbot.

^ Due to rounding the Maryland Total differs from the actual value of 11,673,471.61.

Maryland achieved a 42.25% MRA waste diversion rate. This consisted of a 38.22% MRA recycling rate (2,522,304 tons of MRA recycling, plus 95,040 tons resource recovery facility credit) plus a 4.03% (287,869 tons reduced) source reduction credit.

An additional 2,862,775 tons of materials (e.g., scrap metal, asphalt, soils, etc.) that do not count toward the MRA recycling rate were also recycled for a grand total of 5,480,119 tons

recycled in Maryland, including the resource recovery facility credit. (See Tables 17 and 18, including footnotes, for details.)

Other highlights for CY20:

- 2,885,757 tons (32%) of the waste managed by Maryland permitted solid waste acceptance facilities was landfilled in Maryland;
- 1,578,921 tons (18%) were recycled/reused in Maryland;
- 1,239,162 tons (14%) were incinerated in Maryland; and
- 2,582,227 tons (29%) were exported to out-of-state facilities. (See Table 15, including footnotes, for details.)
- 2,582,227 tons of waste were exported from Maryland, while only 302,747 tons of waste were imported into Maryland. (See Tables 14 and 15, including footnotes, for details.)
- Maryland MSW landfills reported a total available capacity of 52,061,690 tons in CY20. (See Appendix C, including footnotes, for details.)

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, Annotated Code of Maryland, 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 manage. The annual report must identify:

- The amount of solid waste managed in each of the following categories:
 - MSW;
 - C&D;
 - LCD;
 - Industrial Waste;
 - Incinerator Ash;
 - 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 the state 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 CY20. 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 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 CY20, 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 represents only 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 Permitted Solid Waste Acceptance and Recycling Facilities in CY20

In CY20, 9,472,618 tons of solid waste was accepted by Maryland permitted solid waste acceptance facilities, NWW recycling facilities, and composting facilities. The 9,472,618 tons includes waste stored on site and waste sent from one facility to another. Of the 9,472,618 tons accepted, 8,980,974 tons were managed by storing, recycling and disposal in Maryland, or transportation 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 and Recycling Facilities

Waste Detail		Tons
A	Total Waste Generated in Maryland (see Table 1, including “^” footer)	11,673,472
B	Total Maryland Waste Recycled (see Table 17, including “*” footer)	5,385,079
C	Total Maryland Waste Disposed (A – B)	6,288,393
D	Total Maryland waste recycled that was not managed through a Maryland permitted Solid Waste Acceptance Facility (5,385,079 (Table 17) – 1,798,649 (Table 3))	3,586,430
E	Natural Wood Waste Adjustment (see Table 12) ^	207,578
F *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment ^^	164,076
G	Total waste imported into Maryland (see Table 14)	302,747
H **	Disposed Ash, Back-End Scrap Metal, and By-Pass ^^	219,531
Total Waste Managed by Maryland permitted solid waste acceptance facilities (A-D+E+F+G+H) (see Table 3)		8,980,974

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.

^ 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. 150,720.00 tons of ash recycled + 13,356.11 tons of back-end scrap metal and bypass recycled = 164,076.11 tons. 219,530.87 tons of disposed ash, back-end scrap metal, & by-pass.

The amount of out-of- state waste that was managed in Maryland in CY20 decreased to 302,747 tons, compared to 309,803 tons in 2019. The quantity of solid waste accepted, processed, and disposed at the permitted refuse disposal systems in Maryland is similar to previous years. 2,885,757 tons of waste was landfilled, and 1,239,162 tons was incinerated in Maryland. 1,578,921 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 continued in CY20. There was a decrease, to 2,582,227 tons, in the amount of waste exported compared to 2019 (2,647,234 tons).

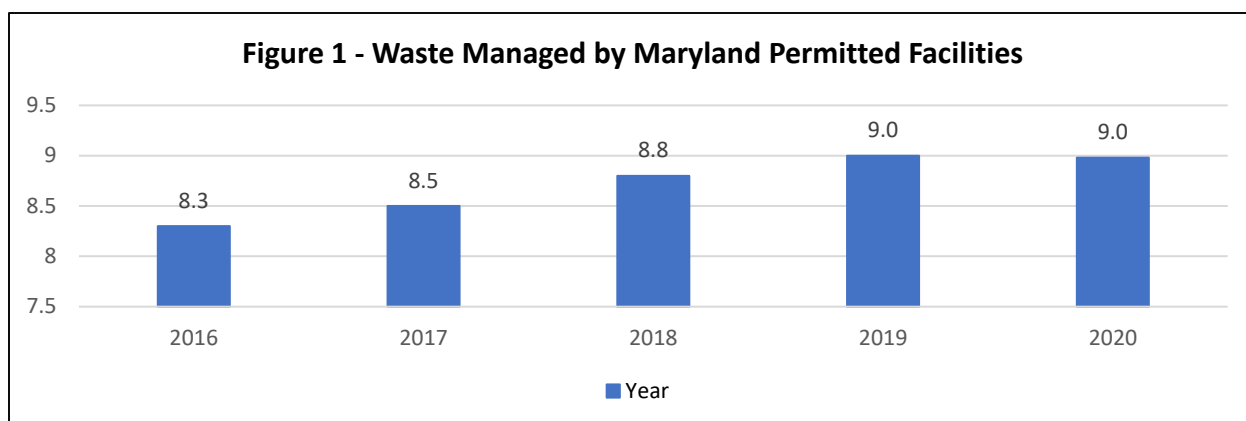


Table 3 details the total amount of solid waste that Maryland permitted solid waste acceptance facilities stored on site or managed via export, disposal (i.e., landfilling and incineration), and recycling/reuse. Permitted solid waste acceptance facilities do not report the types of MSW collected, only total MSW. According to the Maryland's 2016 Maryland Statewide Waste Characterization Study, MSW disposed in Maryland is comprised of approximately 25.6% paper and paperboard, 17.9% food scraps, 6.1% yard trimmings, 14% plastics, 3.9% metals, 2.3% glass, 15.3% C&D, 0.4% household hazardous waste (HHW), 0.5% electronics, 5.7% textiles, and 8.2% other (e.g., diapers, bulky items, tires).

Table 3 – Waste Managed in CY20 by Maryland Permitted Solid Waste Acceptance and Recycling Facilities

Solid Waste Category	Tons Accepted ¹	Tons Recycled/ Reused ²	Tons Composted	Tons Disposed	Tons Stored	Tons Managed ³
Municipal Solid Waste	5,471,638	138,443	0	4,300,374	14,591	4,453,408
Construction & Demolition Debris	2,677,835	555,415	0	1,826,261	673,088	3,054,764
Industrial Waste	27,163	2232	0	25,084	0	27,316
Land Clearing Debris	27,163	15,526	1,394	10,524	1,113	28,557
Other Wastes ⁴	96,967	0	0	94,872	0	94,872
Yard Trimmings	420,929	61,593	260,130	37	10	321,770
Food Scraps/Manure, etc.	45,421	0	45,419	0	0	45,419
NWW/Wood Materials	496,179	540,735	27,042	10,970	6,105	584,852
Total Waste Received	9,263,295	1,313,944	333,985	6,268,122	694,907	8,610,958
Incinerator Ash	209,323	150,720	0	219,296	0	370,016
TOTAL REPORTED	9,472,618	1,464,664	333,985	6,487,418	694,907	8,980,974

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/composted/mulched waste that was captured by Maryland permitted solid waste acceptance and permitted NWW/Composting Facilities.

³ "Tons Managed" is equal to "Tons Recycled/Reused" + "Tons Composted" + "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 includes an incinerator, transfer station, landfill system, landfill, solid waste processing facility, and any other solid waste acceptance

facility. Appendix B gives a complete list of 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 is also known as a MSW landfill, is designed, constructed, and operated so that all types of waste generated by a community, except waste specifically prohibited by solid waste regulations, can be accepted. During CY20, 23 Refuse Disposal Permits for municipal landfills were in effect. Of the 23 permits, 22 facilities have been developed. Of the 22 developed facilities, 21 facilities accepted MSW, managed/disposed of MSW, and/or transferred recyclables to the marketplace.

The construction of Montgomery County Site 2 Municipal Landfill as a back-up facility to handle the county's waste capacity in the future is on hold. The Midshore Regional Solid Waste Municipal Landfill in Talbot County ceased its landfill operations in 2011. Under a multi-jurisdictional agreement, waste from the four Midshore counties (Caroline, Kent, Queen Anne's, and Talbot) is currently disposed of at the Midshore II Landfill in Caroline County. Details of MSW landfill waste management practices are presented in Table 4 (in tons).

Table 4 – Permitted MSW Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Allegany	Mountainview Municipal	Private	75,175	75,175	0
Anne Arundel	Millersville Resource Recovery Facility	County	157,045	120,919	9,219
Baltimore City	Quarantine Road	City	323,706	255,441	269
Baltimore	Eastern Sanitary	County	494,219	452,204	1,746
Calvert	Appeal Sanitary	County	9,108	194	5,841
Caroline	Midshore II	County	159,244	159,089	155
Carroll	Northern Municipal	County	41,402	28,412	12,990
Cecil	Cecil County Central-Horizontal Expansion	County	195,033	106,607	4,591
Charles	Charles County Municipal	County	124,945	112,110	2,050
Dorchester	Beulah Municipal	County	63,279	57,415	62
Frederick	Fort Detrick Area B	Federal	22	17	0
	Reichs Ford/Site B	County	110,440	8,087	1,156
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	31,419	30,975	165
Harford	Harford Waste Disposal Center (Expansion)	County	18,089	8,283	9,807
Howard	Alpha Ridge Municipal	County	29,921	155	4,776
Montgomery	Montgomery County Site 2	County	0	0	0

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Prince George's	Brown Station Road	County	341,488	340,088	1,400
St. Mary's	St. Andrew's Municipal	County	14,861	0	14,861
Somerset	Somerset County	County	28,235	27,835	400
Talbot	Midshore Regional Solid Waste Facility	County	0	0	0
Washington	Forty West Municipal	County	131,251	129,977	680
Wicomico	Newland Park Municipal	County	153,569	153,569	0
Worcester	Central Sanitary	County	66,801	57,978	1,669
TOTAL (tons)			2,569,252	2,124,530	71,837

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until 2021.

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 or cardboard packaging or 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 (in tons).

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	43,997	28,277	453
Baltimore County	Days Cove Rubble Landfill Lateral Expansion	Private	164,318	163,811	507
	Honeygo Run Reclamation Center	Private	187,502	187,476	26
Prince George's	Ritchie Land Reclamation	Private	391,382	324,222	15,049
Queen Anne's	Baker Rubble	Private	23,723	23,075	86
TOTAL (tons)			810,922	726,861	16,121

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21.

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 wastes may also be disposed of in permitted MSW landfills. Details of industrial waste landfill waste management practices are presented in Table 6 (in tons).

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	25,080	21,862	0
	Hawkins Pt. Plant	Private	0	0	0
	W. R. Grace and Co. – Davison Chemical Division	Private	12,504	12,504	0
Frederick	Essroc Cement Corporation	Private	0	0	0
TOTAL (tons)			37,584	34,366	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21.

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 (in tons).

Table 7 – Permitted Land Clearing Debris Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Calvert	Hance Land Clearing Debris	Private	0	0	0
	Howlin Land Clearing Debris	Private	0	0	0

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
St. Mary's	Knott Land Clearing Debris	Private	0	0	0
TOTAL (tons)			0	0	0

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 (in tons).

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	59,858	0	59,858
	Triumvirate	Private	12		12
Baltimore County	Eastern	County	212,375	147	212,396
	Western Acceptance	County	181,205	0	181,205
Calvert	Appeal	Private	120,833	0	120,833
Cecil	Stemmers Run	County	702	0	702
	Woodlawn	County	1,415	0	1,415
Howard	Citron Hygiene	Private	34	0	34
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	47,206	0	47,206
Washington	Agape Pet Services	Private	15	0	15
Wicomico	Foskey Lane	Private	374	0	374
	Curtis Bay	Private	296	0	296
Worcester	Ocean City	Municipal	31,266	0	31,266
TOTAL (tons)			655,591	147	655,612

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21.

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 (in tons).

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 Processing Facility	Private	31,586	0	31,586
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0
Calvert	Southern Maryland Processing	Private	16,279	0	16,279
Montgomery	C&D Recovery Processing	Private	0	0	0
Prince George's	Dower House Recycling and Processing	Private	0	0	0
	Sun Services Processing & Recycling Center	Private	142,879	0	142,879
Wicomico	Peninsula Regional Medical Center**	Private	405	0	405
	Bennett Processing	Private	13,357	0	13,067
TOTAL (tons)			204,506	0	204,216

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21.

** 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 and transfer station waste management practices are presented in Table 10 (in tons).

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	43,019	0	43,019
Anne Arundel	Annapolis Junction Recycling and Transfer Station	Private	619,046	0	619,046

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
	Biomedical Waste Services Inc.	Private	1,413	0	1,413
	Curtis Creek Processing Facility and Transfer Station	Private	120,416	0	120,416
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	147,723	0	147,723
	Stericycle, Inc.	Private	20,586	0	20,586
	Baltimore Recycling Center, LLC	Private	162,037	0	162,037
	Daniels Sharpsmart	Private	2,073	0	2,073
Baltimore County	Baltimore County Central Acceptance Facility	County	296,651	2,588	295,051
Carroll	Northern Municipal Landfill	County	101,198	0	101,198
	Roll-Off Express	Private	133,200	0	133,200
Frederick	Reichs Ford Landfill	County	237,465	0	237,465
Harford	Auston Processing and Transfer Facility	Private	3,270	0	3,332
Howard	Alpha Ridge Municipal Processing & Transfer Facility	County	56,805	0	56,805
	Ameriwave Processing and Transfer Station	Private	72,512	0	72,512
Montgomery	Montgomery County Solid Waste Processing and Transfer Station	County	730,975	0	730,975
Prince George's	Recycle One Processing & Transfer Station	Private	264,720	0	264,720
	Sheriff Road Processing Transfer Facility	Private	151,033	0	151,033
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0
Wicomico	CES-Connelly Road Processing & Transfer Station	Private	4,550	0	4,703
TOTAL (tons)			3,168,692	2,588	3,167,307

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21.

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 electrically powered generators to produce

energy. Details of MSW incinerator/waste-to-energy facility waste management practices are presented in Table 11 (in tons).

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	661,516	661,642	198,180
	Curtis Bay Energy	Private	26,063	26,063	9,973
Charles	Naval Support Facility Indian Head Incinerator	Federal	40	0	40
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	548,758	551,390	164,323
Somerset	Smith Island Incinerator	County	116	67	73
TOTAL (tons)			1,236,493	1,239,162	372,589

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21

Natural Wood Waste 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 have subsequently been processed. Owners or operators of facilities that recycle 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 (in tons). Details on NWW permits are provided in Appendix D.

Table 12 – Permitted Natural Wood Waste Recycling Facilities

Jurisdiction	Facility Name	Permittee	NWW Accepted	NWW Handled	
				NWW Recycled*	Product Marketed*
Allegany	Braddack Construction, LLC.	Braddack Construction, LLC.	10	10	0
Anne Arundel	A-A Recycle & Sand, Inc.	A-A Recycle & Sand, Inc.	29,620	23,100	15,393
	L and W Recycling	L & W Recycling, Inc.	8,085	7,343	5,215
Baltimore County	Edrich Lumber, Inc.	Edrich Lumber, Inc.	24,078	24,078	31,105
	Hollins Organic Products, Inc.	Hollins Organic Products, Inc.	17,996	17,996	13,961

Jurisdiction	Facility Name	Permittee	NWW Accepted	NWW Handled	
				NWW Recycled*	Product Marketed*
	Hollins Organic Products, Inc. 2	Hollins Organic Products, Inc	0	0	0
	King Mulch and Pallet	Albert J. Bierman	4,324	4,324	3,991
	Northwest Recycling, LLC.	Northwest Recycling LLC.	13,742	12,493	12,211
	Wirtz & Daughters, Inc.	Wirtz And Daughters, Inc.	16,227	16,227	37,457
Calvert	A & L Natural Wood Waste Facility	A.H Hatcher Inc.	22,129	7,640	10,014
	231 Materials & Recycling Products, LLC.	231 Materials & Recycling Products, LLC.	0	0	0
Caroline	Cahall Construction, LLC	Cahall Construction, LLC	876	0	0
	Danny's Grinding Services, LLC	Danny's Grinding Services, LLC	0	0	0
Carroll	C. J. Miller, LLC.	C. J. Miller, LLC.	966	896	2,184
	WeCare Denali /Harvest RGI	WeCare Denali, LLC/Harvest RGI, LLC	14,792	14,792	14,792
	Hidey's Landscape Supply Yard	Hidey's Lawn Services LLC.	4,795	5,674	2,656
Cecil	Chesapeake Wood Recycling	Chesapeake Investment, Inc.	1,900	1,550	980
Charles	Beuchert Excavating, Inc.	Beuchert Excavating, Inc.	1,137	1,087	438
	Calvert Wood Recycling	Calvert Wood Recycling LLC	13,720	13,720	63,748
	Chesapeake Environmental Materials	Chesapeake Environmental Materials	0	0	0
	Mona Recycling	Michael Mona Jr.	1,076	1,076	569
Frederick	Butler Wood Recycling	William Lee Butler	1,389	1,150	896
	Grant County Mulch	Grant County Mulch, Inc.	43,266	82,088	60,341
	Bussard Brothers Landscape	R. W. Bussard & Sons, Inc.	5,233	4,710	0
Harford	Comer Construction, Inc	Comer Construction, Inc	0	0	0

Jurisdiction	Facility Name	Permittee	NWW Accepted	NWW Handled	
				NWW Recycled*	Product Marketed*
	Crouse Construction Company, Inc.	Crouse Construction Company, Inc.	0	0	0
	Harford Industrial Minerals, Inc.	Harford Industrial Minerals, Inc.	0	0	0
	Heston's Mulch	Arthur D. Heston	652	543	582
Howard	Level Land Lisbon Mulch Yard	Level Land, Inc.	6,848	7,427	9,644
	Oak Ridge Farm	Oak Ridge Farm, LLC	6,085	10,083	10,665
	RLO Contractors, Inc.	RLO Contractors, Inc.	30,908	66,370	66,370
Kent	Sharp Lawn & Tree, Inc.	Sharp Lawn & Tree, Inc.	433	375	256
Montgomery	Acme Biomass Reduction, Inc.	Acme Biomass Reduction, Inc.	3,642	3,096	1,170
	Country Nursery	Country Nursery	0	0	0
	Grant County Mulch Ground Covers	Grant County Mulch, Inc.	23,096	22,935	22,721
	Spring Garden Farm	Spring Garden Farm	9,294	0	17,863
Prince George's	Grant County Mulch Facility	Grant County Mulch, Inc.	96,697	117,543	124,343
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	3,915	3,915	4,856
	Grange Hall Yard	Cole Ventures, Inc.	2,655	0	1,492
	Pardoe's Lawn and Tree Service, Inc.	Pardoe's Lawn and Tree Service, Inc.	192	278	450
St. Mary's	Charlotte Hall Lumber Yard	Bay Works Wood Processing, LLC	9,807	9,709	10,338
Talbot	Dependable Sand and Gravel Company, Inc.	Dependable Sand and Gravel Company, Inc.	3,945	4,220	3,077
Washington	Hess Road Recycling Center	Universal Contractor Inc.	25	25	0
Wicomico	Dunn's Tractor Service, Inc.	Dunn's Tractor Service Inc.	1,453	1,453	1,420
	Grant County Mulch Facility	Grant County Mulch Inc.	23,706	42,886	64,614
TOTAL (tons)			448,714	530,812	615,812

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY20, but not managed until CY21.

Composting Facilities

Composting facilities are not considered a refuse disposal system, however, they are permitted by MDE and thus included in this section. Their totals are included in the waste managed in Maryland totals. 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 webpage at mde.maryland.gov/composting. Composting facility waste management practices are presented in Table 13 (in tons).

Table 13 – Permitted Composting Facilities

Jurisdiction	Facility Name	Permittee	Facility Tier*	Feedstocks	
				Accepted	Composted
Anne Arundel	Millersville Landfill & Resource Recovery Composting Facility	WeCare Denali, LLC	Tier 1	26,460	16,416
	Tolson & Associates, LLC.	Tolson & Associates, LLC.	Tier 1	5,613	6,735
	Veteran Compost Facility	Garrity Renewables, LLC	Tier 2	0	0
Baltimore County	Eastern Sanitary Landfill	Baltimore County DPW	Tier 1	1,229	615
Caroline	Twin Maple Compost Facility	Mid-Atlantic Organic Resource Company, LLC	Tier 2	13,176	11,650
Carroll	WeCare Denali/Harvest RGI	WeCare Denali, LLC/Harvest RGI	Tier 1	29,193	14,596
Cecil	Cecil County Central Landfill	Cecil County DPW	Tier 1	4,847	2,424
	West Coast Mushrooms Facility	West Coast Mushrooms Inc.	Tier 2	14,355	20,250
Charles	Calvert Wood Recycling Facility	Calvert Wood Recycling, LLC	Tier 1	3,649	8,155
Frederick	Key City Compost & Utica Bridge Farm	Resolution Solutions, LLC	Tier 2	0	0
	Reichs Ford Site B Landfill	Frederick County DPW	Tier 1	17,389	8,695
Harford	Harford Mulch and Compost Facility	Maryland Environmental Service	Tier 1	32,828	8,113
	Veteran Compost Facility	Garrity Renewables, LLC	Tier 2	3,858	1,200
Howard	Composting Facility at Alpha Ridge Landfill	Howard County DPW	Tier 2	9,064	6,327
	Level Land Lisbon Mulch Yard	Level Land, Inc.	Tier 1	3,410	3,410

Jurisdiction	Facility Name	Permittee	Facility Tier*	Feedstocks	
				Accepted	Composted
Montgomery	Montgomery County Yard Trim Composting Facility	Maryland Environmental Service	Tier 1	67,688	45,126
	ACME Biomass Reduction Facility	ACME Biomass Reduction, Inc.	Tier 1	39,452	33,534
	Aspen Nursery	Aspen Landscape Contractors, Inc.	Tier 1	1,561	145
Prince George's County	City of College Park Composting Facility	City of College Park DPW	Tier 1	3,836	1,179
	Prince George's County Organics Composting Facility	Maryland Environmental Service	Tier 2	61,141	20,615
Washington	Forty West Landfill	Washington County DPW	Tier 1	2,115	1,058
TOTAL (tons)				340,864	210,243

* 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 and composting facilities in Maryland. Figure 2 illustrates the amount of imported versus Maryland-generated solid waste managed at permitted solid waste acceptance and composting facilities. In CY20, Maryland's permitted solid waste facilities accepted waste from Canada, Connecticut, Delaware, Florida, Georgia, Kentucky, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, Washington D.C., West Virginia, and Wisconsin. Highlights include:

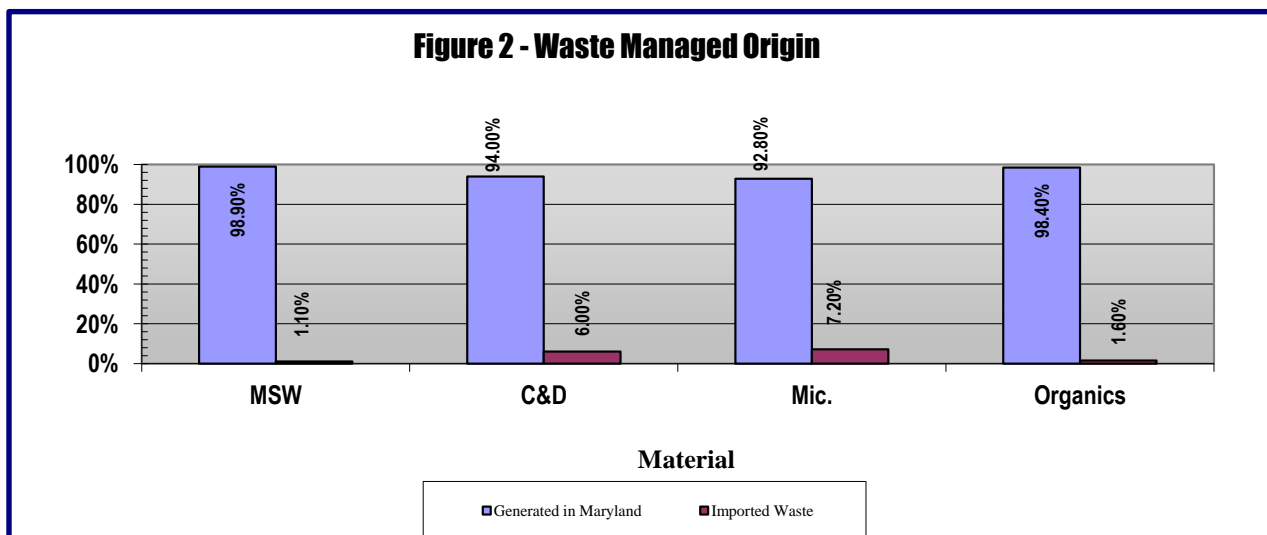
- There was a slight decrease in the amount of solid waste and organics imported (302,747 tons) into Maryland in CY20 compared to CY19 (309,803 tons).
- The solid waste and organics imported into Maryland comprises 3.4% of approximately 9 million tons of solid waste managed at permitted Maryland solid waste acceptance, NWW recycling, and composting facilities.
- Ritchie Land Reclamation Limited Partnership Landfill in Prince George's County and Mountainview Municipal Landfill in Allegany County received the bulk of C&D (121,208 tons) and MSW (26,715 tons) waste imported to Maryland, respectively.

C&D that was imported into Maryland was disposed of 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	52,155	DE, NC, NJ, NY, OH, PA, SC, TN, VA, WASHINGTON DC, WV	4,453,408
C&D	189,102	DE, PA, VA, WASHINGTON DC, WV	3,054,764
Miscellaneous *	36,077	CANADA, CT, DE, FL, GA, KY, MA, MI, MN, MT, NH, NJ, NC, NY, PA, RI, SC, TX, VA, VT, WASHINGTON DC, WA, WV, WI	520,761
Organics	25,413	DE, PA, SC, VA, WASHINGTON DC	952,041
TOTAL (tons)	302,747		8,980,974

* 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, some of the waste generated in 18 counties and Baltimore City was transported to out-of-state facilities for recycling or disposal. There was a decrease of 2.5% of the amount of solid waste exported in CY20 (2,582,227 tons) compared to the amount of waste exported in 2019 (2,647,234 tons). 41 of the 70 permitted and developed solid waste acceptance facilities that accepted waste in CY20 exported waste to 14 states and Washington, D.C. A small portion of waste was also sent to Canada and Germany.

Virginia was the most prevalent export destination for Maryland waste and accepted approximately 71% (1,824,373 tons) of the total exported waste. Figure 3 illustrates, by percentage, where solid waste captured by Maryland's permitted solid waste acceptance facilities was managed. Table 15 gives a destination breakdown of solid waste exported by Maryland permitted solid waste acceptance facilities.

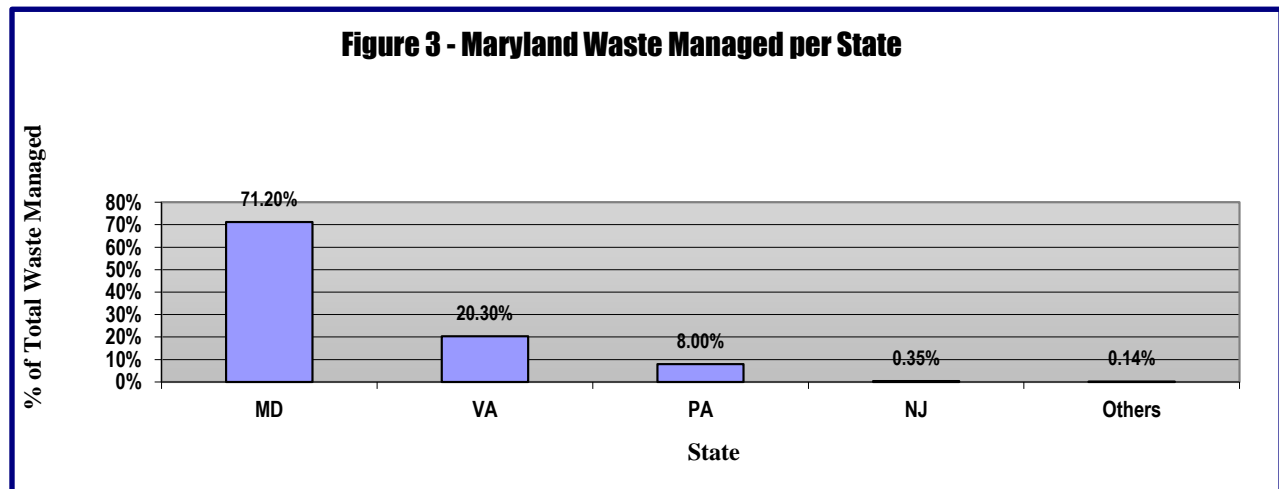


Table 15 – Maryland Exported Material Tonnage by State Destination

Solid Waste Category	Virginia	Pennsylvania	New Jersey	Other	Total (Tons)
MSW	1,194,218	531,496	31,007	7,664	1,764,385
C&D	469,375	162,080	0	2,514	633,969
Miscellaneous *	160,780	20,960	0	2,133	183,873
TOTAL (Tons)	1,824,373	714,536	31,007	12,311	2,582,227

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

Solid Waste Management Practices

In CY20, the solid waste accepted at Maryland permitted solid waste acceptance and recycling facilities was managed by transporting the waste out of state or landfilling, incinerating, or recycling/reusing the waste in Maryland. Table 16 gives a breakdown of the management practices by the Maryland permitted solid waste acceptance facilities and recycling facilities.

Table 16 – Maryland Solid Waste Management Practices

Solid Waste Management Method	Tons	Percentage of Total Solid Waste Managed
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Landfilled in Maryland	2,885,757	32.2%
Exported and Disposed	2,362,499	26.3%
Exported and Recycled	219,728	2.4%
Recycled/Reused in Maryland	1,578,921	17.6%
Incinerated in Maryland	1,239,162	13.8%
Stored in Maryland Facilities	694,907	7.7%
TOTAL	8,980,974	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 gasses (GHGs), 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 diverted from landfills.

In this part, the quantities of waste disposed are gathered from two sources: (1) the 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 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 of in a facility dedicated solely for that entity's waste.

Recent legislation related to the Land and Materials Administration is available on MDE's webpage at mde.maryland.gov/programs/LAND/Pages/LMA-Legislation.aspx.

Sustainable Materials Management

In 2017, Governor Hogan signed Executive Order 01.01.2017.13, Waste Reduction and 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 (SMM) 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. These goals were developed and published in April 2019, and are discussed further in this Part. More information about the executive order and SMM is available at mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/Waste-Reduction-and-Resource-Recovery-Executive-Order.aspx.

Recycling Market Development

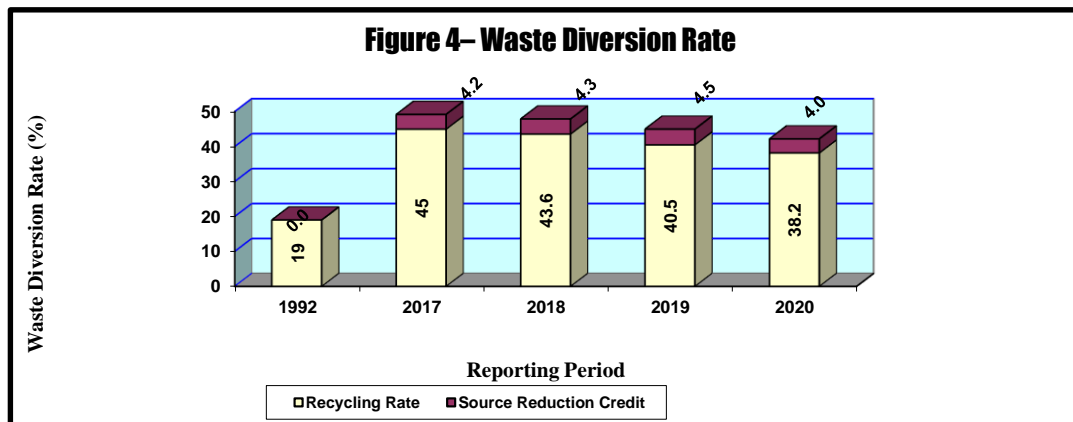
During the 2021 legislative session, Maryland passed the Recycling Market Development law, which requires the Office of Recycling in MDE to promote the development of markets for recycled materials and products in the state. It also requires the MDE to evaluate the availability of certain markets and identify businesses in the state that use recycled materials and provide annual updates beginning with the 2022 Maryland Solid Waste Management and Diversion Report.

Organics Recycling and Waste Diversion – Food Residuals

Passed in 2021, the Organics Recycling and Waste Diversion – Food Residuals law requires certain entities that generate food residuals to separate the food residuals from other solid waste and ensure that the food residuals are diverted from final disposal in a refuse disposal system in a composting facility. The requirements have a staggered rollout beginning in 2023.

Maryland's 42.2% Waste Diversion Rate

The recycling rate plus the source reduction (SR) credit make up the waste diversion rate. Through the efforts of its citizens, businesses, and government agencies, Maryland achieved a Statewide waste diversion rate of 42.2% in CY20. The 42.2% waste diversion rate was composed of a 38.2% MRA recycling rate and a 4.0% SR credit. Figure 4 provides a historical breakdown of Maryland's waste diversion rate.



Maryland's 38.2% Recycling Rate

In CY20, Maryland residents and businesses recycled 38.2% of the MRA waste generated. This is a decrease from the 40.5% MRA recycling rate in 2019. The decrease in the recycling rate in 2020 likely reflects impacts of the COVID-19 pandemic on both commercial and residential recycling. Businesses generated fewer recyclables with employees not being in the office and some businesses being closed and/or not doing as much in-person business. Also, counties noted that they had more difficulty getting businesses to voluntarily report recycling data for 2020, probably for the same reasons. When a business does not report recycling data to the county, its disposal data is still captured because MDE receives disposal data from permitted solid waste acceptance facilities. Taken together, these circumstances negatively impact the recycling rate because the tons recycled goes down while the tons disposed stays the same.

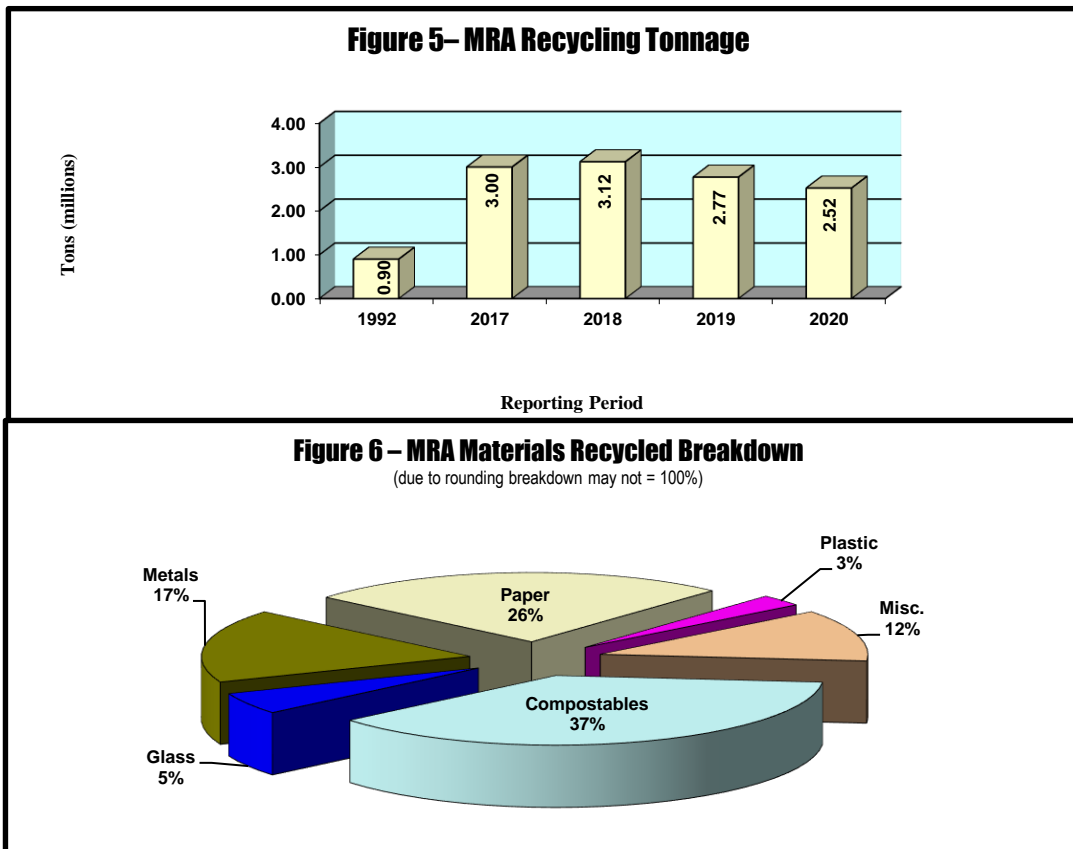
In the residential sector, more people working from home results in more waste and recyclables being generated; however, there were instances where collection was temporarily impacted because of reduced staffing at recycling centers and collection firms and other disruptions resulting from the pandemic. MDE is aware that at least one jurisdiction (Baltimore City) discontinued recycling collection for a period of time, but continued trash collection, which would be expected to have a negative impact on the recycling rate.

Aside from COVID and the resulting staffing issues for local recycling programs, markets for recyclables were also down significantly in 2020, which may have resulted in more recyclables being disposed of. Fortunately, prices for the core materials (paper and plastic) largely recovered in mid-2021, and it is hopeful that any impacts to recycling from markets will soon recover. It is also important to note that while the weight-based recycling rate declined in 2020,

Maryland also saw an overall decrease in waste generation, which led to improvements in environmental outcomes in several areas, including the GHG emissions and energy use associated with materials management. Additionally, while the statewide recycling rate decreased, recycling of certain materials such as food scraps increased in 2020. These impacts are discussed in more detail below.

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.” Note that this credit was eliminated by legislation passed in 2021 (Ch. 631). That change is not reflected in this report, since it covers CY20 data, prior to the effective date of that legislation. Six jurisdictions did not meet the mandatory county recycling rate of 20 or 35%, based on population. See Table 17 for details.

Figure 5 summarizes the tons of recycling over the past several years, compared with recycling in 1992. Figure 6 shows a breakdown of the total MRA recycled by material in CY20. 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.



Maryland's 33% U.S. Environmental Protection Agency (EPA) Recycling Rate

State recycling laws determine which types of materials count toward 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 391,269 tons to 2,148,860 tons. Maryland's EPA recycling rate of 33% is just below the overall EPA U.S. recycling rate of 36.4% for 2018 (most recent available as of the writing of this report).

Table 17 – County Recyclables by Commodity in Tons for CY20

Compiled by the Maryland Department of the Environment from Reports Submitted for CY20

County	MRA Rate ² (%)	Mandatory Recycling Rate (%)	Waste Diversion Rate ³ (%)	Maryland Recycling Act (MRA) Materials (in tons)							Non-MRA Recyclables ⁵	Total Recycling*
				Compostables ⁴	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	15.05	20	20.05	4,517	11	514	4,396	503	1,624	11,565	245,782	257,347
Anne Arundel	41.49	35	46.49	113,404	10,266	24,219	92,145	6,049	9,581	255,664	370,942	626,606
Baltimore City	14.94	35	19.94	11,713	10,509	25,306	20,701	5,702	5,973	79,904	301,465	381,369
Baltimore Co.	31.30	35	36.30	78,849	11,687	85,688	77,070	5,944	15,325	274,563	269,866	544,429
Calvert	23.35	20	23.35	3,150	1,234	3,249	6,638	1,799	1,154	17,224	71,091	88,315
Carroll	36.89	35	41.89	48,789	8,121	10,347	10,358	3,959	2,460	84,034	248,389	332,423
Cecil	58.69	20	63.69	87,122	589	7,464	8,745	1,498	1,067	106,485	94,036	200,521
Charles	37.89	35	41.89	14,733	2,151	9,133	12,313	1,041	1,719	41,090	151,065	192,155
Dorchester	9.04	20	9.04	2,375	76	156	670	50	292	3,619	4,404	8,023
Frederick	41.48	35	46.48	34,844	4,886	7,251	36,407	4,217	24,911	112,516	96,863	209,379
Garrett	44.13	20	44.13	8,420	324	3,476	3,207	119	2,376	17,922	13,775	31,697
Harford	40.02	35	45.02	51,410	658	9,952	22,405	2,250	31,648	118,323	98,360	216,683
Howard	42.32	35	42.32	101,774	9,480	8,332	90,089	6,730	8,610	225,015	4,271	229,286
Midshore ¹	49.37	20	50.37	69,406	2,882	5,258	29,183	1,457	2,201	110,387	80,320	190,707
Montgomery	58.94	35	63.94	181,406	20,581	117,466	98,788	10,033	120,829	549,103	215,272	764,375
Prince George's	41.34	35	46.34	115,689	31,417	103,821	92,261	11,313	14,308	368,809	298,205	667,014
Somerset	9.66	20	9.66	815	11	476	54	7	481	1,844	10,803	12,647
St. Mary's	38.47	20	38.47	6,899	1,347	2,527	5,138	769	1,037	17,717	93,927	111,644
Washington	26.29	35	26.29	1,926	2,317	1,548	26,065	1,239	1,553	34,648	38,506	73,154
Wicomico	34.45	20	34.45	47,703	6,098	5,428	5,900	1,527	2,606	69,262	122,754	192,016
Worcester	26.58	20	26.58	13,205	864	442	6,837	315	946	22,609	31,155	53,764
State Highways of Additional Asphalt and Concrete Recycled											1,525	1525
TOTAL*	38.22	N/A	42.20	998,149	125,509	432,053	649,370	66,521	250,701	2,522,303	2,862,776	5,385,079

* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values (i.e., MRA Recyclables = 2,522,303.78, Non-MRA Recyclables = 2,862,775.24 tons, Total 5,385,079.02 tons. The MRA recycling rate includes an additional 95,040.09 tons for the RRF credit that is not included in this table).

1 Midshore 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 287,869.16 tons.

4 Compostables include 944,280.68 tons of material that was composted/mulched and 53,868.73 tons recycled by other means.

5 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 4% Source Reduction Credit

In 2020, 12 of Maryland's jurisdictions were able to add from 1 to 5 points to their waste diversion rates by conducting SR activities as a waste reduction strategy. They accomplished this by utilizing internet resources, demonstration sites (i.e., backyard food waste, food donation, and yard waste composting), and publications on reuse practices, food waste donation, and yard waste reduction. A complete list of SR activities and a breakdown of Maryland SR activities in CY20 is available on MDE's Maryland State, County, and City Recycling webpage at mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/recyclingrates.aspx.

Beyond the Maryland Recycling Act

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 2.9 million tons of non-MRA materials were reported as recycled in CY20. Table 18 offers a breakdown by category of the non-MRA materials reported as recycled in CY20.

Table 18 – Recycling of Non-MRA Materials in Tons

Compiled by the MDE from Reports Submitted for Calendar Year 2020

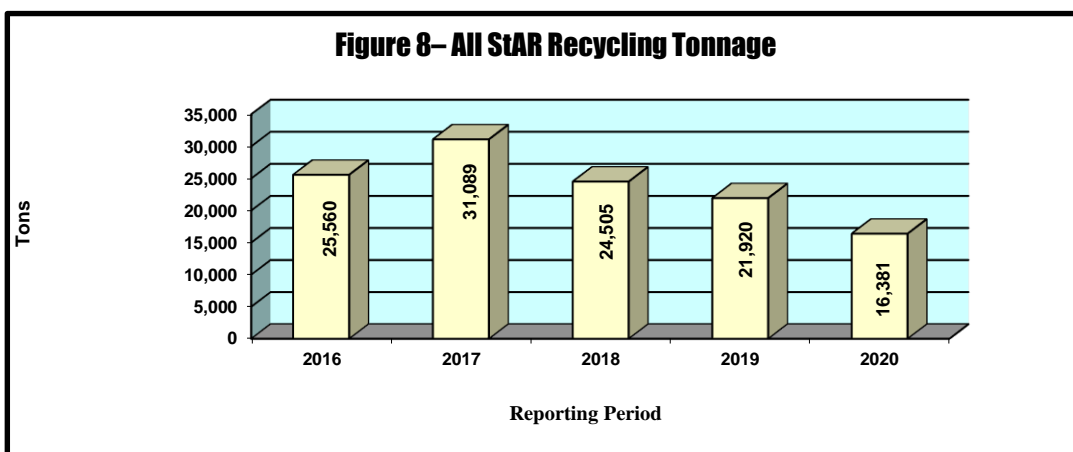
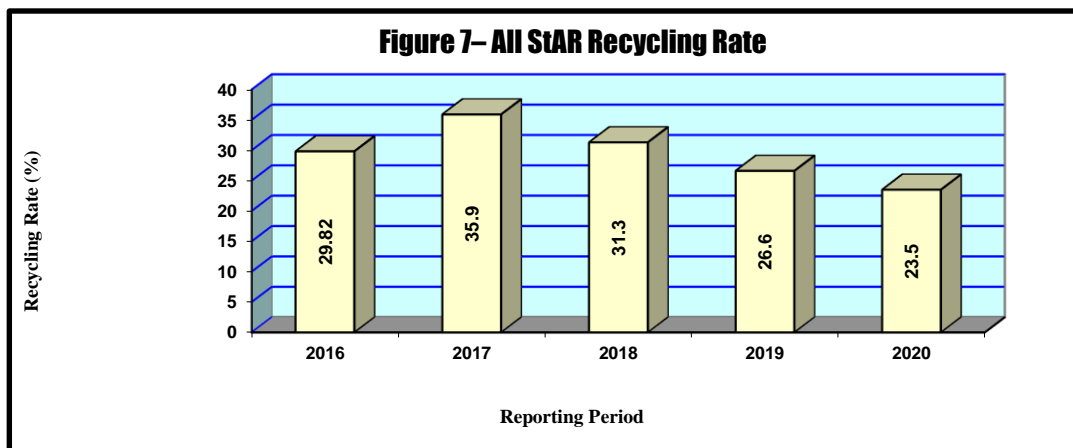
MATERIAL	TONS RECYCLED
Antifreeze	1,611
Asphalt & Concrete	871,910
Coal Ash	229,679
Construction/Demolition Debris	262,247
Land clearing Debris	51,040
Scrap Automobiles	162,680
Scrap Metal	562,807
Sewage Sludge	65,539
Soils	455,348
Waste Oil	25,708
Other Materials	174,207
TOTAL	2,862,776

Maryland's 23.5 % All StAR Recycling Rate

The All StAR Program is the name of the state government agency recycling program that is designed to help the state government reach its recycling goals. Each All StAR agency designates a Recycling Coordinator to manage recycling activities at their various sites throughout Maryland. 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 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 CY20, state agencies recycled 16,381 tons of MRA materials for an overall MRA recycling rate of 23.5%. Figure 7 provides a 5-year history of Maryland's All StAR recycling rate and Figure 8 summarizes the recycling tonnages since 2016. Table 19 summarizes the performance of each state agency participating in the All StAR program.



Also, the state government recycled 125,081 tons of non-MRA materials, including C&D 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 CY20 All StAR statistics is available under "State Agency Recycling" on MDE's Waste Diversion in Maryland webpage at mde.maryland.gov/recycling. MRA tonnages reported by state agencies are included in the CY20 recycling totals reported by the counties (Table 17).

State agencies achieve cost savings by boosting the amount of waste diverted to recycling and, to an even greater extent, by reducing the total amount of waste generated.

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

Table 19 – Maryland State Agencies' CY20 Recycling Rates

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2020

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2020 (tons)	2020 MRA Recycling Rate (%)
Baltimore City Community College	1	0	0	0	0
Comptroller of the Treasury	1	1	186	72.25	90.0
Department of Agriculture	2	2	222	5.30	8.44
Department of Assessments and Taxation	24	13	176	9.20	15.39
Department of Budget and Management	1	0	0	0	0
Department of Education	29	10	1,986	69.71	63.28
Department of General Services	25	25	8,598	154.31	10.10
Department of Health and Mental Hygiene	23	9	6,730	160.13	3.83
Department of Human Resources	60	19	6,404	203.43	21.37
Department of Juvenile Services	15	0	0	0	0
Department of Labor, Licensing & Regulation	20	8	1,264	44.26	10.09
Department of Natural Resources	6	4	621	14.91	12.87
Department of the Environment	5	5	963	37.08	32.00
Department of Transportation	83	83	27,377	7,131.90	40.63
Department of Veterans Affairs	7	7	929	436.87	25.93
Dept. of Housing and Community Development	3	3	366	57.76	28.37
Dept. of Public Safety and Correctional Services	37	12	7,970	602.82	5.04
Judiciary of Maryland	2	0	0	0	0
Maryland Automobile Insurance Fund	1	1	32	108.69	56.64
Maryland Department of Disabilities	1	1	33	0.11	6.11
Maryland Department of Planning	1	1	185	64.34	63.87
Maryland Environmental Service	3	2	245	5.18	52.06
Maryland Food Center Authority	1	1	1,026	388.79	6.32

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2020 (tons)	2020 MRA Recycling Rate (%)
Maryland General Assembly	1	0	0	0	0
Maryland Insurance Administration	1	0	0	0	0
Maryland Military Department	22	22	555	66.78	7.92
Maryland Public Broadcasting Commission	1	1	140	37.75	27.17
Maryland School for the Deaf	2	2	1,005	120.18	29.56
Maryland Stadium Authority	2	2	1,000	164.10	29.40
Maryland State Archives	1	1	73	3.64	31.82
Maryland State Police	38	29	2,313	856.34	42.58
Morgan State University	1	1	9,700	544.88	8.91
St. Mary's College of Maryland	1	1	1,929	266.60	15.96
Subsequent Injury Fund	1	1	16	3.30	53.92
University System of Maryland	19	13	146,183	4,749.96	38.48
TOTAL	441	280	228,227	16,380.57	23.51

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

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. This is possible in 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 Maryland Department of General Services (DGS) require recycling to be integrated into state office space leases and janitorial contracts. This requirement, effective in 2013, is being phased in as old leasing contracts expire. Some agencies reporting zero were the result of being closed during the pandemic.

In addition, state agency recycling rates could be improved by designating a recycling coordinator for each state office that has the responsibility and authority for ensuring recycling goals are met. Finally, state offices must have the means necessary to support successful recycling programs to execute a recycling contract and establish material staging areas, and staff tasked with identifying proper recycling bin locations.

Greenhouse Gasses and Energy Consumption

Using the EPA's Waste Reduction Model (WARM), Tables 20 and 21 detail GHG and energy 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). With the exception of the recycling (i.e., composting) of mixed organics, 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.

Tables 22 and 23 detail product lifecycle GHG emissions and energy use with and without waste diversion activities in Maryland in CY20. In Table 22, for example, the GHG emissions associated with the lifecycle of glass is 8,083 metric tons of CO₂ equivalent without waste diversion (i.e., recycling and source reduction) activities, and -42,331 metric tons of CO₂ equivalent with Maryland's waste diversion activities, for a total savings of 50,414 (i.e., 8,083 + 42,331) metric tons of CO₂ equivalent. Additional information on EPA's WARM is available at epa.gov/warm.

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
Glass	0 **	(0.55) **	(0.30) **	0.01 **
Mixed Metals	0 **	(3.67) **	(4.41) **	(1.04) **
Mixed Organics	0 **	N/A **	(0.37) **	(0.36) **
Mixed Paper	0 **	(6.21) **	(3.69) **	(0.63) **
Mixed Plastic	0 **	(1.89) **	(1.05) **	1.24 **

[^] Comparisons are vs. landfilled. To make comparisons easier, values have been adjusted to assign "Landfilled" a value of 0. Actual, unadjusted values can be found in the WARM model at epa.gov/warm.

* 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
Glass	0 **	(7.17) **	(2.40) **	(0.05) **
Mixed Metals	0 **	(51.13) **	(66.82) **	(11.36) **
Mixed Organics	0 **	N/A **	0.50 **	(2.50) **
Mixed Paper	0 **	(29.29) **	(20.41) **	(6.51) **
Mixed Plastic	0 **	(54.72) **	(39.47) **	(13.77) **

[^] Comparisons are vs. landfilled. To make comparisons easier, values have been adjusted to assign "Landfilled" a value of 0. Actual, unadjusted values can be found in the WARM model at epa.gov/warm.

* 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.

Table 22 – Maryland Waste Diversion and Greenhouse Gas Emissions for CY20

MRA Material	MTCO ₂ E* NWD^	MTCO ₂ E* WD^^	MTCO ₂ E* Savings
Glass	8,083	(42,331)	(50,414)
Mixed Metals	(189,989)	(2,102,829)	(1,912,840)
Mixed Organics	848,972	75,534	(773,438)
Mixed Paper	(74,589)	(3,529,218)	(3,454,629)
Mixed Plastic	355,227	131,416	(223,810)
Miscellaneous	45,660	(74,279)	(119,939)
TOTAL	993,364	(5,541,706)	(6,535,070)

* MTCO₂E = Metric Tons of Carbon Dioxide Equivalent

^ NWD = No Waste Diversion (baseline = 68.8% landfilled and 31.2% incinerated)

^^ WD = Waste Diversion from Maryland CY20 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 CY20

(in million BTUs)

MRA Material	BTUs* NWD^	BTUs* WD^^	BTU* Savings
Glass	92,411	(350,007)	(442,418)
Mixed Metals	(2,062,148)	(31,559,478)	(29,497,330)
Mixed Organics	(1,660,082)	(1,570,700)	89,383
Mixed Paper	(5,271,243)	(20,156,835)	(14,885,592)
Mixed Plastic	(3,605,766)	(7,666,598)	(4,060,833)
Miscellaneous	(3,120,285)	(2,673,653)	446,632
TOTAL	(15,627,113)	(63,977,271)	(48,350,158)

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

^ NWD = No Waste Diversion (baseline = 68.8% landfilled and 31.2% incinerated)

^^ WD = Waste Diversion from Maryland CY20 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 6.5 million metric tons of CO₂ equivalent emissions savings produced by Maryland's waste diversion activities in CY20 (Table 22) are the equivalent of removing over 1.38 million passenger cars from the roadway each year or conserving over 735 million gallons of gasoline, or over 272 million cylinders of propane used for home barbeques. The 48 trillion british thermal unit (BTU) energy savings reported in Table 23 are the equivalent of the annual energy consumption of over 527,000 households (i.e., 23.2% of the estimated 2,273,462 households in Maryland in CY20), or the amount of energy contained in over 8.32 million barrels of oil or over 401 million gallons of gasoline. These reductions are important to meeting our mandated climate change goals in Maryland.

Sustainable Materials Management (SMM) Metrics and Goals

As was directed in the Waste Reduction and Resource Recovery Plan for Maryland, a series of voluntary statewide metrics and goals that were established to track the state's progress in SMM. The goals are to be achieved by 2035. In 2020, the amount of waste generation, GHG emissions, and energy use improved upon 2019. Table 24 lays out those goals and the status in achieving them.

Table 24 – SMM Goals & Status

SMM Goals	2035 Target	Current Status
Waste Generation Per Capita	5.5 lbs./person/day	6.08 lbs./person/day
GHG Emissions Reductions	Reduction of 1.2 million MTCO ₂ e compared to 2016	Increase of 1.9 million MTCO ₂ e compared to 2016
Reduction in Energy Use	Reduction of 5.1 trillion BTUs compared to 2016	Increase of 2.2 trillion BTUs compared to 2016
Material-Specific Recycling Rates	Food Scraps – 60% Glass – 55% Metal – 75% Paper Products – 65% Plastic – 25% Yard Trimmings – 85%	Food Scraps – 17.8% Glass – 55.8% Metal – 71.9% Paper Products – 37.0% Plastic – 9.9% Yard Trimmings – 84.8%
Overall Statewide Recycling and Waste Diversion Rate	Recycling – 55% Waste Diversion – 60%	Recycling – 38.2% Waste Diversion – 42.2%

Special Programs

From July 2020 through June 2021, MDE continued implementing special programs designed to expand recycling and protect public health and the environment.

Newsprint

Maryland law mandates that, on a statewide 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 CY20, the newsprint recycled content percentage was 0%. In 2019, newspaper publishers were granted a waiver from the 40% recycled content requirement due to a lack of recycled content newsprint stock, meaning that publishers individually were not penalized for failing to meet the requirement in

2020. A waiver request for the reporting period ending in 2020 has been received and is under consideration.

Table 25 contains 36 known publishers that distribute 85 different newspapers in Maryland. Working with the Maryland/DC Press Association and publishers, MDE continues to seek increased compliance from publishers who did not comply with the reporting requirements.

Table 25 – Maryland Newspaper Publishers

Publisher	Content%	Publisher	Content%
A&C Business News	NR	Greenbelt Cooperative Publishing	NR
Afro-American Newspapers	0.0	Herald-Mail	NR
American Farm Publications	0.0	Independent Newspapers, Inc.	0.0
Asian Fortune	NR	Korea Daily	NR
Baltimore Business Journal	1.80	Maryland Coast Dispatch	NR
Baltimore Sun Media Group	0.0	Morgan Messenger	0.0
Baltimore Times Publications	NR	New York Daily News	0.0
Bay Weekly	0.0	New York Times Company	0.0
Carroll Publishing Company	0.27	News Journal, Wilmington	0.0
Chesapeake Publishing Corporation	0.0	Ogden Newspapers of MD, LLC	0.0
Citizen Communications, Inc.	NR	Prince George's Post	0.0
Connection Publishing	NR	Sentinel Newspapers	0.0
Courier	0.0	Southern Maryland Publishing Co.	0.0
Cumberland Times News	0.0	USA Today	0.0
Dow Jones & Company	0.0	Washington Business Journal	NR
Express Publications Company, LLC	0.0	Washington Post	0.0
Flag Communications	0.0	Washington Times	0.0
FT Publications, Inc.	NR		
Gannett Company, Inc.	0.0	Statewide	0.00
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 CY20, recycled content for these directories was reported as follows:

- Dex Media (Thryu) – 0% recycled content;
- Ogden Directories, Inc. – Distributes less than 50 tons of directory stock, therefore is exempt from reporting requirements;

- Vivial – Distributes less than 50 tons of directory stock, therefore is exempt from reporting requirements; and
- Ziplocal – Did not report.

In CY20, Dex Media was granted a 1-year exemption from meeting the 40% recycled content requirement due to the lack of availability of recycled content directory paper stock.



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 these products' disposal.

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. A retailer may not sell a CED unless the manufacturer is registered. 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 Department-approved takeback program. Registration fees may be used by MDE to award grants to counties and municipalities to conduct CED recycling activities.

One-hundred twenty-four (124) manufacturers registered with MDE and were authorized to sell their products in Maryland in CY20. Fifty-nine (59) manufacturers have MDE-approved free take back programs. Of these, Acer America Corporation, ASUS Computer International, Best Buy, Dell Marketing LP, Dynabook Americas, Inc., EliteLux Technologies, Inc., EliteLux Technologies, Inc., Elo Touch Solutions, Inc., Funai Corporation, Google, Inc., Hewlett Packard Company, Hisense USA, Hitachi America, Ltd., JVCKENWOOD USA Corp., Kyocera Communications, Inc., Lenovo (United States), Inc., LG Electronics USA, Inc. Motorola Mobility, LLC, MSI Computer Corp, Nintendo of America, NOOK Digital LLC f/k/a barnesandnoble.com, LLC, Panasonic Corp of North America, PLR IP Holding, LLC, Sharp Electronics Corp, SunBrite TV LLC, TCT Mobile (US), Inc. /Alcatel One Touch. TTE Technology, Inc., Venturer Electronics, Inc., VTech Electronics North America, LLC, Vizio, Inc. Voxx International Corporation, and Walmart, Inc. reported recycling 156.39 tons through their free recycling programs in CY20. The remaining manufacturers reported 0 tons of Maryland electronic recyclables.

MDE performed 314 inspections at 306 electronics retailers during FY21. The inspections resulted in the issuance of three site complaints against retailers for selling unregistered manufacturer brands. 100% of the site complaints were successfully resolved in FY21.

Cumulative highlights of eCycling in Maryland include:

- 128 special collection events (i.e., 1 or 2-day collection events) have been held in 24 jurisdictions since CY11, through CY20;
- There were 7 special events in CY20, an increase from the three collection events in CY19; and
- 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, Washington, and Worcester counties, Baltimore City, and Midshore Region.

Information on Maryland's eCycling program is available on MDE's webpage at mde.maryland.gov/ecycling. Table 26 gives a breakdown of the electronics equipment collected in CY20. Figure 9 summarizes the electronics tonnage totals collected since collection began in 2001. An additional 1,832.27 tons of electronics from commercial businesses were reported by the counties in CY20 as having been recycled. These were not part of residential eCycling programs.

Table 26 – eCycling Collection Programs

County	Population (2020)	Type	Date(s)	No. of participants	Tons collected ^	Pounds collected ^	Pounds/ participant
Subtotal Maryland	6,045,680	—	2011-2019	—	64,276.34	128,552,67	—
eCycling Special Events in 2020							
Midshore	—	1-day	Sept	702	14.06	28,120	40
Montgomery	—	1-day	Oct	—	1.80	3,600	—
Prince George's (3)	—	1-day	Jan (1), Oct (2)	852	17.36	34,720	41
Washington	—	1-day	Nov	483	13.26	26,533	55
Worcester	—	1-day	Oct	351	0.50	1,000	3
Subtotal Events	—	—	2020	2,388	46.98	93,973	139
Permanent eCycling in 2020							
Allegany	70,416	—	2020	—	5.99	11,980	—
Anne Arundel	579,234	—	2020	—	203.99	407,989	—
Baltimore City	593,490	—	2020	—	302.00	604,000	—
Baltimore County	827,370	—	2020	—	282.07	564,140	—
Calvert	92,525	—	2020	—	146.41	292,820	—
Carroll	168,447	—	2020	—	49.60	99,200	—
Cecil	102,855	—	2020	—	21.00	42,000	—
Charles	163,257	—	2020	—	110.80	221,600	—
Frederick	259,547	—	2020	—	111.77	223,540	—
Garrett	29,014	—	2020	—	23.31	46,620	—
Harford	255,441	—	2020	—	137.62	275,240	—

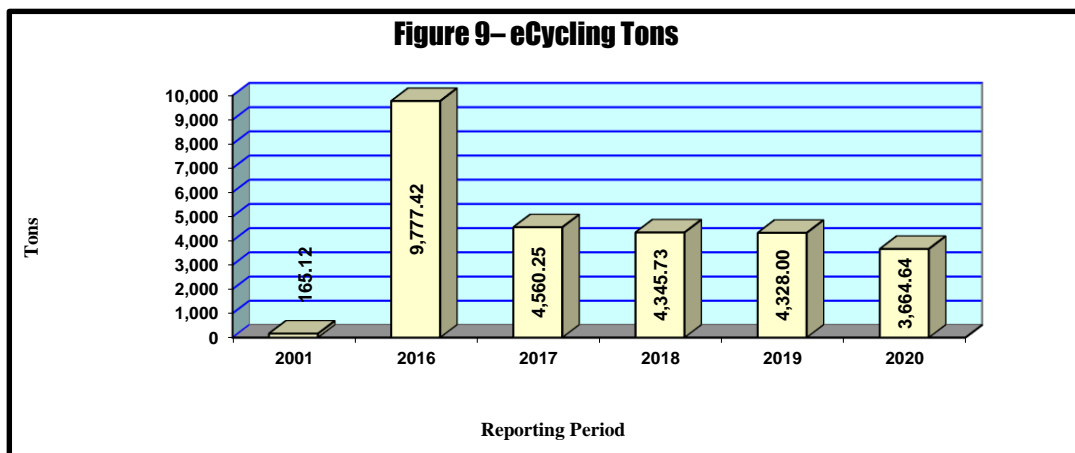
Howard	325,690	—	2020	—	554.19	1,108,380	—
Midshore Region	166,006	—	2020	—	27.15	54,300	—
Montgomery **	1,050,688	—	2020	—	1,339.83	2,679,660	—
Prince George's **	909,327	—	2020	—	131.91	263,822	—
St. Mary's	113,510	—	2020	—	132.91	265,820	—
Washington	151,049	—	2020	—	31.61	63,220	—
Worcester	52,276	—	2020	—	5.5	11,000	—
Subtotal Permanent	5,910,142	—	2020	—	3,617.66	7,235,331	—
TOTALS (2011 – 2020) ^				2,388 (2020)	67,940.98	7,457,923	139 (2020)

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

** 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.

Mercury Recycling

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 October 1, 2007.



Household Hazardous Waste (HHW)

Environment Article Section 9-1801 Annotated Code of Maryland, defines Household Hazardous Waste (HHW) as any waste material, including garbage or trash, derived from a household that would be listed as 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 collection programs. Information on HHW programs in Maryland is available at mde.maryland.gov/hhw

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.

MDE encourages state government to increase the use of products made with recycled materials by supporting the following procurement initiatives:

- Participating on the Maryland Green Purchasing Committee. The committee was created on October 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 DGS to promote government purchasing of materials with recycled content.
- In FY21, 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 webpage 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.

Recycling Resources

MDE aids 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 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 MDE's recycling webpages for the specific commodity in question. For companies without access to the Internet, MDE can mail or fax a list of markets by material.

- **Automobile Tires:** The Scrap Tire Recycling Act authorized MES to establish a scrap tire recycling system to address scrap tires generated in Maryland, including scrap tire collection facilities and scrap tire haulers. MDE maintains a list of approved scrap tire facilities and haulers on MDE's webpage at mde.maryland.gov/programs/LAND/RecyclingandOperationsprogram/Pages/scrap_tire.aspx.

A detailed report on scrap tires in Maryland is available in the *Maryland Scrap Tire Program's Annual Report* available on MDE's webpage at mde.maryland.gov/programs/LAND/Pages/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 on MDE's HHW webpage at 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 obtained 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 jurisdiction accepts white goods from residents for recycling. Contact each jurisdiction for details and any questions concerning the proper collection procedures. Contact information is also available in the "State, County, and City Contact Info" section on MDE's webpage at mde.maryland.gov/programs/LAND/RecyclingandOperationsprogram/Pages/County-Recycling-Services.aspx. Additionally, resources for residents and businesses

are available under “Metals” in the “Recycling Market Directory” available on MDE’s recycling webpage.

Permitting Guidance

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

- **MDE Guide to Environmental Permits and Approvals:** MDE’s webpage at mde.maryland.gov/programs/Permits/Pages/index.aspx 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 webpage at mde.maryland.gov/composting.
- **Permitting Guidance for Maryland Anaerobic Digestion Facilities:** Information intended to assist prospective anaerobic digestion facilities in identifying applicable state government laws and regulations is available on MDE’s composting web page at mde.maryland.gov/composting.

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 webpage at mde.maryland.gov/programs/Land/Documents/mde.state.md.us/assets/document/recycling/commercialwasteguide.pdf.

Public Resources

As waste diversion programs continue, it is important for MDE to keep the public informed of waste diversion programs in the state. From July 2020 through June 2021, MDE provided assistance and public education through efforts such as “America Recycles Day,” web resources, and county solid waste and recycling managers meetings.

- **Food Waste Minimization and Related Activities – A Toolkit for Maryland Schools:** MDE created this toolkit to help schools reduce, donate, and recycle surplus food to avoid waste, feed those in need, and promote healthy soils. The tool kit contains information and resources to help administrators, educators, and staff plan curriculum

and policies for their students to learn about and engage in environmentally sound approaches to daily living.

- **America Recycles Day (ARD):** ARD is a national event that promotes recycling, source reduction, and buying products made from recycled materials as objectives for a more sustainable society. Due to COVID, MDE held the 19th Annual "Rethink Recycling" Sculpture Contest online in November 2020, which featured 70 entries from seven different high schools across Maryland. The Sculpture Contest 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 ARD, 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. In addition, a "People's Choice" award was given to the sculpture that received the most votes from attendees of the contest.

Contest details are available on MDE's *Education and Outreach* webpage 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 webpage at mde.maryland.gov/recycling. The webpage 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. New information is added as it becomes available. MDE's website also offers Maryland's citizens and businesses the opportunity to email MDE with questions or comments on recycling.
- **County Recycling & Solid Waste Managers Meetings:** MDE organizes regular joint County Solid Waste and Recycling Managers meetings in Maryland 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 issues including public outreach, new technologies, and initiatives such as composting. In an effort to keep these forums focused and relevant, county managers are periodically surveyed regarding the meeting format and their technical support needs.

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 (ecycleclearinghouse.org) was launched in 2010 by two leading nonprofit organizations advancing recycling efforts across the country - the National Center for Electronics Recycling and the Northeast Recycling Council. 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.
- **MES:** MES (menv.com) recognizes that recycling is an element of effective waste management. MES assists MDE-led All StAR programs 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 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, and projects. MDE attends MRN meetings and reports MDE's activities and accomplishments 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. NMWDA 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 non-profit organization promoting SMM 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 27 illustrates the elements of Maryland counties' individual recycling programs. Unless otherwise noted in Table 27, 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 yard trimmings (*i.e.*, mixed yard waste and

Christmas trees). Additionally, MDE's waste diversion webpage contains detailed information on the county recycling programs and source reduction activities. Highlights of county programs in 2020 include:

- Eleven counties achieved waste diversion rates greater than the 2005 40% waste diversion goal.
- Two counties (Cecil and Montgomery) achieved a recycling rate greater than the 55% recycling SMM goal.
- Two counties (Cecil and Montgomery) and Midshore Region achieved a waste diversion rate greater than the 50% waste diversion SMM goal.
- Twelve jurisdictions earned SR credits. Nine (9) counties - Allegany, Anne Arundel, Baltimore, Carroll, Cecil, Frederick, Harford, Montgomery, and Prince George's - plus Baltimore City earned the maximum 5% SR credit.
- Three counties accept food waste for recycling.
- Sixteen counties accept expired medication for proper disposal.
- Twenty-two counties had permanent electronic drop-off locations.
- Seven eCycling collection events were held in 5 counties.
- Seventeen counties operated textile collection programs.
- Nineteen counties maintained mercury thermometer drop-off locations.
- Fifteen counties collected paint for recycling.
- Eighteen 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, please log onto MDE's waste diversion webpage at mde.maryland.gov/recycling and click on "State, County, and City Contact Info."

Table 27 – County Residential Recyclables by Commodity

County	Food Waste	Medicine	Lead-Acid Batteries	Oil/ Antifreeze	Established Electronic Drop-offs	Paints	Textiles	Hg°	HHW~	Comments/Additional Materials^
Allegany ^p		✓	✓	✓/✓	✓					batteries, tire, propane tanks, stretch wrap, and vinyl siding
Anne Arundel ^{cs}		✓	✓	✓/✓	✓	✓	✓		✓	cooking oil, wood pallets, tires, propane tanks, rubble, vinyl siding, scrap metal, oyster/clam shells, empty fuel containers; food scraps
Baltimore City ^{cs}	✓	✓	✓	✓✓	✓	✓		✓	✓	tires, oyster shells, rigid plastics, scrap metal, plastic bag take-back events, wood waste
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
Caroline		✓	✓	✓/✓	✓	✓	✓	✓	✓	Midshore program, eCycling event, paint on HHW Day
Carroll ~		✓	✓	✓/✓	✓		✓	✓	✓	scrap metal, vinyl siding, cooking oil, usable building material, #6 Styrofoam
Cecil ^{cs}		✓	✓	✓/✓	✓	✓	✓	✓		Rechargeable batteries, oil filters, scrap metal, tires, fluorescent lamps,
Charles ^{cps}		✓	✓	✓/✓	✓	✓	✓	✓	✓	Cooking oil, household batteries, oil filters, propane tanks, and tires are accepted at recycling centers; fluorescent lights accepted only at HHW events; no latex paint
Dorchester			✓	✓/✓			✓	✓		No books
Frederick ^{cs}			✓	✓/✓	✓				✓	pesticide containers, scrap metal, tires, flexible foam, wood pallets
Garrett ^m				✓/✓	✓					#1 & 2 plastic only, inkjet & toner cartridges, oil filters
Harford ^{cps}		✓	✓	✓/✓	✓	✓	✓	✓	✓	scrap metal, ecycle, mattresses, agricultural plastics, 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
Kent		✓	✓	✓/✓	✓	✓	✓	✓	✓	Midshore program, eCycling event, pesticide containers, boat shrink-wrap; auto tires, cooking oil, Freon units, scrap metal
Montgomery ^c			✓	✓/✓	✓	✓	✓	✓	✓	bicycles, cooking oil, scrap metal, oil filters, propane tanks, tires, reusable building materials, rubble recycling (concrete, asphalt, brick, block, stone, and soil), bulky rigid plastic
Prince George's ^{cs}	✓	✓	✓	✓/✓	✓	✓		✓	✓	Scrap metal, propane and helium tanks, CFLs, cooking oil, batteries, bulky materials such as furniture, tires, rigid plastics, CFC's..
Queen Anne's		✓	✓	✓/✓	✓	✓	✓	✓	✓	Midshore program, eCycle event; boat shrink-wrap, passenger tires; gasoline collection and vegetable oil recycling
St. Mary's ^s		✓	✓	✓/✓	✓	✓	✓		✓	oil filters, eyeglasses, cooking oil, rechargeable batteries, propane tanks, tires, scrap metal, oyster shells
Somerset ^s			✓	✓/✓				✓		pesticide containers, oil filters, tires
Talbot		✓	✓	✓/✓	✓	✓	✓	✓	✓	Midshore program, eCycling event, pesticide containers
Washington			✓	✓/✓	✓		✓	✓		eCycle event; propane tanks, cooking oil, tires, polystyrene, rechargeable batteries
Wicomico ^c			✓	✓/✓			✓	✓	✓	Oyster/clam shell, scrap metal, tires, wood pallets, propane tanks, Freon units
Worcester			✓	✓/	✓		✓	✓	✓	propane tanks, tires, wood pallets, scrap metal

^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

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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 CY20 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 wastes 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, newspaper, and magazines. The facility also provides an ash disposal area for citizen use during the winter months.	No information provided.	The Mountainview Landfill had purchases for 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.	3 full time and 3 contract positions	Increase of taxes paid to the County
Anne Arundel	Annapolis Junction Recycling and Transfer Station (Privately Owned)	Facility pays Host Community Fee to the County for each ton of solid waste received. Tip fee charged County is below the area's rates for disposal.	Highway traffic from tractor trailer trucks is reduced due to rail transfer of solid waste. Allows Anne Arundel and Howard Counties to conserve disposal capacity in county landfills.	24 employees.	No information provided.

Baltimore City	BFI Baltimore Processing and Transfer Center (Privately Owned)*	Paid local taxes.	Convenient location for C&D haulers to offload.	6 employees.	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 Processing Facility (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 78% of its waste accepted at the site for recycling and saved costs of disposal.	\$475,000/22 employees.	The business intends to expand in 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 of \$5,363.
Baltimore City	Baltimore Recycling Center, LLC (Privately Owned)	The facility pays more than \$62,400 in taxes per year.	The business has invested over five million dollars in the property and equipment to run a C&D recycling facility at no cost to the City. Baltimore City gets recycling credit for these efforts and property builders get LEED credits for our recycling of their waste.	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 more than \$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 the county in disposing of solid waste.	3 employees.	No information provided.
Calvert	Southern Maryland	Assisting the county in handling solid	Not provided.	4 employees.	\$10,000 annual purchase of goods

	Processing Facility (Privately Owned)	waste & promoting recycling.			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 65 full time positions with over \$2.1 million in salaries.	The landfill capital and operational projects have utilized various contractors and vendors within Calvert County and surrounding jurisdictions.
Carroll	Northern Municipal Landfill*	No information provided	Provided property owner waste disposal coupons value of \$2.09millions.	14 direct and indirect employees with approx. budget of \$1.6 million.	No information provided
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 operators, drivers, laborers.	\$375,000 annual purchase of goods and services.
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	The landfill operations are supported by a total of 20 employees with approx. 1.5 million in compensation.	Estimated value of goods and services purchased from the locality for the facility: \$3.3 million. Estimated value of materials recycled for the year: \$266,000.

			Government to accept MSW originating within the County.		
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 \$ 50,000/1	Estimated value of goods and services purchased from the locality for the facility: \$70,000. Estimated value of materials recycled for the year: \$5,500
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.	\$187,000/3 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$55,000. Estimated value of materials recycled for the year: \$7,000.
Frederick	Essroc Industrial Waste Landfill	Land Assessment taxes paid for the industrial complex	Not Applicable	No employee	None
Frederick	Reichs Ford/Site B Municipal Sanitary Landfill/Transfer Station (County Owned)*	Free curbside recycling for 82,101 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.	\$3.6 Million/48 employees.	Spent \$7.7 million on various recycling contracts and programs.
Harford	Harford Waste Disposal Center (Publicly Owned)*	Provide 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 MES. Provides County residents with nonprofit disposal methodology and hierarchy. Provides recycling services at “no cost.”	\$2 Million/38 full time employees.	Estimated value of savings to Harford County: Free Single Stream Recycling - \$54,212, Free recycling for additional materials – \$167,246, Free yard trim recycling – \$984,849.
Howard	Ameriwaste Processing and Transfer Station	Payment of real estate, personal property and sales	Facility supplements County facilities	12 employees. Jobs include 53 equipment	\$200,000 in purchase from local vendors, \$19,000 in

	(Privately Owned)	taxes to Howard County.	for solid waste disposal.	operators, 2 clerks, and 5 laborers.	value of recycled items.
Montgomery	Montgomery County Solid Waste Processing & Transfer Station (Publicly Owned)*	Strategically located for easy access to accommodate residential, industrial, and commercial use.	No information provided.	20 full time County employees. Covanta Montgomery, Inc.- 70 full time, 10 temps, MES - 13 full time 10 Temp employees, Clean Harbor – 4 full time employees.	Revenue from some materials partially offsets operating costs, allowing fees to remain relatively flat over the past several years.
Prince George's	Recycle One Processing & Transfer Station*	Paid \$236,000 taxes to the County. Only facility in the County that provides MSW and C&D waste collection, recycling and disposal services.	Strategically located for local customers.	Employs 18 individuals and 30 full- time trucking contracts for an estimated budget of \$6.5 million.	Goods and services purchased are approximately \$500,000; \$350,000 in recycled products produced. Invested 3.2 million in capital equipment and improvements.
St. Mary's	St. Andrew's Municipal Landfill (Publicly Owned)	Tipping fees waived during emergency/storm damage situations and other approved non-profit 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 include 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	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

		the area. Provides employment opportunities in the area.			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 Municipal 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	2019-WPT-0632	11/14/2024	- /5.85	13810 Hazmat Drive Cumberland, MD 21502
Anne Arundel	Annapolis Junction Processing Facility and Transfer Station	WPT	PRI	2016-WPT-0158	3/24/2026	- / 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	2018-WPT-0539	01/24/2024	- / 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	2019-WRF-0580	12/09/2024	72/184	1451 Capital Raceway Road, Crofton, MD 21114.
Baltimore City	Baltimore Processing and Transfer Center	WPT	PRI	2019-WPT-0627	3/13/2024	- / 15.6	5800 Chemical Road, Baltimore MD 21226.
	Baltimore Recycling Center Processing Facility and Transfer Station	WPT	PRI	2019-WPT-0631	12/22/2024	- / 12.5	1030 Edison Highway, Baltimore MD 21213. Accepts Only C&D Waste.
	Daniel's Sharpsmart Processing Facility and Transfer Station	WPT	PRI	2019-WPT-0633	12/12/2024	- / <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	2018-WIF-0653	11/01/2023	32 / 65	3601 Fort Armistead Road, Baltimore MD 21226.
	Hawkins Pt. Plant Industrial Landfill	WIF	PRI	2019-WIF-0527A	1/16/2025	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	2021-WTS-0038	2/4/2026	- / 6.6	5030 Reisterstown Road, Baltimore MD 21215.
	Quarantine Road Landfill	WMF	MUN	2019-WMF-0325	12/18/2024	126 /153	6100 Quarantine Road, Baltimore MD 21226.
	Stericycle Medical Waste Processing Facility and Transfer Station	WPT	PRI	2016-WPT-0677	3/25/2024	- / 2.4	5901 Chemical Road, Baltimore MD 21226.
	Triumvirate Environmental Medical Waste Transfer Station	WTS	PRI	2018-WTS-0686	6/1/2025	- / 20	2300 Sun Street, Curtis Bay, 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 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	10275 Beaver Dam Road, Cockeysville MD 21030.
	Days Cove Rubble Landfill	WRF	PRI	2016-WRF-0592A	2/13/2025	35.6 / 99	6425 Days Cove Road, White Marsh MD 21162.
	Eastern Sanitary Landfill	WMF	CTY	2020-WMF-0052A	5/6/2025	200 / 367	6259 Days Cove Road, White Marsh MD 21162.
	Eastern Sanitary landfill Transfer Station	WTS	CTY	2020-WTS-0665	4/9/2025	- / 4	6260 Days Cove Road, White Marsh MD 21162.

	Honeygo Run Reclamation Center Rubble Landfill	WRF	PRI	2019-WRF-0579A	11/25/2024	77/117	10710 Philadelphia Road, Perry Hall MD 21128. Expansion of Existing Landfill.
	Recovermat Mid-Atlantic, LLC. Processing Facility	WPF	PRI	2021-WPF-0341	3/24/2026	- / 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	2021-WLC-0252	8/1/2026	10.2 / 23.6	1/4 mile west of MD Rtes 2 & 506, Prince Frederick MD 20678.
	Howlin Landclearing Debris Landfill	WLC	PRI	2018-WLC-0577	6/13/2023	3.0 / 32.7	8580 Nursery Road, Lusby MD 20657.
	Southern Maryland Processing Facility	WPF	PRI	2020-WPF-0597	4/9/2025	- / 0.2	7659 Binnacle Lane, Owings MD 20736
Caroline	Midshore II Solid Waste Regional Municipal Landfill	WMF	MES	2019-WMF-0608	2/25/2024	71.3 - / 224	12236 River Road Ridgely MD 21660.
Carroll	Northern Municipal Landfill	WMF	CTY	2020-WMF-0066	1/4/2026	80 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Northern Municipal Landfill Processing Facility and Transfer Station	WPT	CTY	2019-WPT-0541	3/25/2024	3 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Roll-Off Express, Inc. Processing Facility and Transfer Station	WPF	PRI	2013-WPT-0664	7/24/2023	- / 6.8	2900 Dede Road, Finksburg MD 21048.
Cecil	Cecil County Central Landfill – Horizontal Expansion	WMF	CTY	2019-WMF-0629	6/06/2024	81.6 / 418	758 East Old Philadelphia Road, Elkton MD 21921
	Stemmer's Run Transfer Station	WTS	CTY	2020-WTS-0072	11/5/2025	- / 9.7	45 Stemmer's Run Road, Earleville MD 21919.
	Woodlawn Transfer Station	WTS	CTY	2020-WTS-0074	11/5/2025	- / 30	Fire Tower & Waibel Roads, Port Deposit MD 21904.
Charles	Charles County Municipal Landfill	WMF	CTY	2019-WMF-0076A	4/07/2024	70 / 114	12305 Billingsley Road, Waldorf MD 20602.
	Naval Support Facility Indian Head Incinerator	WIN	FED	2019-WIN-0529	10/23/2024	- / 2,500	101 Strauss Avenue, Indian Head MD 20640.
Dorchester	Beulah Municipal Landfill	WMF	CTY	2014-WMF-0628A	9/21/2022	27 / 59	6812 East New Market-Ellwood Road, Hurlock MD 21643.
Frederick	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	2020-WMF-0327	1/4/2026	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	2018-WMF-0582	6/19/2023	58 / 184	9031 Reichs Ford Road, Frederick MD 21704.
	Reichs Ford/Site B Processing Facility & Transfer Station	WPT	CTY	2021-WPT-0604	6/24/2026	10 / 184	9031 Reichs Ford Road, Frederick MD 21704.
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	WMF	CTY	2018-WMF-0094A	5/01/2023	32 / 188	3118 Oakland-Sang Run Road, Oakland MD 21550.
Harford	Auston Processing Facility & Transfer Station	WPT	PRI	2017-WPT-0616	11/01/2023	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	2021-WMF-0110	5/11/2026	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.
	Citron Hygiene Transfer Station	WTS	PRI	2018-WTS-0687	5/7/2024	- / 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	2019-WPF-0581	5/21/2024	- / 10.8	24120 Frederick Road, Clarksburg MD 20871.
	Montgomery County Resource Recovery Facility	WTE	CTY	2018-WTE-0538	12/26/2023	- / 35	21204 Martinsburg Road, Dickerson MD 20842.
	Montgomery Co. Site 2 Municipal Landfill	WMF	CTY	2019-WMF-0237	7/23/2024	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	2020-WMF-0589	3/18/2026	134 / 164	3500 Brown Station Road, Upper Marlboro MD 20772.
	Dower House Recycling and Processing Center	WPF	PRI	2020-WPF-0563	10/26/2025	- / 10	5900 Dower House Road, Upper Marlboro MD 20772. Facility Not Constructed.
	Recycle One Processing Facility and Transfer Station	WPT	PRI	2019-WPT-0647	8/23/2024	1.8/2.85	4700-A Lawrence Street. Hyattsville MD 20781
	Ritchie Reclamation Rubble Landfill	WRF	PRI	2015-WRF-0590A	10/30/2023	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	2021-WPF-0639	3/30/2026	4.3	11220 Somerset Ave Beltsville, MD 20705
Queen Anne's	Baker Rubble Landfill	WRF	PRI	2018-WRF-0622	5/7/2023	15.9 / 18.5	501 4-H Park Road, Queenstown MD 21658. Serves Midshore 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	2020-WMF-0138	12/22/2025	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	2019-WPT-0624	1/23/2024	1 / 55	44861 St. Andrews Church Road, California MD 20619 Facility Not Constructed
Somerset	Somerset County Landfill – Fairmount Site	WMF	CTY	2019-WMF-0268	4/7/2024	26.4 / 33	8716 James Ring Road, Westover MD 21871.
	Smith Island Incinerator	WIN	CTY	2021-WIN-0140	4/14/2026	- / 0.50	Smith Island Road, Ewell MD 21824.
Talbot	Midshore Regional Municipal Landfill	WMF	MES	2020-WMF-0144	3/16/2025	67 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties.
	Midshore Transfer Station	WTS	MES	2020-WTS-0549	6/4/2025	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	2019-WMF-0266A	12/1/2024	189 / 425	12630 Earth Care Road, Hagerstown MD 21740.
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.
	Curtis Bay Medical Waste Services Transfer Station	WTS	PRI	2017-WTS-0678	1/23/2023	- / 10	2434 Goddard Parkway, Salisbury, MD 21801
	Foskey Lane Transfer Station	WTS	PRI	2021-WTS-0673	5/27/2026	- /3.66	29631 Foskey Lane, Delmar MD 21875
	Newland Park Municipal Landfill	WMF	CTY	2020-WMF-0283	9/21/2025	60 / 125	7161 Brick Kiln Road, Salisbury MD 21801.

	Peninsula Medical Waste Processing Facility	WPM	PRI	2018-WPM-0505	6/28/2023	- / 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	2020-WTS-0156	2/24/2025	- / 2.2	306 - 65th Street, Ocean City MD 21842. Accepts Only MSW.

* The status of the facilities is current as of December 31, 2019 – the period of time covered by the report.

Table B2 – Summary of Permitted Solid Waste Acceptance Facilities

Type Of Facility	Number of Facilities
WMF: Municipal Solid Waste Landfill	23
WRF: Construction & Demolition Landfill	5
WLC: Landclearing Debris Landfill	3
WIF: Industrial Landfill	4
WIN: MSW or Special Medical Waste Incinerator	3
WMI: Medical Waste Incinerator	1
WPF: Processing Facility	7
WPM: Special Medical Waste Processing Facility	1
WTS: Transfer Station	13
WPT: Processing Facility & Transfer Station	20
WTE: Waste to Energy/MSW Incinerator	2
TOTAL	82

Type of Ownership	Number of Facilities
CTY: County Government	30
PRI: Private (Commercial)	43
MUN: Municipal Government	3
FED: Federal Government	3
MES: Maryland Environmental Service	3
TOTAL	82

Table B3 – Permitted Solid Waste Acceptance Facilities NOT in Operation

Jurisdiction	Site Name	Facility Type	Ownership Type	Status
Frederick	Essroc Cement Corporation	Industrial Landfill	Private	Not Built
	Fort Detrick – Area B & Main Post Incinerator	Incinerator	Federal	Inactive
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

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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 52,061,690 tons with 2,124,530 tons being disposed of in CY20. Thus, at the current disposal rate, there would be approx. 25 years (52,061,690 tons ÷ 2,124,530 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 2020 (CY)	Landfilled in 2020 (Tons)	Used in 2020 ^
Alpha Ridge Municipal Landfill	13,521,900	5,978,289	3,288,059	7,543,611	4,148,986	2053	19	155	0.09%
Appeal Municipal Landfill	2,799,290	617,838	370,703	2,181,452	1,308,872	3495	324	194	0.01%
Beulah Sanitary Landfill	2,360,560	1,839,678	1,821,283	520,882	515,672	2025	57,995	57,415	2.40%
Brown Station Road Landfill	16,505,000	14,790,822	10,068,633	1,714,178	1,163,078	2025	499,759	340,088	3.00%
Cecil County Central Landfill – Horizontal Expansion **	23,327,539	5,782,557	3,469,534	17,544,982	10,530,466	2080	170,013	106,607	0.73%
Central Sanitary Landfill	4,800,000	2,515,279	1,760,696	2,284,721	1,599,304	2051	82,826	57,978	1.56%
Charles County Municipal Landfill	4,374,700	2,694,456	1,924,611	1,680,244	1,248,789	2032	156,954	112,110	4.00%
Eastern Sanitary Landfill	23,474,559	16,045,362	7,536,145	7,429,197	3,496,898	2027	750,508	452,204	3.20%
Fort Detrick – Area B & Main Post	1,000,900	144,710	121,794	856,190	671,919	2089	97	17	0.40%
Forty West Municipal Landfill	24,752,000	5,242,848	2,218,993	19,509,152	7,372,407	2080	236,367	129,977	1.04%
Garrett County Solid Waste Disposal & Recycling Facility	2,568,470	1,407,957	839,027	1,160,513	639,985	2037	44,137	30,975	1.90%
Harford Waste Disposal Center	4,870,330	991,060	396,794	3,879,270	1,734,506	2135	22,965	8,283	0.47%
Midshore Regional Solid Waste Facility	3,924,994	3,684,695	2,032,481	240,299	126,266	2025	0	0	0.00%
Midshore II Regional Solid Waste Facility	7,800,000	2,161,044	1,262,396	5,638,956	3,417,604	2046	249,132	159,089	3.20%
Millersville Landfill & Resource Recovery Facility	14,156,000	6,645,562	3,987,337	7,510,438	4,506,263	2053	227,584	120,919	1.60%
Montgomery County Site 2**	0	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	4,260,000	4,106,183	3,116,595	153,817	116,745	2022	99,044	75,175	2.30%
Newland Park Municipal Landfill	7,200,000	4,860,773	2,623,497	2,339,227	1,264,503	2032	285,638	153,569	3.95%
Northern Municipal Landfill	3,504,187	960,515	482,428	2,543,672	1,339,749	2070	52,481	28,412	1.56%
Quarantine Road Landfill	18,320,799	15,379,909	17,433,410	2,940,890	4,001,902	2028	248,798	255,441	1.36%
Reichs Ford/Site B Municipal Sanitary Landfill	7,326,426	3,920,359	2,199,707	3,406,067	1,921,408	2045	24,172	8,087	0.32%
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	1,031,764	607,422	578,236	186,368	2032	48,248	27,835	3.00%

Totals	193,957,654	100,801,660	67,561,545	93,155,994	52,061,690		3,257,061	2,124,530	1.68%
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* St. Andrews Municipal Landfill closed in 2001. The current permit (2020-WMF-0138) was issued for a new landfill that was never constructed. St. Mary's County uses permit 2020-WMF-0138 to operate the closed St. Andrews Municipal Landfill as a transfer station.

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

^ Equal to Landfilled in 2020 (CY) ÷ Permitted Capacity (CY)

Construction and Demolition Debris landfills (Table C2) reported a total available capacity of 10,956,052 tons with 726,861 tons disposed of in CY20. At the current disposal rate, there would be over 15 years (10,956,052 tons ÷ 726,861 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 2020 (CY)	Landfilled in 2020 (Tons)	Used in 2020 ^
Baker Rubble Landfill	820,000	788,483	473,090	31,517	18,910	2021	38,458	23,075	4.00%
Days Cove Rubble Landfill – Lateral Expansion	6,017,847	3,593,458	2,156,074	2,424,389	1,454,634	2029	281,079	163,811	4.67%
Honeygo Run Reclamation Center	11,723,461	6,742,659	4,347,947	4,980,802	2,818,902	2035	338,068	187,476	2.88%
Ritchie Land Reclamation Partnership Phase	9,680,800	4,259,532	2,555,719	5,421,268	3,252,761	2035	540,370	324,222	5.60%
Tolson & Associates	5,762,060	343,940	161,632	5,418,120	3,410,845	2042	61,225	28,277	1.20%
TOTALS	34,004,168	15,728,072	9,694,462	18,276,096	10,956,052		1,259,200	726,861	3.70%

^ Equal to Landfilled in 2019 (CY) ÷ Permitted Capacity (CY)

Industrial landfills (Table C3) reported a total available capacity of 9,004,909 tons. At a current disposal rate of 34,366 tons, there would be over 262 years (9,004,909 tons ÷ 34,366 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 2020 (CY)	Landfilled in 2020 (Tons)	Used in 2020 ^
W.R. Grace and Co. – Davison Chemical Division	495,000	257,403	300,520	237,597	194,480	2029	12,333	12,504	2.49%
Essroc Cement Corporation	273,000	0	0	273,000	273,000	N/A	0	0	0.00%
Hawkins Point Plant	3,228,044	2,229,264	2,719,612	998,780	2,445,258	2035	0	0	0.00%
Fort Armistead Road – Lot 15	6,300,000	761,663	837,829	5,538,337	6,092,171	2152	22,800	21,862	0.04%
TOTALS	10,296,044	3,248,330	3,857,961	7,047,714	9,004,909		35,133	34,366	0.34%

^ Equal to Landfilled in 2020 (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 available 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 2020 (CY)	Landfilled in 2020 (Tons)	Used in 2020 ^
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Howlin Landclearing Debris Landfill	64,120	49,633	62,041	14,487	18,109	2021	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	126,373	63,486	140,680	70,040	2044	0	0	0.00%
TOTALS	425,673	251,811	132,421	173,862	89,255		0	0	0.00%

^ Equal to Landfilled in 2020 (CY) ÷ Permitted Capacity (CY)

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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	2020-NWW-GP01	9.90	4/9/2025	(410) 437-7718	(410) 437-7718
	L and W Recycling, Inc. 8316 Lokus Road Odenton, MD 21113	GP	2021-NWW-GP01	12.00	7/20/2026	(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	2021-NWW-0003	12.00	3/1/2026	(410) 922-5959	(410) 521-2778
	Hollins Organic Products, Inc. 6247 Falls Road Baltimore, MD 21209	GP	2020-NWW-GP01	2.00	6/25/2025	(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	2020-NWW-GP01	5.00	1/14/2026	(410) 833-9369	(410) 833-3963
	Wirtz & Daughters, Inc. 6275 Days Cove Road White Marsh, MD 21162	IP	2020-NWW-0552	14.00	4/30/2025	(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 24480-A Pinewood Road Preston, MD 21655	GP	2017-NWW-GP01	24.49	9/19/2022	(410) 479-5384	(301) 479-5387
	Danny's Grinding Services, LLC 14488 Oakland Road Ridgely, MD 21660	GP	2020-NWW-GP01	1.76	10/15/2025	(410) 253-6570	(410) 634-2733
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
	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
	WeCare Denali, LLC 7901 Kabik Court, Woodbine, MD 21797	GP	2019-NWW-GP01	30.00	8/25/2024	(410) 795-7666	(410) 795-7666
Cecil	Chesapeake Wood Recycling 1726 East Old Philadelphia Road Elkton, MD 21421	GP	2020-NWW-GP01	25.00	7/14/2025	(410) 392-0770	(410) 392-2317
Charles	Beuchert Excavating, Inc. 12340 Crain Highway Newburg MD 20664	GP	2019-NWW-GP01	12.50	3/5/2024	(301) 399-5088	(301) 274-2454
	Calvert Wood Recycling 6585 Ripley Road Ripley, MD 20646	GP	2021-NWW-GP01	8.50	4/13/2026	(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	2019-NWW-0002	7.00	10/31/2024	(301) 440-1145	(301) 440-1145
Frederick	Butler Wood Recycling 4039 Tuscarora Road Point of Rocks, MD 21777	GP	2019-NWW-GP01	58.00	4/3/2024	(301) 607-4541	(301) 874-8348
	Bussard Brothers Landscape Supply-5307-B Green Valley Rd Monrovia, MD 21770	GP	2019-NWW-GP01	2.00	11/14/2024	(301) 865-3925	(301) 865-8496

	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
	Comer Construction, Inc. 900 Circelli Court Aberdeen, MD 21001	GP	2018-NWW-GP01	6.00	11/14/2023	(410) 879-6094	(410) 638-0289
	Crouse Construction Co. 1001 Philadelphia Road Aberdeen, MD 21001	GP	2020-NWW-GP01	25.00	6/7/2025	(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	2018-NWW-GP01	5.00	7/9/2023	(410) 489-5206	(410) 489-4316
	Oak Ridge Farm 2700 Woodbine Road Woodbine, MD 21797	GP	2019-NWW-GP01	4.2	9/17/2024	(410) 287-5758	(410) 287-5758
	R.L.O Contractors Inc. 7531 Cemetery Lane Elkridge, MD 21075	GP	2019-NWW-GP01	15.00	11/11/2024	(410) 471-4450	(410) 471-4450
Kent	Sharp Lawn & Tree Inc. 10010 Lakeside Lane Chestertown, MD 21620	GP	2021-NWW-GP01	3	6/3/2026	(410) 778-6302	(410) 778-3509
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville, MD 20833	GP	2019-NWW-GP01	107.50	11/26/2024	(301) 540-2968	(301) 540-9630
	Country Nursery 3330 Spencerville Road Burtonsville, MD 20866	GP	2018-NWW-GP01	11.5	6/6/2023	(301) 421-9593	(301) 421-9593
	Grant County Mulch Inc. 24420 Frederick Road Clarksburg, MD 20841	GP	2018-NWW-GP01	6.35	9/11/2023	(304) 749-7451	(304) 749-7451
	Spring Garden Farm 4900 Brookeville Road Brookeville, MD 20833	GP	2019-NWW-GP01	3	9/5/2024	(304) 749-7451	(304) 749-7451
Prince George's	Grant County Mulch Inc. 5402 Van Dusen Road Laurel, MD 20707	GP	2021-NWW-GP01	25	2/16/2026	(800) 749-7451	(800) 749-7451
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	2021-NWW-GP01	15.98	4/26/2026	(410) 778-2016	(410) 778-2022
	Grange Hall Yard 437 Grange Hall Road Centreville, MD 21617	GP	2020-NWW-GP01	9.06	9/6/2025	(410) 974-0397	(410) 974-0397
St. Mary's	Charlotte Hall Lumber Yard	GP	2020-NWW-GP01	3.51	1/4/2026	(301) 481-7304	(301) 481-7304
Talbot	Dependable Sand and Gravel Company, Inc. 13155 Ocean Gateway Queen Anne, MD 21657	GP	2020-NWW-GP01	343	10/14/2025	(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	2019-NWW-GP01	10.00	8/25/2024	(410) 742-7429	(410) 742-7429
General Permits (GP):				39			
Individual Permits (IP):				5			
TOTAL				44			

* The status of the facilities is current as of December 31, 2020 – the period covered by the report.

Permitted Composting Facilities

Table D2 – Permitted Composting Facilities*

County	Name & Location	Permit Type/ Tier Type	Feedstock Type	Feedstock Capacity (Tons)	Permit Number	Expiration Date	Phone Number
Anne Arundel	Millersville Landfill and Resource Recovery Pad 389 Burns Crossing Road Severn, MD 21144	GP/Tier 1	Yard Trimmings	20,000	2021-GCF-0022	3/27/2026	410-970-5060
	Tolson & Associates, LLC End of Capitol Raceway Road Crofton, MD 21144	GP/Tier 1	Yard Trimmings	25,000	2021-GCF-0018	3/27/2026	301-428-0800
	Veteran Compost Facility 4900 Sands Road Lothian, MD 21162	GP/Tier 2	Food Scraps/Manure/Wood Chips	20,000	2021-GCF-0019	3/27/2026	410-939-6404
Baltimore	Eastern Sanitary Landfill 6259 Days Cove Road White Marsh, MD 21162	RD/Tier 1	Yard Trimmings	20,000	2020-WMF-0052A	5/6/2025	410-887-3188
Caroline	Twin Maples Facility 14130 Clarks Lane Ridgely, MD 21660	GP/Tier 2	Poultry Byproducts, Hatchery Waste, Chicken Litter, Seafood Waste, and Wood Waste	13,000	2021-GCF-0007	3/27/2026	336-207-9310
Carroll	WeCare Denali, LLC 7901Kabik Court Woodbine, MD 21797	IP/Tier 1	Yard Trimmings	60,000	2019-ICF-0002	11/14/2024	410-970-5060
Cecil	Cecil County Central Landfill 758 East Old Philadelphia Road Elkton, MD 21921	RD/Tier 1	Yard Trimmings	10,000	2019-WMF-0629	6/6/2024	410-996-8373
	West Coast Mushrooms Facility 342 Hopewell Road Rising Sun, MD 21911	GP/Tier 2	Hay, Straw, Chicken Litter, Corn Stover, Cotton Seed	16,000	2021-GCF-0009	3/27/2026	41-658-7699
Charles	Calvert Wood Recycling Facility 6585 Ripley Road Ripley, MD 20646	GP/Tier 1	Yard Trimmings/NWW	5,000	2021-GCF-0008	3/27/2026	301-743-9011
Frederick	Key City Compost at Utica Bridge Farm 10642 Woodsboro Road Woodsboro, MD 21798	GP/Tier 2	Food Scraps/Yard Trimmings, Manure	20,000	2021-GCF-0023	3/27/2026	443-699-5334
	Reichs Ford/Site B Municipal Landfill 9031 Reichs Ford Road Frederick MD 21704.	RD/Tier 1	Yard Trimmings	25,000	2018-WMF-0582	6/19/2023	301-600-3041
Harford	Harford Waste Disposal Center Facility 3135 Scarboro Road Street, MD 21154	GP/Tier 1	Yard Trimmings	40,000	2021-GCF-0002	3/27/2026	410-638-3018
	Veteran Compost Facility 328 Bush Chapel Road Aberdeen, MD 21001	GP/Tier 2	Food Scraps/Wood Chips	20,000	2021-GCF-0011	3/27/2026	410-939-6404
Howard	Level Land Lisbon Mulch Yard 1100-1281 Madison Street Lisbon, MD 21765	GP/Tier 1	Yard Trimmings	6,250	2021-GCF-0010	3/27/2026	410-489-5206
	Alpha Ridge Landfill 2350 Marriottsville Road Marriottsville, MD 21104	GP/Tier 2	Food Scraps/Manure/Yard Trimmings	12,000	2021-GCF-0004	3/27/2026	410-313-4144
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville, MD 20833	GP/Tier 1	Yard Trimmings	19,000	2021-GCF-0014	3/27/2026	240-461-7026
	Aspen Nursery Facility 15710 New Hampshire Ave Silver Spring, MD 20905	GP/Tier 1	Yard Trimmings	1,250	2021-GCF-0012	3/27/2026	301-384-4800
	Montgomery County Yard Trim Facility 21210 Martinsburg Road Dickerson, MD 20842	GP/Tier 1	Yard Trimmings	77,000	2021-GCF-0001	3/27/2026	410-428-8185
Prince George's	City of College Park Facility 9217 51 st Avenue College Park, MD 20740	GP/Tier 1	Yard Trimmings	5,600	2021-GCF-0005	3/27/2026	240-487-3590
	Prince George's County Organics Composting Facility 6550 S.E Crain Highway Upper Marlboro, MD 20772	GP/Tier 2	Food Scraps/Yard Trimmings	69,000	2021-GCF-0003	3/27/2026	240-712-1021

Washington	Forty West Municipal Landfill 12630 Earthcare Road Hagerstown, MD 21740	RD/Tier 1	Yard Trimmings	5,000	2019-WMF-0266A	12/1/2024	240-313-2634
General Permits (GP):				16			
Refuse Disposal Permits (RD):				4			
Individual Permits (IP):				1			
TOTAL				21			

* The status of the facilities is current as of December 31, 2019 – the period covered by the report.

APPENDIX E

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Maryland
Department of
the Environment

WINTER 2020

All-Star News

All State Agencies Recycle

David Mrgich, Chief
Waste Diversion Division
david.mrgich@maryland.gov

MD Department of the Environment
Land and Materials Administration
www.mde.maryland.gov/landmaterials

Christy Bujnovszky
Recycling Unit
christy.bujnovszky@mde.state.md.us

Expanded Polystyrene (EPS) Food Service Products Ban

During the 2019 legislative session the Maryland General Assembly passed [Chapter 579 \(Sections 9-2201 through 9-2207\)](#) of the Environment Article, [Annotated Code of Maryland](#)) banning the use of food service products composed of expanded polystyrene (EPS), commonly referred to under the trademark name of Styrofoam.

EPS food service products (e.g., cups, plates, bowls, trays, egg cartons, etc.) left in any food service inventory should be used by July 1, 2020, when the law goes into effect. On or after July 1, 2020:

- a person may not sell or offer for sale in the state an EPS food service product; and
- a food service business or school may not sell or provide food or beverages in an EPS foodservice product.

MDE is tasked by the legislature to conduct outreach about the ban. The county departments of health or environmental protection will

oversee the enforcement of the law, and have the authority to assess fines for noncompliance.

If improperly discarded, EPS products can persist in the environment for a long time. The lightweight cups and container often become litter that can end up in the Chesapeake Bay or other bodies of water, harming our marine life and polluting waters.

For additional information, please see the link below for FAQs at:

<https://mde.maryland.gov/programs/LAND/RecyclingandOperationsprogram/Documents/EPS%20faq%2012%20%2719.pdf>



Twelve State Agencies Reach 30 Percent Recycling Rate in 2018

State government, as a whole, is required to recycle 30 percent of its waste. In 2018, twelve State agencies recycled at least 30 percent of their waste and nine agencies recycled more than 40 percent. State government, as a whole, recycled 31.3 percent of the waste it generated.

The following State agencies reached a recycling rate of at least 30 percent in 2018:

- Comptroller of Maryland;
- Dept. Of Environment;
- Dept. of Transportation;
- Dept. of Veterans Affairs;
- Maryland Automobile Insurance Fund;
- Maryland Environmental Service;
- Maryland General Assembly;
- Maryland Insurance Administration;
- Maryland Stadium Authority;
- Maryland State Archives
- Subsequent Injury Fund; and
- University System of Maryland.

Results for all State Agencies are available on the Maryland State Agencies 2018 Recycling Rates Table.

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2018 (tons)	2018 MRA Recycling Rate (%)
Baltimore City Community College	1	0	0	0	0
Comptroller of the Treasury	1	1	800	110.22	79.28
Department of Agriculture	2	2	222	25.05	18.87
Department of Assessments and Taxation	15	0	0	0	0
Department of Budget and Management	1	0	0	0	0
Department of Education	30	20	1382	88.07	22.33
Department of General Services	24	24	8,250	193.24	10.70
Department of Health and Mental Hygiene	18	7	6,059	239.99	6.85
Department of Human Resources	33	26	6,055	248.06	24.49
Department of Juvenile Services	14	14	1,557	545.73	22.61
Department of Labor, Licensing & Regulation	14	9	1,331	89.73	16.77
Department of Natural Resources	6	2	558	24.78	23.37
Department of the Environment	5	4	963	47.42	37.16
Department of Transportation	82	82	10,589	10,478.23	42.40
Department of Veterans Affairs	12	7	78	309.16	46.81
Dept. of Housing and Community Development	3	0	0	0	0
Dept. of Public Safety and Correctional Services	35	5	7970	707.83	9.44
Judiciary of Maryland	2	0	0	0	0
Maryland Automobile Insurance Fund	1	1	205	134.69	39.30
Maryland Department of Disabilities	1	1	33	0.11	1.18
Maryland Department of Planning	1	1	187	5.75	8.98
Maryland Environmental Service	4	3	250	16.96	62.56
Maryland Food Center Authority	1	1	26	423.61	7.14
Maryland General Assembly	1	1	852	151.45	49.38
Maryland Insurance Administration	1	1	242	9.86	40.95
Maryland Military Department	33	27	114	56.12	8.30
Maryland Public Broadcasting Commission	1	1	140	94.05	14.94
Maryland School for the Deaf	2	2	420	129.81	23.16
Maryland Stadium Authority	2	2	2,150	849.43	40.07
Maryland State Archives	1	1	71	3.30	33.78
Maryland State Police	30	30	1891	468.32	29.04
Morgan State University	1	1	1741	203.07	15.81
St. Mary's College of Maryland	1	1	498	267.89	28.00
Subsequent Injury Fund	1	1	16	4.18	72.57
University System of Maryland	17	17	36,670	8,579.05	41.64
TOTAL	397	295	91,320	24,505.16	31.32

APPENDIX F

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County Recycling Coordinators

Allegany

Ms. Brynn Laird
Recycling Coordinator
Allegany County Dept. of Public Works
701 Kelly Road, Suite 300
Cumberland, MD 21502-
Phone: (301) 777-5933 **Ex:** 210
Fax: (301) 777-2001
Email: blaird@alleganygov.org

Anne Arundel

Mr. Richard Bowen
Solid Waste Recycling Manager
Waste Management Services
2662 Riva Road
MS-7406
Annapolis, MD 21401-
Phone: (410) 222-7951 **Ex:**
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Email: pwbowe63@aacounty.org

Baltimore City

Ms. Simone Pope
Bureau of Solid Waste
200 Holliday Street
Baltimore, MD 21202-
Phone: (410) 396-4511 **Ex:**
Fax: (410) 545-6117
Email: simone.pope@baltimorecity.gov

Baltimore County

Mr. Richard Keller
Recycling & Waste Prevention Manager
County Office Building
111 West Chesapeake Avenue, Rm 225
Towson, MD 21204-
Phone: (410) 887-2000 **Ex:**
Fax: (410) 887-2931
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Calvert

Ms. Heather Maggard

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Lusby, MD 20657-
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heather.maggard@calvertcountymd.gov

Caroline

Mr. Kevin Brown
Recycling Coordinator
Department of Public Works
520 Wilmuth Street
Denton, MD 21629-
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Carroll

Ms. Maria Myers
Recycling Manager
Dept. of Public Works
225 North Center Street
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Westminster, MD 21157-5194
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Email: mtmyers@carrollcountymd.gov

Cecil

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Recycling Program Manager
758 East Old Philadelphia Road
Elkton, MD 21921-
Phone: (410) 996-6275 **Ex:**
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Charles

Ms. Meg Romero
Department of Public Works
1001 Radio Station Road

La Plata, MD 20646-
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Dorchester

Mr. Paul Simpkins
Dorchester County Landfill
6815 E. New Market Ellwood Rd.
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Frederick

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Recycling Program Manager
Department of Solid Waste
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Garrett

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Oakland, MD 21550-
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Harford

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Recycling Specialist
Maryland Environmental Service
3135 Scarboro Road
Street, MD 21154-
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Howard

Mr. Alan Wilcom
Recycling Coordinator
Bureau of Environmental Services

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Kent

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Midshore

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Montgomery

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Division of Solid Waste Services
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Prince George's

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Recycling Manager
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Queen Anne's

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312 Safety Drive

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Somerset

Mr. Charles Cavanaugh
Director of Solid Waste Management
Somerset County Government
11916 North Somerset Avenue
Princess Anne, MD 21853-
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St. Mary's

Mr. Nick Zurkan
Solid Waste & Recycling Manager
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California, MD 20619-
Phone: 301-863-8400 **Ex:** 3550
Cell : 240-925-1425
Fax: 301-863-8810
Email: Nicholas.Zurkan@stmarysmd.com

Talbot

Mr. Ray Clarke
Recycling Coordinator
Department of Public Works
215 Bay Street, Suite 6
Easton, MD 21601-
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Washington

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Recycling Coordinator
12630 Earth Care Road
Hagerstown, MD 21740-
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Email: adrury@washco-md.net

Wicomico

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Recycling Coordinator
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Salisbury, MD 21801-
Phone: (410) 548-4935 **Ex:**
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Worcester

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