



Maryland
Department of
the Environment

**MARYLAND SOLID WASTE MANAGEMENT
and DIVERSION REPORT
– 2022 (CY 2021 data) –**

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Resource Management Program

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Overview

Introduction

The Maryland Department of the Environment (Department or MDE) respectfully submits to the Governor and General Assembly MDE's Annual Report describing how solid waste was managed in Maryland during calendar year (CY) 2021. 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 calendar year. 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 CY21, and an overview of the State's technical assistance activities during Fiscal Year (FY) 2022. 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 CY21, Maryland counties and Baltimore City generated 13,931,608 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 an increase of 19.3% from the 11,673,472 tons generated in CY20. 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 3,214,488 tons of MRA recyclables, and 4,580,145 tons of waste disposed (without recycled MSW ash and backend scrap metal), for a total of 7,794,613 tons of MRA waste generated in Maryland.

Table 1 – Maryland Waste Generation Totals

County	Total Waste (tons)
Allegany	478,117
Anne Arundel	1,189,044
Baltimore City	1,510,490
Baltimore County	1,708,238
Calvert	246,744
Carroll	537,864
Cecil	397,903
Charles	396,618
Dorchester	81,874
Frederick	397,138
Garrett	62,761
Harford	443,234
Howard	1,152,243
Mid-Shore *	355,648
Montgomery	1,570,381
Prince George's	2,170,440
Somerset	68,915
St. Mary's	129,622
Washington	222,191
Wicomico	330,384
Worcester	162,887
State Highways	318,873
MARYLAND TOTAL ^	13,931,609

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

^ Due to rounding the Maryland Total differs from the actual value of 13,931,608.33. Maryland counties total 13,612,735.33.

A total of 9,942,620 tons of waste was accepted at Maryland permitted solid waste acceptance facilities. Of that total, 9,183,693 tons was managed by Maryland permitted solid waste acceptance facilities during CY21 by recycling, disposal (incineration and landfilling), or transportation out-of-State (see Table 3). 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)	13,931,608
B	Total Maryland Waste Recycled (see Table 17, including “**” footer)	7,172,837
C	Total Maryland Waste Disposed (A – B)	6,758,771
D	Total Maryland waste recycled that was not managed through a Maryland permitted Solid Waste Acceptance Facility (7,172,837 (Table 17) – 1,740,398 (Table 3))	5,432,439
E	Total waste disposed by Maryland counties, but not captured by a Maryland permitted solid waste acceptance facility ^	89,296
F *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment ^^^	196,729
G	Total waste imported into Maryland (see Table 14)	327,909
H **	Disposed Ash, Back-End Scrap Metal, and By-Pass ^^^	249,182
Total Waste Managed by Maryland permitted solid waste acceptance facilities (A-D-E+F+G+H) (see Table 3)		9,183,693

Waste generated in Maryland	Waste generated vs. managed adjustments	Waste managed by Maryland Permitted Solid Waste Acceptance Facilities
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- * To avoid double-counting and accurately report the amount of waste generated in Maryland, the amount of recycled product material from the incineration process is subtracted from the amount of material sent to the incinerator. However, this material is managed by permitted facilities.
- ** To avoid double-counting and accurately report the amount of waste generated in Maryland, disposed product material from the incineration process is not counted as waste generated in Maryland. However, this material is managed by permitted refuse disposal systems.
- ^ Not reported separately in report. Reported by counties via the MRA Tonnage Reporting Survey (53,417 tons) and included in the 13,511,215 waste generated tons.
- ^^ 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. 159,705.67 tons of ash recycled + 37,023.3 tons of back-end scrap metal and bypass recycled = 196,729.17 tons. 249,182.3 tons of disposed ash, back-end scrap metal, & by-pass.

Maryland achieved a 45.8% MRA waste diversion rate. This consisted of a 42.5% MRA recycling rate (3,214,468 tons of MRA recycling, plus 95,217 tons resource recovery facility credit) plus a 3.3% (269,611 tons reduced) source reduction credit. An additional 3,958,369 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 7,268,054 tons recycled in Maryland, including the resource recovery facility credit. (See Tables 17 and 18, including footnotes, for details.)

Other highlights for CY21:

- * 3,202,459 tons (35%) of the waste managed by Maryland permitted solid waste acceptance facilities was landfilled in Maryland;
- * 1,516,539 tons (17%) were recycled/reused in Maryland;
- * 1,302,266 tons (14%) were incinerated in Maryland; and
- * 2,315,499 tons (25%) were exported to out-of-State facilities. (See Table 15, including footnotes, for details.)
- * Maryland remains a significant exporter of solid waste and exports more waste than it imports. A total of 2,315,499 tons of waste was exported from Maryland, while only 327,909 tons of waste was imported into Maryland. (See Tables 14 and 15, including footnotes, for details.)

- * Maryland MSW landfills reported a total available capacity of 48,853,125 tons in CY21. That is a reduction of 6.2% from the 52,061,690 tons in CY20. (See Appendix C, including footnotes, for details.)
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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 CY21. 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 CY21, 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 CY21

In CY21, 9,942,620 tons of solid waste was accepted by Maryland permitted solid waste acceptance facilities, NWW recycling facilities, and composting facilities. The 9,942,620 tons includes waste stored on site and waste sent from one facility to another. Of the 9,942,620 tons accepted, 9,183,693 tons were managed by storing, recycling and disposal in Maryland, or transportation out of State.

The amount of out-of-State waste that was managed in Maryland in CY21 increased to 327,909 tons, compared to 302,747 tons in 2020. The quantity of solid waste accepted, processed, and disposed at the permitted refuse disposal systems in Maryland is similar to previous years. 3,202,459 tons of waste was landfilled, and 1,302,266 tons was incinerated in Maryland. 1,516,539 tons of reclaimed recyclables were collected, sorted, and transferred to recycling facilities in Maryland. Figure 1 depicts the millions of 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 CY 21. There was a decrease, to 2,315,499 tons, in the amount of waste exported compared to CY20 (2,582,227 tons).

Figure 1 - Waste Managed by Maryland Permitted Facilities

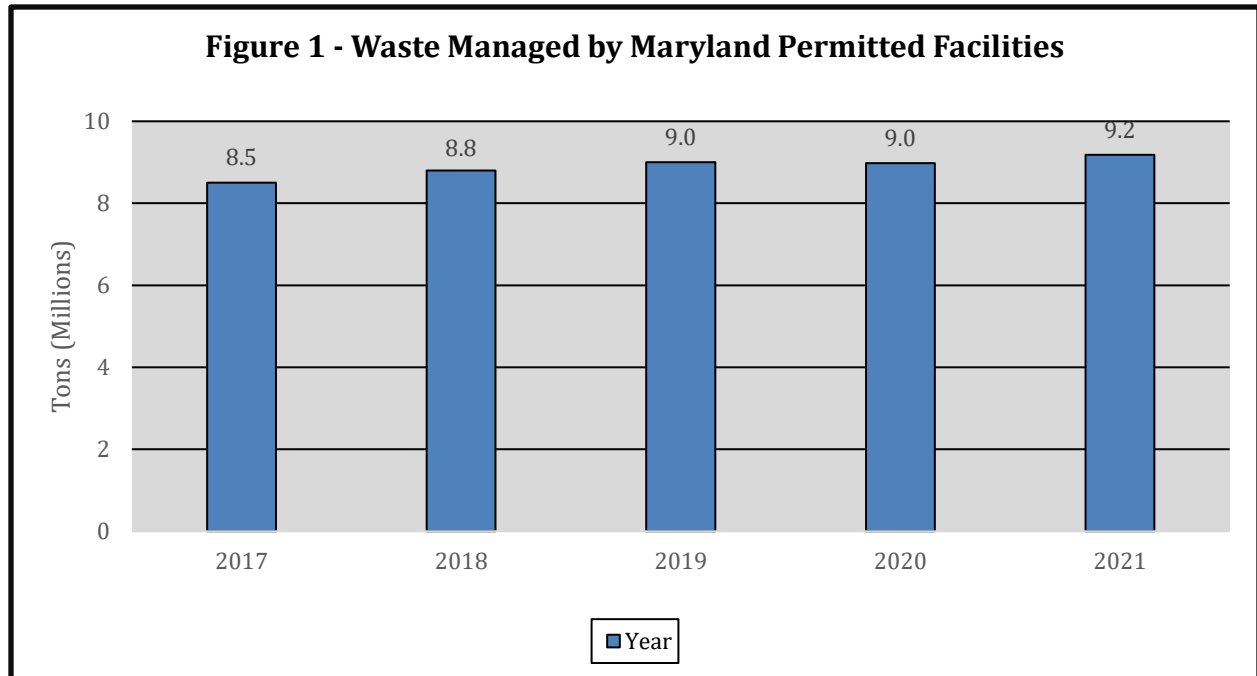


Table 3 details the total amount of solid waste that Maryland permitted solid waste acceptance facilities stored on site or managed via export, disposal (i.e., landfilling and incineration), and recycling/reuse. Permitted solid waste acceptance facilities do not report the types of MSW collected, only 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 CY21 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	5,774,769	149,420	0	4,366,211	29,114	4,544,745
Construction & Demolition Debris	2,755,685	448,970	0	1,812,159	810,244	3,071,373
Industrial Waste	34,187	2,459	0	31,251	0	33,710
Land Clearing Debris	34,082	13,982	1,214	19,137	862	35,195
Other Wastes ⁴	118,091	0	0	113,444	0	113,444
Yard Trimmings	384,506	31,634	262,805	793	12	295,244
Food Scraps/Manure, etc.	48,345	0	48,321	0	0	48,321
NWW/Wood Materials	546,765	587,823	34,064	5,676	6,698	634,261
Total Waste Received	9,696,430	1,234,288	346,404	6,348,671	846,930	8,776,293
Incinerator Ash	246,190	159,706	0	247,694	0	407,400
TOTAL REPORTED	9,942,620	1,393,994	346,404	6,596,365	846,930	9,183,693

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 (“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 CY21, 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 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 Mid-Shore Regional Solid Waste Municipal Landfill in Talbot County ceased its landfill operations in 2011. Under a multi-jurisdictional agreement, waste from the four Mid-Shore 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.

Table 4 – Permitted MSW Landfills

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Allegany	Mountainview Municipal	Private	76,666	76,666	0
Anne Arundel	Millersville Resource Recovery Facility	County	208,147	173,678	8,352
Baltimore City	Quarantine Road	City	355,905	276,944	264
Baltimore	Eastern Sanitary	County	512,332	490,059	1,467
Calvert	Appeal Sanitary	County	8,751	404	6,476
Caroline	Midshore II	County	152,962	152,830	132
Carroll	Northern Municipal	County	22,417	15,779	6,638
Cecil	Cecil County Central-Horizontal Expansion	County	202,813	119,731	5,502
Charles	Charles County Municipal	County	142,909	132,316	1,692
Dorchester	Beulah Municipal	County	70,245	62,514	137
Frederick	Fort Detrick Area B	Federal	4,603	4,603	0
	Reichs Ford/Site B	County	10,036	8,944	1,093

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	32,301	31,885	152
Harford	Harford Waste Disposal Center (Expansion)	County	17,400	5,782	11,618
Howard	Alpha Ridge Municipal	County	56,252	4	4,417
Montgomery	Montgomery County Site 2	County	0	0	0
Prince George's	Brown Station Road	County	386,282	384,862	1,420
St. Mary's	St. Andrew's Municipal	County	11,776	0	11,776
Somerset	Somerset County	County	28,283	27,892	391
Talbot	Midshore Regional Solid Waste Facility	County	0	0	0
Washington	Forty West Municipal	County	155,477	154,384	707
Wicomico	Newland Park Municipal	County	161,649	161,649	0
Worcester	Central Sanitary	County	64,570	57,078	1,636
TOTAL			2,681,776	2,338,004	63,870

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

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, if 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.

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	52,327	30,216	441
Baltimore County	Days Cove Rubble Landfill Lateral Expansion	Private	160,391	160,121	270
	Honeygo Run Reclamation Center	Private	250,080	250,062	18

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Prince George's	Ritchie Land Reclamation	Private	339,843	303,763	6,316
Queen Anne's	Baker Rubble	Private	24,200	24,200	0
TOTAL			826,841	768,362	7,045

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

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.

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	55,818	46,482	0
	Hawkins Pt. Plant	Private	35,924	35,924	0
	W. R. Grace and Co. – Davison Chemical Division	Private	13,687	13,687	0
Frederick	Essroc Cement Corporation	Private	0	0	0
TOTAL			105,429	96,093	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

LCD Landfill

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

Table 7 – Permitted Landclearing Debris Landfills

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

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

^ Knott Landclearing Debris is closed. Hance and Howlin Landclearing Debris are not accepting any waste.

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.

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	81,435	0	81,435
	Triumvirate	Private	182	0	182
Baltimore County	Eastern	County	83,510	987	82,670
	Western Acceptance	County	181,205	0	181,205
Calvert	Appeal	Private	121,197	0	121,197
Cecil	Stemmers Run	County	574	0	574
	Woodlawn	County	1,500	0	1,500
Howard	Citron Hygiene	Private	29	0	29
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	45,844	0	45,844
Washington	Agape Pet Services	Private	19	0	19
Wicomico	Foskey Lane	Private	1,193	0	1,193
	Curtis Bay	Private	301	0	301
Worcester	Ocean City	Municipal	36,593	0	36,593
TOTAL			553,582	987	552,742

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

Solid or Medical Waste Processing Facility

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

Table 9 – Permitted Solid and Medical Waste Processing Facilities

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore City	L & J Processing Facility	Private	32,474	0	32,474
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0
Calvert	Southern Maryland Processing	Private	14,350	0	14,350
Montgomery	C&D Recovery Processing	Private	42,917	143	42,774
Prince George's	Dower House Recycling and Processing	Private	0	0	0
	Sun Services Processing & Recycling Center	Private	144,750	0	144,750
Wicomico	Peninsula Regional Medical Center**	Private	473	0	473
	Bennett Processing	Private	10,585	0	10,432
TOTAL			245,549	143	245,253

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

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

Solid Waste Processing Facility and 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.

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	42,111	0	42,111
Anne Arundel	Annapolis Junction Recycling and Transfer Station	Private	546,154	0	546,154
	Biomedical Waste Services Inc.	Private	1,954	0	1,954
	Curtis Creek Processing Facility and Transfer Station	Private	136,175	0	136,175
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	176,557	0	176,557
	Stericycle, Inc.	Private	21,470	0	21,470
	Baltimore Recycling Center, LLC	Private	186,547	0	186,547
	Daniels Sharpmart	Private	2,424	0	2,424
	World Recycling Company	Private	8,225	0	8,225
Baltimore County	Baltimore County Central Acceptance Facility	County	326,480	0	328,935
Carroll	Northern Municipal Landfill	County	112,387	0	112,387
	Roll-Off Express	Private	142,603	0	142,603
Frederick	Reichs Ford Landfill	County	246,978	0	246,978
Harford	Auston Processing and Transfer Facility	Private	2,033	19	2,014
Howard	Alpha Ridge Municipal Processing & Transfer Facility	County	59,893	0	59,893
	Ameriwaste Processing and Transfer Station	Private	67,126	0	67,126
Montgomery	Montgomery County Solid Waste Processing and Transfer Station	County	740,849	0	740,842
Prince George's	Recycle One Processing & Transfer Station	Private	295,328	0	295,328
	Sheriff Road Processing Transfer Facility	Private	139,720	0	139,720
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Wicomico	CES-Connelly Road Processing & Transfer Station	Private	3,913	0	3,913
TOTAL			3,258,927	19	3,261,356

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

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.

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	700,028	698,239	205,637
	Curtis Bay Energy	Private	26,382	26,382	10,840
Charles	Naval Support Facility Indian Head Incinerator	Federal	103	0	103
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	577,128	577,579	164,098
Somerset	Smith Island Incinerator	County	129	66	79
TOTAL			1,303,770	1,302,266	380,757

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

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. 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	Braddock Construction, LLC.	Braddock Construction, LLC.	14	7	0
Anne Arundel	A-A Recycle & Sand, Inc.	A-A Recycle & Sand, Inc.	32,992	25,760	20,839
	L and W Recycling	L & W Recycling, Inc.	15,481	15,481	21,984
Baltimore County	Edrich Lumber, Inc.	Edrich Lumber, Inc.	24,732	24,732	32,228
	Hollins Organic Products, Inc.	Hollins Organic Products, Inc.	17,774	17,774	16,540
	Hollins Organic Products, Inc. 2	Hollins Organic Products, Inc	0	0	0
	King Mulch and Pallet	Albert J. Bierman	5,115	5,115	4,592
	Northwest Recycling, LLC.	Northwest Recycling LLC.	16,382	16,382	15,301
	Wirtz & Daughters, Inc.	Wirtz And Daughters, Inc.	17,763	17,763	42,431
Calvert	A & L Natural Wood Waste Facility	A.H Hatcher Inc.	18,570	6,409	6,409
Caroline	Cahall Construction, LLC	Cahall Construction, LLC	1,939	0	0
	Danny’s Grinding Services, LLC	Danny’s Grinding Services, LLC	6,400	4,000	4,000
Carroll	C. J. Miller, LLC.	C. J. Miller, LLC.	658	658	2,948
	WeCare Denali /Harvest RGI	WeCare Denali, LLC/Harvest RGI, LLC	6,470	8,901	24,033
	Hidey’s Landscape Supply Yard	Hidey’s Lawn Services LLC.	586	3,516	4,279
Cecil	Chesapeake Wood Recycling	Chesapeake Investment, Inc.	4,400	3,570	3,000

Jurisdiction	Facility Name	Permittee	NWW Accepted	NWW Handled	
				NWW Recycled*	Product Marketed*
Charles	Beuchert Excavating, Inc.	Beuchert Excavating, Inc.	1,754	1,214	1,344
	Calvert Wood Recycling	Calvert Wood Recycling LLC	3,236	3,236	2,991
	Chesapeake Environmental Materials	Chesapeake Environmental Materials	0	0	0
	Mona Recycling	Michael Mona Jr.	1,688	1,688	1,319
Frederick	Butler Wood Recycling	William Lee Butler	1,379	2,094	2,033
	Grant County Mulch	Grant County Mulch, Inc.	45,429	86,192	63,359
	Bussard Brothers Landscape	R. W. Bussard & Sons, Inc.	6,997	7,225	6,034
Harford	Comer Construction, Inc	Comer Construction, Inc	0	0	0
	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	748	575	548
Howard	Level Land Lisbon Mulch Yard	Level Land, Inc.	5,250	6,012	5,800
	Oak Ridge Farm	Oak Ridge Farm, LLC	6,072	10,480	11,083
	RLO Contractors, Inc.	RLO Contractors, Inc.	50,872	66,370	66,370
Kent	Sharp Lawn & Tree, Inc.	Sharp Lawn & Tree, Inc.	440	350	448
Montgomery	Acme Biomass Reduction, Inc.	Acme Biomass Reduction, Inc.	3,565	3,031	1,740
	Country Nursery	Country Nursery	0	0	363
	Grant County Mulch Ground Covers	Grant County Mulch, Inc.	24,251	24,082	23,857
	Spring Garden Farm	Spring Garden Farm	22,268	22,958	4,985

Jurisdiction	Facility Name	Permittee	NWW Accepted	NWW Handled	
				NWW Recycled*	Product Marketed*
Prince George's	Grant County Mulch Facility	Grant County Mulch, Inc.	101,532	123,420	130,560
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	3,894	3,892	3,757
	Grange Hall Yard	Cole Ventures, Inc.	3,293	0	3,714
	Pardoe's Lawn and Tree Service, Inc.	Pardoe's Lawn and Tree Service, Inc.	661	415	655
St. Mary's	Charlotte Hall Lumber Yard	Bay Works Wood Processing, LLC	5,630	6,299	6,234
Talbot	Dependable Sand and Gravel Company, Inc.	Dependable Sand and Gravel Company, Inc.	2,795	3,546	3,239
Washington	Hess Road Recycling Center	Universal Contractor Inc.	0	0	0
Wicomico	Dunn's Tractor Service, Inc.	Dunn's Tractor Service Inc.	356	357	357
	Grant County Mulch Facility	Grant County Mulch Inc.	24,891	45,031	67,845
TOTAL			486,277	568,535	607,219

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in CY21, but not managed until CY22.

Composting Facilities

Composting facilities are not considered a refuse disposal system, however, they are permitted by MDE and thusly 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. Composting facility waste management practices are presented in Table 13.

Table 13 – Permitted Composting Facilities

Jurisdiction	Facility Name	Permittee	Facility Tier*	Feedstocks	
				Accepted	Compost Produced
Anne Arundel	Millersville Landfill & Resource Recovery Composting Facility	WeCare Denali, LLC	Tier 1	20,692	20,213
	Tolson & Associates, LLC.	Tolson & Associates, LLC.	Tier 1	2,174	2,825
	Veteran Compost Facility	Garrity Renewables, LLC	Tier 2	0	0
Baltimore County	Eastern Sanitary Landfill	Baltimore County DPW	Tier 1	19,776	9,888
	PEH Organics Recycling, Inc.	PEH Organics Recycling, Inc.	Tier 2	0	0
Caroline	Twin Maple Compost Facility	Mid-Atlantic Organic Resource Company, LLC	Tier 2	16,329	15,960
Carroll	WeCare Denali/Harvest RGI	WeCare Denali, LLC/Harvest RGI	Tier 1	37,984	11,954
Cecil	Cecil County Central Landfill	Cecil County DPW	Tier 1	5,490	2,745
	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	2,991	3,514
Frederick	Key City Compost & Utica Bridge Farm	Resolution Solutions, LLC	Tier 2	1,008	0
	Reichs Ford Site B Landfill	Frederick County DPW	Tier 1	16,696	8,348
Harford	Harford Mulch and Compost Facility	Maryland Environmental Service	Tier 1	27,635	6,813
	Veteran Compost Facility	Garrity Renewables, LLC	Tier 2	4,030	1,750
Howard	Composting Facility at Alpha Ridge Landfill	Howard County DPW	Tier 2	8,819	15,838
	Level Land Lisbon Mulch Yard	Level Land, Inc.	Tier 1	3,900	2,800
Montgomery	Montgomery County Yard Trim Composting Facility	Maryland Environmental Service	Tier 1	54,171	39,347
	ACME Biomass Reduction Facility	ACME Biomass Reduction, Inc.	Tier 1	40,387	34,329
	Aspen Nursery	Aspen Landscape Contractors, Inc.	Tier 1	1,701	155
	City of College Park Composting Facility	City of College Park DPW	Tier 1	2,671	1,249

Jurisdiction	Facility Name	Permittee	Facility Tier*	Feedstocks	
				Accepted	Compost Produced
Prince George's County	Prince George's County Organics Composting Facility	Maryland Environmental Service	Tier 2	61,660	28,392
Washington	Forty West Landfill	Washington County DPW	Tier 1	2,106	1,053
TOTAL				344,575	227,423

* 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 CY21, Maryland's permitted solid waste facilities accepted waste from Canada, Connecticut, Delaware, Florida, Georgia, Kentucky, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, D.C., West Virginia, and Wisconsin. Highlights include:

- * There was an increase of 8.3% of the amount of solid waste and organics imported (327,909 tons) into Maryland in CY21 compared to CY20 (302,747 tons).
- * The solid waste and organics imported into Maryland comprises 3.6% of over 9 million tons of solid waste managed at permitted Maryland solid waste acceptance, natural wood waste recycling, and composting facilities.
- * Ritchie Land Reclamation Limited Partnership Landfill in Prince George's County and Mountainview Sanitary Landfill in Allegany County received the bulk of C&D (108,492 tons) and MSW (27,213 tons) waste imported to Maryland, respectively.

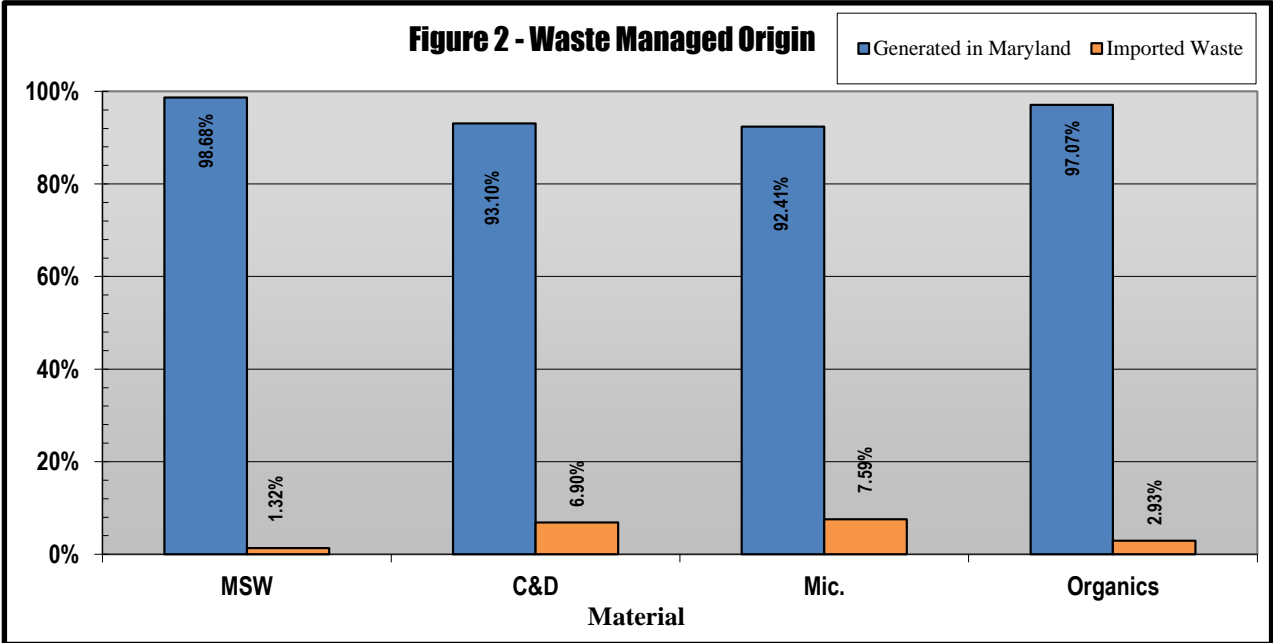
C&D that was imported into Maryland was disposed of at privately-owned rubble landfills or was processed into segregated recyclables that were then transferred to mid-Atlantic recycling facilities.

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	59,179	DE, NC, NJ, NY, OH, PA, SC, TN, VA, WASHINGTON DC, WV	4,544,745

Solid Waste Category	Tons of Solid Waste Imported Into Maryland	Jurisdictions Where the Solid Waste Originated	Total Tons Managed
C&D	199,310	DE, PA, VA, WASHINGTON DC, WV	3,071,373
Miscellaneous *	41,617	CANADA, CT, DE, FL, GA, KY, MA, MI, MN, MO, NE, NH, NJ, NC, NY, OH, PA, RI, SC, TN, TX, VA, VT, WASHINGTON DC, WV, WI	589,749
Organics	27,803	DE, PA, SC, VA, WASHINGTON DC	977,826
TOTAL	327,909		9,183,693

* 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 10.32% of the amount of solid waste exported in CY21 (2,315,499 tons) compared to the amount of waste exported in CY20 (2,582,227 tons). 38 of the 77 permitted and developed solid waste acceptance facilities that accepted waste in CY21 exported waste to 14 states and the Washington DC. 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 68% (1,567,240 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.

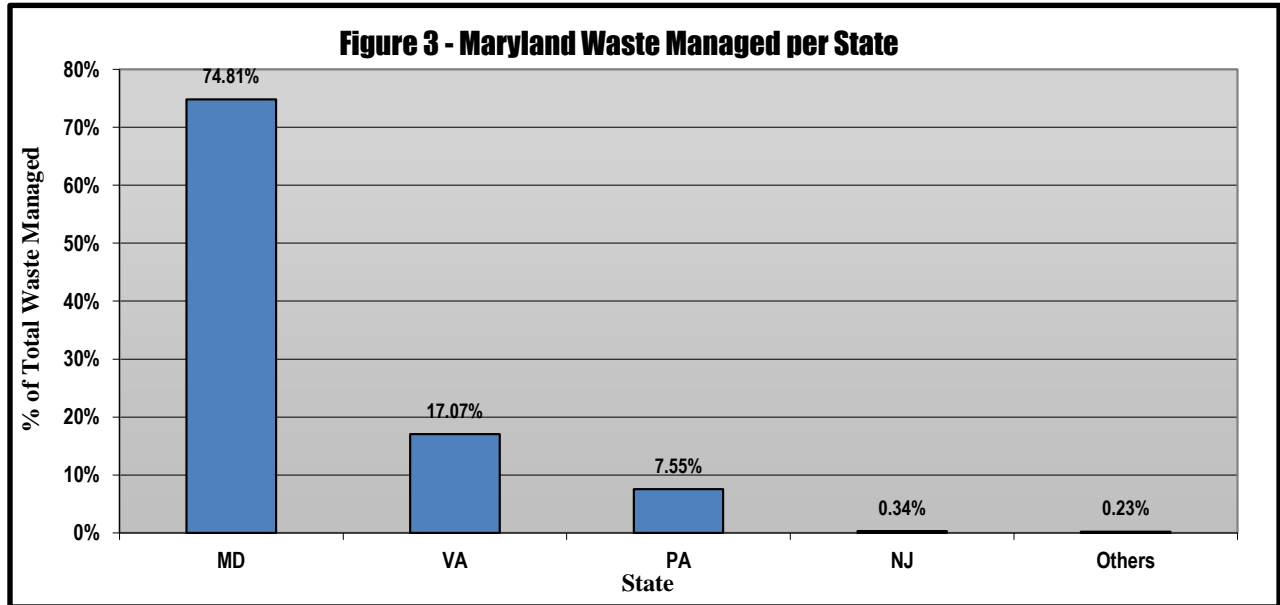


Table 15 – Maryland Exported Material Tonnage by State Destination

Solid Waste Category	Virginia	Pennsylvania	New Jersey	Other	Total (Tons)
MSW	1,000,020	484,023	34,118	15,224	1,533,385
C&D	405,159	187,989	0	4,453	597,601
Miscellaneous *	162,061	21,113	0	1,339	184,513
TOTAL (Tons)	1,567,240	693,125	31,118	21,016	2,315,499

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

Solid Waste Management Practices

In CY21, 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
Landfilled in Maryland	3,202,459	35.0%
Exported and Disposed	2,091,640	22.8%
Exported and Recycled	223,859	2.4%
Recycled/Reused in Maryland	1,516,539	16.5%
Incinerated in Maryland	1,302,266	14.1%
Stored in Maryland Facilities	846,930	9.2%
TOTAL	9,183,693	100%

Part II – Waste Diversion

Introduction

In Maryland, waste diversion is defined as the amount of waste recycled and the amount of waste diverted from entering the waste stream through source reduction activities. Waste diversion saves energy, reduces greenhouse gases, 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 Maryland Recycling Act (MRA) Tonnage Reporting Surveys, submitted by the counties and Baltimore City that contain information about solid waste known to the counties or Baltimore City to be exported directly out of state without passing through a Maryland permitted facility; and (2) the Solid Waste Tonnage Reports, submitted by Maryland permitted facilities.

Maryland's Legislative Mandate

In 1988, the Maryland Recycling Act (MRA) (Chapter 536) mandated that Maryland reduce the overall amount of solid waste disposal in the State through improved management, education, and regulation. Each county, including Baltimore City, is required to develop and periodically update a recycling plan addressing certain topics. The plan must be reviewed and approved by MDE. The MRA has been amended since its original passage. Currently, a county with a population greater than 150,000 is required to recycle 35% or more of its waste, and a county with a population of

less than 150,000 is required to recycle 20% or more of its waste. The MRA excludes from its scope scrap metal, land clearing debris, construction and demolition debris, sewage sludge, hospital wastes, and waste generated by a single individual or business and disposed 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 *Recent Legislation* web page at mde.maryland.gov/programs/LAND/Pages/LMA-Legislation.aspx. In FY22, MDE began the implementation of:

Recycling Market Development

Passed during the 2021 legislative session, the Recycling Market Development law requires the Office of Recycling in the Department of the Environment 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. See *Recycling Market Development* Section on Page 32 for more information.

Organics Recycling and Waste Diversion – Food Residuals

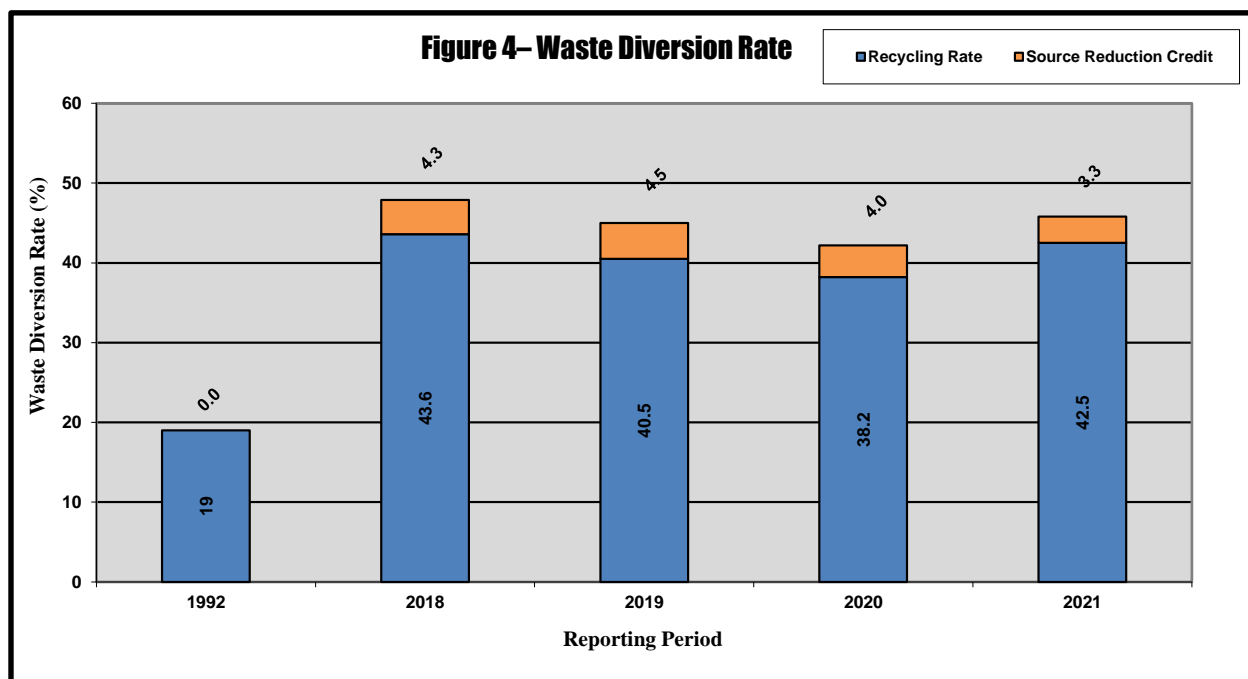
Passed during the 2021 legislative session, the Organics Recycling and Waste Diversion – Food Residuals law requires certain entities that generate food residuals to separate the food residuals from other solid waste and ensure that the food residuals are diverted from final disposal in a refuse disposal system in a composting facility. The requirements are a staggered rollout beginning in 2023. See *Organics Recycling and Waste Diversion – Food Residuals* Section on Page 33 for more information.

Maryland's 45.8% 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 45.8% in CY21. The 45.8% waste diversion rate was composed of a 42.5% MRA recycling rate and a 3.3% SR credit. Figure 4 provides a historical breakdown of Maryland's waste diversion rate.

Maryland's 42.5% Recycling Rate

In CY21, Maryland residents and businesses recycled 42.5% of the MRA waste generated. This is an increase from the 38.2% MRA recycling rate in 2020. The increase in the recycling rate in 2021 likely reflects impacts of the state emerging from aftermath of the COVID-19 pandemic.



The MRA recycling rate is calculated as: (MRA recycling tonnage + resource recovery facility credit) ÷ (MRA recycling tonnage + 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.”

On October 1, 2021, House Bill 280 became effective. The Bill alters Sections 9-1701 and 9-1703 of the Environment Article, Annotated Code of Maryland. It alters the definition of “recyclable materials” under the Maryland Recycling Act to exclude incinerator ash; and repealing the authority of a county to utilize a resource recovery facility to meet 5% of the waste reduction required to be achieved through recycling in the county’s recycling plan. The effects likely resulting in a decrease in the recycling rates reported in CY22.

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 CY21. 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.

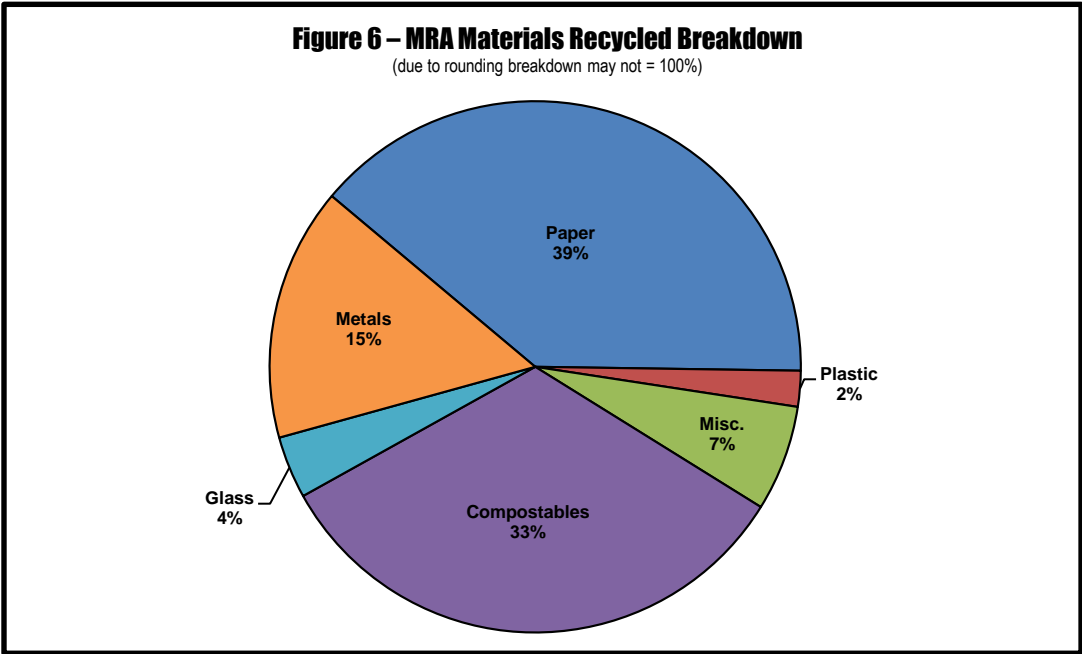
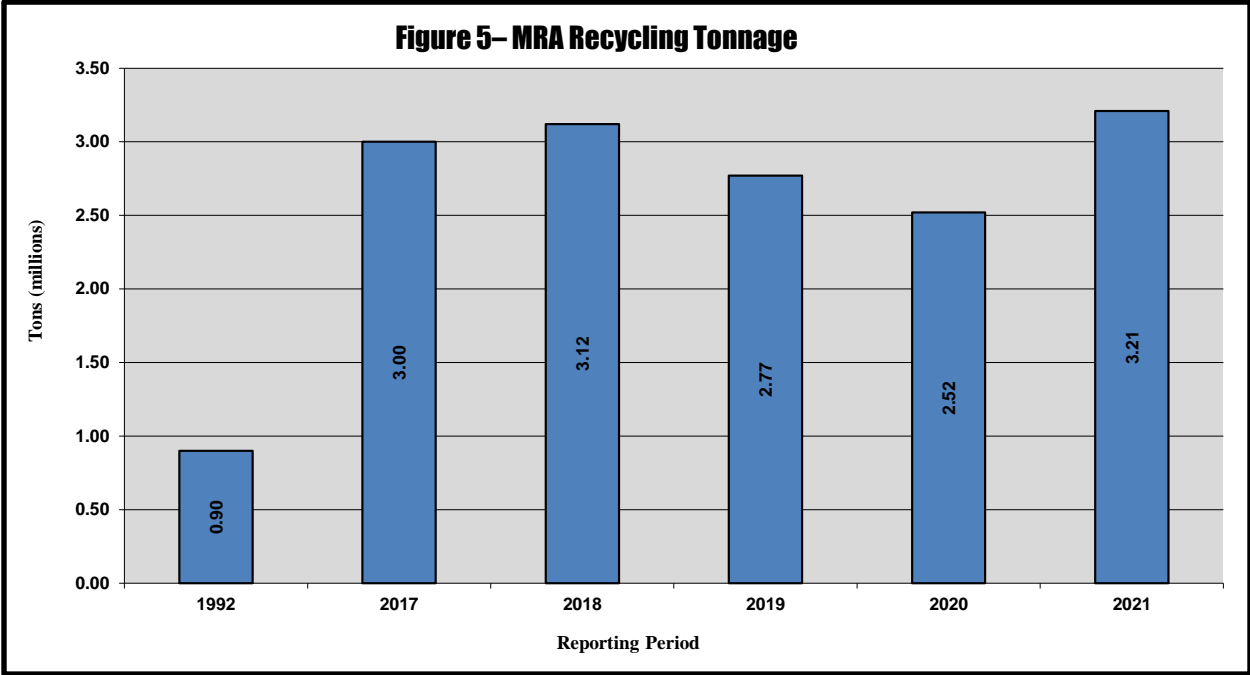


Table 17 – County Recyclables by Commodity in Tons for CY21

Compiled by the Maryland Department of the Environment from Reports Submitted for CY21

County	MRA Rate ² (%)	Mandatory Recycling Rate (%)	Waste Diversion Rate ³ (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables ⁵	Total Recycling*
				Compostables ⁴	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	48.66	20	48.66	4,579	652	53,976	4,289	199	1,234	64,929	335,632	400,561
Anne Arundel	39.69	35	44.69	110,100	10,697	17,149	95,549	7,244	19,706	260,445	379,191	639,636
Baltimore City	22.28	35	22.28	7,185	13,032	28,794	69,597	6,520	5,662	130,790	379,116	509,906
Baltimore Co.	28.88	35	33.88	73,403	11,049	99,117	71,934	5,410	13,192	274,105	267,571	541,676
Calvert	30.91	20	30.91	2,492	3,691	4,260	12,795	1,913	1,240	26,391	131,721	158,112
Carroll	42.29	35	47.29	66,266	7,585	9,994	10,749	3,979	8,084	106,657	268,470	375,127
Cecil	58.54	20	63.54	94,823	702	8,787	9,092	1,020	887	115,311	83,712	199,023
Charles	35.77	35	39.77	14,324	2,181	9,245	13,109	988	1,934	41,781	203,370	245,151
Dorchester	14.07	20	14.07	1,828	164	102	899	82	3,249	6,324	6,423	12,747
Frederick	30.35	35	35.35	26,412	857	18,812	20,453	1,492	4,779	72,805	75,082	147,887
Garrett	40.90	20	40.90	6,937	361	3,337	3,065	84	1,969	15,753	14,876	30,629
Harford	44.67	35	49.67	56,005	4,278	20,886	35,559	3,337	20,790	140,855	98,310	239,165
Howard	43.70	35	43.70	122,592	5,042	6,643	56,838	4,806	16,957	212,878	576,957	789,835
Mid-Shore ¹	46.09	20	47.09	66,208	2,669	5,300	26,095	1,083	982	102,337	66,667	169,004
Montgomery	52.09	35	57.09	185,974	17,682	59,225	107,310	11,151	93,143	474,485	378,908	853,393
Prince George's	61.71	35	65.71	119,073	34,936	138,642	671,323	17,601	7,131	988,706	182,994	1,171,700
Somerset	4.96	20	4.96	902	10	367	83	7	510	1,879	10,963	12,842
St. Mary's	21.70	20	21.70	4,650	1,062	2,187	4,163	574	1,619	14,255	29,546	43,801
Washington	25.87	35	25.87	2,108	2,708	2,716	31,971	1,367	1,177	42,047	25,244	67,291
Wicomico	38.92	20	38.92	70,053	1,505	5,267	6,475	917	2,194	86,411	91,607	178,018
Worcester	35.23	20	35.23	27,084	859	411	6,246	300	424	35,324	33,136	68,460
State Highways of Additional Asphalt and Concrete Recycled												318,873
TOTAL*	42.46	N/A	45.80	1,062,998	121,722	495,217	1,257,594	70,074	206,863	3,214,468	3,639,496	7,172,837

* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values (i.e., MRA Recyclables = 3,214,468.11, Non-MRA Recyclables = 3,958,369.14 tons, Total 7,172,837.25 tons. The MRA recycling rate includes an additional 95,217.20 tons for the RRF credit that is not included in this table).

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

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

3 Waste Diversion Rate = Recycling Rate + Source Reduction (SR) Credit (based on voluntary reporting of SR activities). **Bolded** rates include both recycling and SR activities. SR activities theoretically reduced the amount of waste generated by 269,610.66 tons.

4 Compostables include 1,008,495.9 tons of material that was composted/mulched and 54,502.1 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 38% US 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. 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 388,084 tons to 2,826,384 tons. Maryland’s EPA recycling rate of 38% is just above the overall EPA U.S. recycling rate of 36.4% for 2018 (most recent available as of the writing of this report).

Maryland’s 3.3% Source Reduction Credit

In CY21, 10 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 CY21 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 considered when assessing the completeness of non-MRA recyclables data. Nearly 3.6 million tons of non-MRA materials were reported as recycled in CY21. Table 18 offers a breakdown by category of the non-MRA materials reported as recycled in CY21.

Table 18 – Recycling of Non-MRA Materials in Tons

*Compiled by the Maryland Department of the Environment
from Reports Submitted for Calendar Year 2021*

MATERIAL	TONS RECYCLED
Antifreeze	1,387
Asphalt & Concrete	1,711,015
Coal Ash	293,652

MATERIAL	TONS RECYCLED
Construction/Demolition Debris	217,915
Landclearing Debris	77,292
Scrap Automobiles	189,160
Scrap Metal	526,950
Sewage Sludge	58,246
Soils	284,564
Waste Oil	21,358
Other Materials	576,830
TOTAL	3,958,369

Maryland's 27.1 % All StAR Recycling Rate

The All StAR (All State Agencies Recycle) Program is the name of the State government agency recycling program that is designed to help 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. Recycling Coordinators provide technical support to encourage recycling and to facilitate reporting on collection activities.

Maryland State government is required under Section 9-1706 of the Environment Article, Annotated Code of Maryland to achieve a recycling rate of at least 30%, or an amount that is determined "practical and economically feasible," but in no case less than 15%. State agencies are required to have recycling plans that address the placement of collection bins and the recycling of aluminum, glass, paper, and plastic at all State-owned or 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 CY21, State agencies recycled 19,290.83 tons of MRA materials for an overall MRA recycling rate of 27.1 %. Figure 7 provides a 5 year history of Maryland's All StAR recycling rate and Figure 8 summarizes the recycling tonnages since 2017. Table 19 summarizes the performance of each State agency participating in the All StAR program.

Also, the State government recycled 226,623.18 tons of non-MRA materials, including construction and demolition debris, antifreeze, motor oil, scrap metal, land clearing debris, concrete, and asphalt, that do not count toward the MRA Recycling Rate. A complete breakdown of the CY21 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 CY21 recycling totals reported by the counties (Table 17).

Figure 7– All StAR Recycling Rate

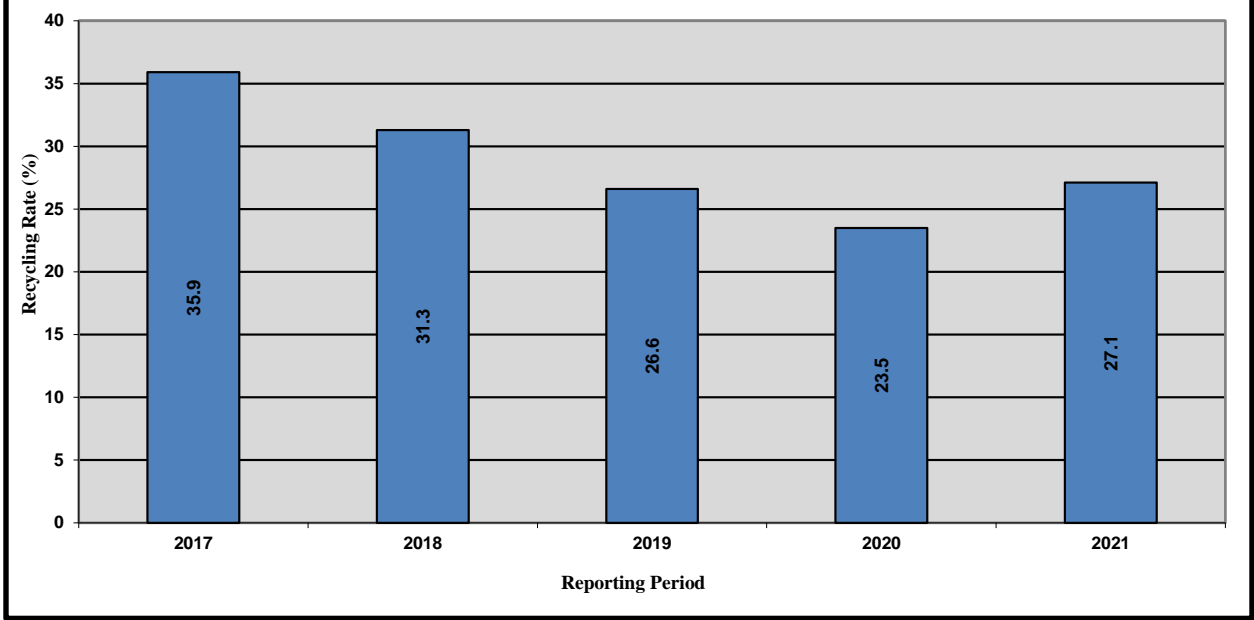


Figure 8– All StAR Recycling Tonnage

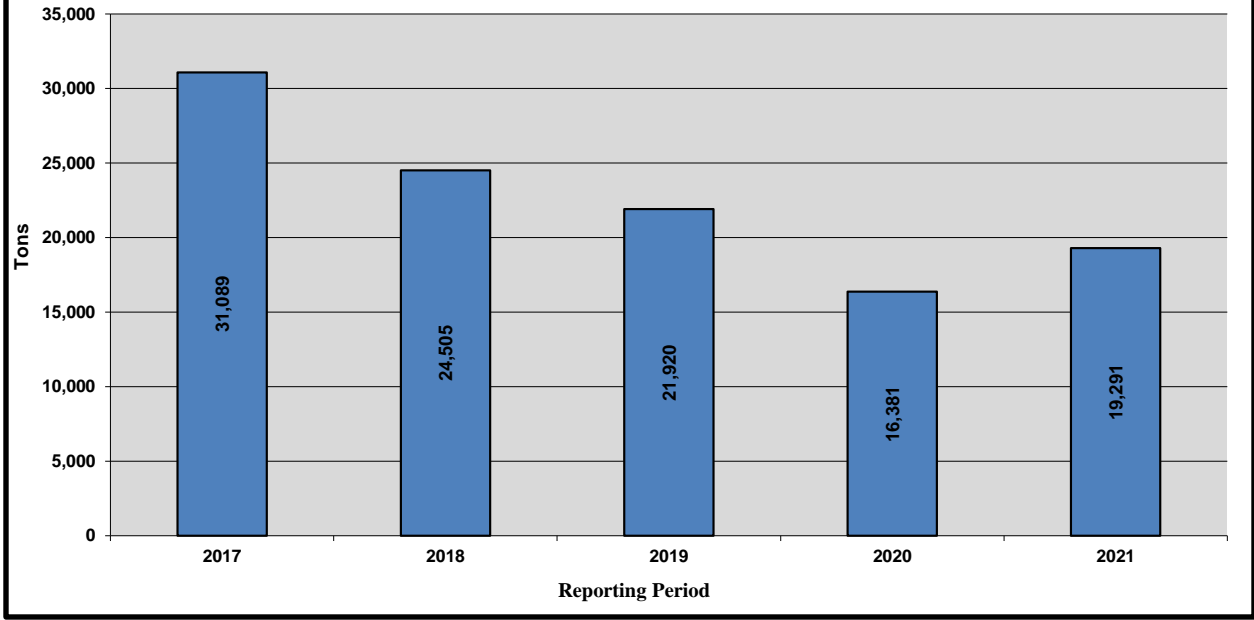


Table 19 – Maryland State Agencies' CY21 Recycling Rates

*Compiled by the Maryland Department of the Environment from
Reports Submitted for Calendar Year 2021*

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2021 (tons)	2021 MRA Recycling Rate (%)
Baltimore City Community College	1	1	324	9.69	7.16
Comptroller of the Treasury	1	1	186	67.07	90.92
Department of Agriculture	2	0	0	0	0
Department of Assessments and Taxation	14	13	176	11.33	15.43
Department of Budget and Management	1	1	185	3.66	5.50
Department of Education	27	27	1,986	90.14	26.30
Department of General Services	26	26	8,598	140.01	8.59
Department of Health	18	17	6,730	470.31	10.06
Department of Human Resources	32	29	6,404	237.81	18.07
Department of Juvenile Services	12	12	2736	377.39	18.95
Department of Labor	13	13	1,264	135.62	21.91
Department of Natural Resources	6	0	0	0	0
Department of the Environment	5	5	963	25.61	35.58
Department of Transportation	85	85	27,377	7822.51	40.34
Department of Veterans Affairs	7	7	929	836.64	47.88
Dept. of Housing and Community Development	3	3	366	57.78	25.05
Dept. of Public Safety and Correctional Services	36	7	7,970	452.88	4.64
Judiciary of Maryland	2	2	291	4.75	9.48
Maryland Automobile Insurance Fund	1	1	32	7.35	11.67
Maryland Department of Disabilities	1	1	33	0.11	3.06
Maryland Department of Planning	1	1	185	14.05	21.21
Maryland Environmental Service	3	2	245	6.05	50.97
Maryland Food Center Authority	1	1	1,026	236.94	6.14
Maryland General Assembly	1	1	852	71.40	23.28
Maryland Insurance Administration	1	1	802	8.06	29.57
Maryland Military Department	24	24	555	70.43	6.16
Maryland Public Broadcasting Commission	1	1	140	74.50	33.01
Maryland School for the Deaf	2	2	1,005	85.94	32.15
Maryland Stadium Authority	2	2	1,000	283.48	26.49
Maryland State Archives	1	1	73	3.65	31.88
Maryland State Police	32	20	2,313	562.99	35.90
Morgan State University	1	0	0	0	0
St. Mary's College of Maryland	1	1	1,929	239.80	19.32
Subsequent Injury Fund	1	1	16	3.95	60.96
University System of Maryland	18	18	146,183	6878.93	35.77
TOTAL	383	327	222,874	19,290.83	27.1

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

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 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.

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.

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 Gases and Energy Consumption

Using the EPA's Waste Reduction Model (WARM), Tables 20 and 21 detail greenhouse gas (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 CY21. 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 CY21

MRA Material	MTCO ₂ E* NWD^	MTCO ₂ E* WD^^	MTCO ₂ E* Savings
Glass	9,183	(37,450)	(46,633)
Mixed Metals	(207,848)	(2,329,333)	(2,121,486)
Mixed Organics	989,581	164,369	(825,212)
Mixed Paper	(63,841)	(5,119,700)	(5,055,859)
Mixed Plastic	390,482	189,850	(200,633)
Miscellaneous	(3,444)	(103,142)	(99,698)
TOTAL	1,114,113	(7,235,406)	(8,349,521)

* MTCO₂E = Metric Tons of Carbon Dioxide Equivalent

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

^^ WD = Waste Diversion from Maryland CY21 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 CY21

(in million BTUs)

MRA Material	BTUs* NWD^	BTUs* WD^^	BTU* Savings
Glass	105,560	(304,305)	(409,866)
Mixed Metals	(2,254,608)	(34,882,245)	(32,627,637)
Mixed Organics	(1,819,971)	(1,542,912)	277,059
Mixed Paper	(5,799,525)	(27,302,474)	(21,502,949)
Mixed Plastic	(3,945,268)	(8,014,615)	(4,069,347)
Miscellaneous	(168,607)	(1,020,136)	(851,528)
TOTAL	(13,882,419)	(73,066,687)	(59,184,268)

* 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 CY21 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 8.3 million metric tons of CO₂ equivalent emissions savings produced by Maryland’s waste diversion activities in CY21 (Table 22) are the equivalent of removing over 1.77 million passenger cars from the roadway each year or conserving over 939 million gallons of gasoline, or over 347 million cylinders of propane used for home barbeques. The 59 trillion British Thermal Unit (BTU) energy savings reported in Table 23 are the equivalent of the annual energy consumption of over 646 thousand households (i.e., 28.2% of the estimated 2,294,270 households in Maryland in CY20), or the amount of energy contained in over 10 million barrels of oil or over 491 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 were established to track the State’s progress in SMM. The goals are to be achieved by 2035. In CY21, the amount of energy use and recycling and waste diversion rates, while not meeting the goals, improved upon CY20. Table 24 sets forth 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	6.93 lbs./person/day
GHG Emissions Reductions	Reduction of 1.2 million MTCO ₂ e compared to 2016	Increase of 4.0 million MTCO ₂ e compared to 2016

SMM Goals	2035 Target	Current Status
Reduction in Energy Use	Reduction of 5.1 trillion BTUs compared to 2016	Increase of 2.1 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 – 22.66% Glass – 53.61% Metal – 73.49% Paper Products – 51.75% Plastic – 9.85% Yard Trimmings – 84.4%
Overall Statewide Recycling and Waste Diversion Rate	Recycling – 55% Waste Diversion – 60%	Recycling – 42.46% Waste Diversion – 45.8%

Special Programs

From July 2021 through June 2022 MDE continued implementing special programs designed to expand recycling and protect public health and the environment.

Recycle Marketing Development

Passed during Maryland’s 2021 legislative session, Maryland’s recycling market development law requires MDE to facilitate a recycle marketing program coordinated with the Department of Commerce (Commerce), the Department of General Services (DGS), the Department of Transportation (MDOT), the Maryland Environmental Service (MES), the Northeast Maryland Waste Disposal Authority (NMWDA), local governments, and private organizations. The law requires the Office of Recycling in MDE to promote the development of markets for recycled materials and recycled products in the State. It also requires MDE to evaluate the availability of recycling markets and identify businesses in the State that use recycled materials.

In May 2022, MDE sent a survey to county recycling coordinators asking for their input for areas where MDE should focus their marketing efforts. The counties provided the following materials were difficult to recycle and find markets for within the state: compressed gas cylinders, glass, mattresses, food residuals, plastics (not including PET & HDPE), asphalt shingles, boat shrink wrap, tires, lithium-ion batteries, and textiles.

MDE facilitated stakeholder meetings with the aforementioned state and local agencies in late 2021, with planned follow-ups in mid-late 2022. Throughout 2022 MDE investigated recycling market concerns and strategies impacting other states and municipalities throughout the USA. MDE is continuing to evaluate specific commodity recycling programs and investigate solutions for hard to recycle products. The goal is to provide solutions and educational support for county recycling program managers. MDE is currently working on:

- 1) Investigating the feasibility of a regional mattress extended producer responsibility (EPR) program.

- 2) Acquiring funding for a multi-agency recycling incubator program supporting the long-term recycling initiatives that require advancement in technology and innovation solutions.
- 3) Reinvigorating recycling programs within state correctional facilities, specifically directed towards organics recycling. This could be achieved by both large-scale composting operations and through anaerobic digestion. Recommended placement of these facilities include Roxbury Correctional Institution (Washington Co), Eastern Correctional Institute (Somerset Co), and North Branch Correctional Institution (Allegany Co).

In FY23, MDE has planned stakeholder meetings that offer opportunities to provide feedback on how the state can support increased recyclable materials and products. Continuing to work with state agencies, will enhance its education and outreach programs directed at recyclable materials and products. MDE will also work with federal and state agencies to fund recycling opportunities through the Bipartisan Infrastructure Law. MDE will investigate how state agency reports on recycling programs and what tools may be available to support the recycling market development law.

The law also requires the Department of Commerce, the Department of General Services, the Department of Transportation, and the Maryland Environmental Service shall report to MDE on relevant programs, tools, training guides, campaigns, and technologies available for promoting the development of markets for recycled materials and recycled products in the State, including efforts in State government to increase the use, reuse, and remanufacturing of recycled materials and the use of recycled products. These reports are found in Appendix F.

Organics Recycling and Waste Diversion – Food Residuals

Passed during Maryland’s 2021 legislative session, Maryland’s food residuals law requires certain persons that generate food residuals to separate said residuals and divert them from refuse disposal systems. Beginning January 1, 2023, the law applies to a person that generates at least two tons of food residuals each week and beginning January 1, 2024, it applies to a person that generates at least one ton of food residuals each week. A person is only subject to the requirement to separate and divert food residuals if the residuals are generated within 30 miles of an organics recycling facility with capacity and willingness to enter into a contract to accept all of the person’s food residuals. Diversion may be accomplished by any combination of the following: reducing residuals generated, donating servable food, managing residuals in an organics recycling system on-site, providing collection and transportation for agricultural use, and/or providing collection and transportation for processing in an organics recycling facility.

To facilitate this law, MDE has drafted regulations to further define the requirements necessary to achieving the law. The regulations are planned to be in effect by January 1, 2023. Additionally, MDE is developing tools to assist

businesses to comply with the law and is actively involved in outreach to businesses subject to the law.

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 CY21, the newsprint recycled content percentage was 0.00 %. For CY21, Maryland newspapers were granted a waiver from the 40% requirement due to the lack of paper stock.

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	NR	Herald-Mail	NR
American Farm Publications	0.0	Independent Newspapers, Inc.	0.0
Asian Fortune	NR	Korea Daily	NR
Baltimore Business Journal	1.94	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	0.46	News Journal, Wilmington	0.0
Chesapeake Publishing Corporation	0.0	Ogden Newspapers of MD, LLC	0.01
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 CY21, 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 CY21, Dex Media was granted a 1-year exemption from meeting the 40% recycled content requirement due to the lack of availability of 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 seven (107) manufacturers registered with MDE and were authorized to sell their products in Maryland in CY21. Fifty-four (54) manufacturers have MDE-approved free takeback programs. Of these, Acer America Corporation, ASUS Computer International, Best Buy, Dell Marketing LP, Element TV

Company, LP, EliteLux Technologies, Inc., Funai Corporation, Google, Inc., Hewlett Packard Company, Hisense USA, JVCKENWOOD USA Corp., Kyocera Communications, Inc., LG Electronics USA, Inc. Motorola Mobility, LLC, Nintendo of America, Panasonic Corp of North America, Sony Electronics, Inc., TransCosmos America, TTE Technology, Inc., VTech Electronics North America, LLC, Viewsonic Corporation, and Vizio, Inc. reported recycling 165.41 tons through their free recycling programs in CY21. The remaining manufacturers reported 0 tons of Maryland electronic recyclables.

MDE performed 323 inspections at 308 electronics retailers during FY22. The inspections resulted in the issuance of 27 Site Complaints against retailers for selling unregistered manufacturer brands. 100% of the Site Complaints were successfully resolved in FY22.

Cumulative highlights of eCycling in Maryland include:

- * 132 special collection events (i.e., 1 or 2-day collection events) have been held in 24 jurisdictions since CY11, through CY20.
- * There were 4 special events in CY21, an decrease from the 3 collection events in CY20.
- * 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 CY21. Figure 9 summarizes the electronics tonnage totals collected since collection began in 2001. An additional 1,445.54 tons of electronics from commercial businesses were reported by the counties in CY21 as having been recycled. These were not part of residential eCycling programs.

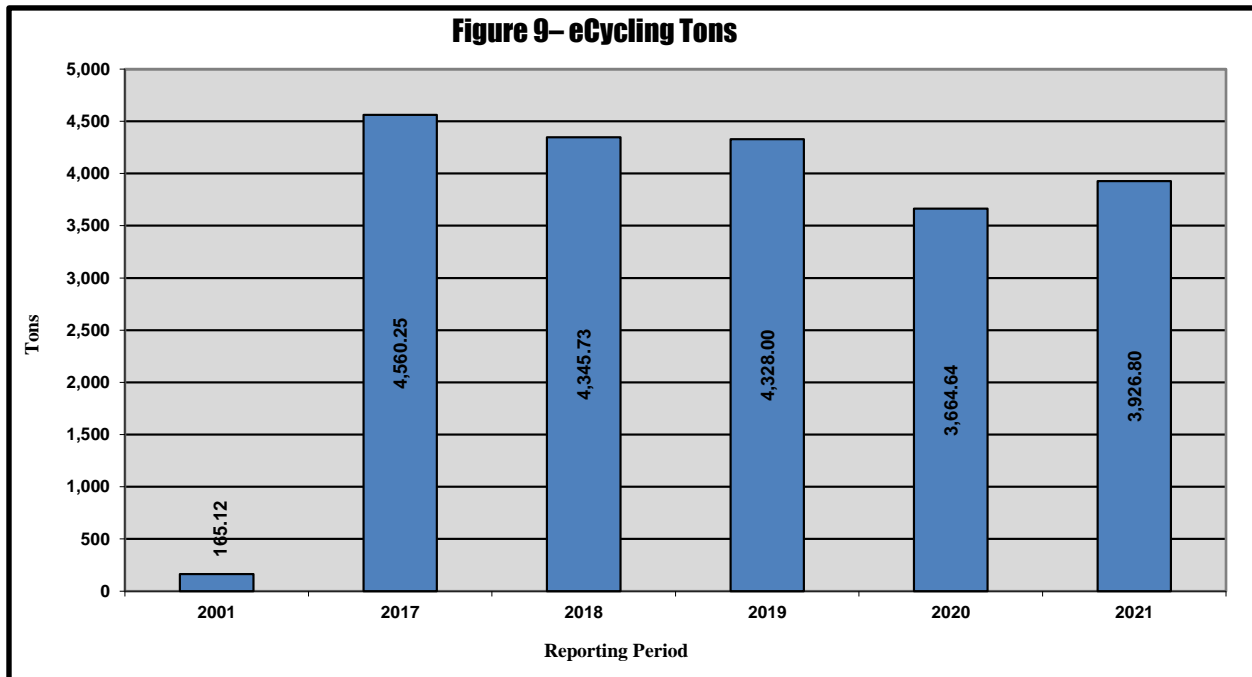
Table 26 – eCycling Collection Programs

County	Population (2021)	Type	Date(s)	No. of participants	Tons collected ^	Pounds collected ^	Pounds/ participant
Subtotal Maryland	6,165,129	–	2011-2020	–	67,940.98	7,457,923	–
eCycling Special Events in 2021							
Midshore (2)	–	1-day	Apr	533	8.36	16,720	31.4
		1-day	Oct	378	5.86	11,720	31.0
Montgomery	–	1-day	Oct	NA	3.74	7,480	NA
Worcester	–	1-day	Nov	283	0.5	1,000	3.5
Subtotal Events	–	–	2021	1,194	18.46	36,920	30.92
Permanent eCycling in 2021							
Allegany	68,684	–	2021	–	25.03	50,060	–
Anne Arundel	584,064	–	2021	–	197.57	395,133	–
Baltimore City	592,211	–	2021	–	401.63	803,260	–
Baltimore County	850,702	–	2021	–	267.00	534,000	–

County	Population (2021)	Type	Date(s)	No. of participants	Tons collected ^	Pounds collected ^	Pounds/participant
Calvert	92,515	-	2021	-	284.17	568,340	-
Carroll	172,148	-	2021	-	55.48	110,960	-
Cecil	103,370	-	2021	-	25.00	50,000	-
Charles	165,209	-	2021	-	87.89	175,780	-
Frederick	267,498	-	2021	-	274.25	548,500	-
Garrett	28,955	-	2021	-	16.09	32,180	-
Harford	259,162	-	2021	-	115.47	230,940	-
Howard	329,248	-	2021	-	423.96	847,920	-
Midshore Region	139,871	-	2021	-	66.35	132,700	-
Montgomery **	1,057,201	-	2021	-	1,333.58	2,667,160	-
Prince George's **	957,767	-	2021	-	163.00	326,000	-
St. Mary's	113,209	-	2021	-	127.00	254,000	-
Washington	153,956	-	2021	-	39.37	78,740	-
Worcester	52,322	-	2021	-	5.50	11,000	-
Subtotal Permanent	5,988,092	-	2021	-	3,908.34	7,816,673	-
TOTALS (2011 – 2021) ^				1,194 (2021)	71,867.78	15,311,516	30.92 (2021)

^ 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 the Maryland Department of General Services (DGS) to promote government purchasing of materials with recycled content.
- * In FY22, buying paper products made with recycled content paper was the rule, not the exception, with nearly all 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/GreenPurchasing/Resources/ProcurementOfficers.as

- [px](#). Local jurisdictions in Maryland can 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 (MRFs) are strategically located to ensure materials reach their market economically.

Businesses can access the Recycling Market Directory directly at mdrecycles.org to find a market for recyclable materials. The website is designed to promote commercial recycling in Maryland and is searchable by commodity. Additional links to other companies are available on 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 the MES to establish a scrap tire recycling system, to address scrap tires generated in Maryland, that includes scrap tire collection facilities and scrap tire haulers. MDE maintains a list of approved scrap tire facilities and haulers 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 in understanding environmental permitting procedures and requirements.

MDE’s *MDE Guide to Environmental Permits and Approvals* webpage at <https://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

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 2021 through June 2022 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)

America Recycles Day (ARD) is a national event that promotes recycling, source reduction, and buying products made from recycled materials as objectives for a more sustainable society. Due to COVID, MDE held the 20th Annual "Rethink Recycling" Sculpture Contest on November 19, 2021.

The "Rethink Recycling" Sculpture Contest featured 40 entries from ten different high schools across Maryland. The Sculpture Contest challenged students to use innovatively and artistically 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 the "Education and Outreach" section of MDE's waste diversion 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 and 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 was launched in 2010 by two leading nonprofit organizations advancing recycling efforts across the country - the National Center for Electronics Recycling (NCER) and the Northeast Recycling Council (NERC). The ERCC is a forum for coordination and information exchange among the state/local agencies that are implementing electronics recycling laws and all impacted stakeholders.

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

Maryland Recycling Network (MRN) – The MRN is a nonprofit, volunteer organization 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 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 is a multi-state non-profit organization promoting sustainable materials management by focusing on waste prevention, toxics reduction, reuse, recycling and organics recovery.

County Waste Diversion Programs

County waste diversion programs are the key to the success of waste diversion in Maryland. MDE works cooperatively with each county to ensure that valuable market and program information is shared, analyzed, and discussed. Table 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 2021 include:

- * Two (2) counties (Cecil and Prince George's) achieved a recycling rate greater than the 55% recycling SMM goal.
- * Twelve (10) jurisdictions earned SR credits. Nine (9) counties - Anne Arundel, Baltimore, Carroll, Cecil, Frederick, Harford, and Montgomery earned the maximum 5% SR credit.
- * Three (3) counties accept food waste for recycling.
- * Sixteen (16) counties accept expired medication for proper disposal.
- * Twenty-two (21) counties had permanent electronic drop-off locations.
- * Four (4) eCycling collection events were held in 5 counties.
- * Seventeen (17) counties operated textile collection programs.
- * Nineteen (19) counties maintained mercury thermometer drop-off locations.
- * Fifteen (15) counties collected paint for recycling.
- * Eighteen (18) counties operated HHW programs.

Waste diversion programs are constantly changing. Appendix G 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		✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore 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		✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore 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		✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore 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		✓	✓	✓/✓	✓	✓	✓	✓	✓	Mid-shore 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

APPENDIX

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APPENDIX A

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Economic Benefits of Permitted Solid Waste Acceptance Facilities

This table provides information that was voluntarily reported by permitted solid waste acceptance facilities in 15 political jurisdictions describing the economic benefits of the facilities to the host communities. While the economic benefits identified in the table are significant, the information does not fully represent the total economic benefits to Maryland’s communities that are provided by all permitted solid waste acceptance facilities. **The facilities that updated their information in CY21 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.	5 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 28,744 tons of its waste accepted at the site for recycling and saves 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 \$65,600 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.	90 employees.	Purchased local goods and services for \$2 million. Fuel for \$550,000. Paid \$20,000 for Tags and permits. Revenues of recycled material is more than \$1 million.
Baltimore City	Northwest Transfer Station (Publicly Owned)	Not Provided	Provides curbside collection of mixed refuse and recycling services.	17 employees.	Not Provided
Baltimore City	Hawkins Point Plant Landfill (Privately Owned)*	Reduced tipping cost for non-friable asbestos containing materials for the Baltimore/Washington market.		2 employees /\$124,800	Sold clay and topsoil to the local market for SWM needs. Clay and topsoil sales varies per load from \$10-

					\$100 and \$100 respectively.
Calvert	Howlin Land Clearing Debris Landfill (Privately Owned)	Tax incentive.	Assisting the county in disposing solid waste.	3 employees.	No information provided.
Calvert	Southern Maryland Processing Facility (Privately Owned)	Assisting the county in handling solid waste & promoting recycling.	Not provided.	4 employees.	\$10,000 annual purchase of goods and services, recycled products.
Calvert	Appeal Sanitary Landfill/Transfer Station (County Owned)*	The landfill is the sole County operated facility for the final disposition of County and out-of-county waste. The transfer station provides value to Calvert County by allowing the Division of Solid Waste to extend the useful life of the Appeal Municipal Landfill by at least 20 years, providing a tangible economic benefit.	Revenues are collected from users of the landfill via user fees and excise taxes. County residents may use the convenience centers free of charge, and for chargeable items, county residents pay a lower fee at the landfill than commercial haulers for disposal. The transfer station is complementary to the Appeal Municipal Landfill and is operated in conjunction with ongoing solid waste refuse collection, landfilling and recycling operations.	The landfill operations and convenience centers are supported by a group of 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.	18 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 Government to accept MSW originating within the 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: \$3.4 million. Estimated value of materials recycled for the year: \$273,000.
Cecil	Stemmers Run Transfer Station (County Owned)*	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Total Salaries paid \$ 80,000/1	Estimated value of goods and services purchased from the locality for the facility: \$80,000. 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.	\$200,000/3 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$5,500. 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 84,093 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.	\$3.8 Million/48 employees.	Spent \$8.2 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 Maryland Environmental Service. 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 - \$55,686, Free recycling for additional materials – \$185,162, Free yard trim recycling – \$829,059.
Howard	AmeriWaste Processing and Transfer Station (Privately Owned)	Payment of real estate, personal property and sales taxes to Howard County.	Facility supplements County facilities for solid waste disposal.	12 employees. Jobs include 53 equipment operators, 2 clerks, and 5 laborers.	\$200,000 in purchase from local vendors, \$19,000 in value of recycled items.
Montgomery	Montgomery County Solid Waste 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 \$70,000 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 20 individuals and 30 full-time trucking contracts for an estimated budget of \$6.9 million.	Goods and services purchased is approximately \$1,067,723. Invested \$1.98 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,	Facility owned and operated by Washington County for the solid waste	\$2,000,930/29 employees. Jobs include: deputy director (1), assistant director (1), recycling coordinator	Approx. \$6.3 million annual operating budget spent locally for the purchase of

		industrial, and commercial use.	disposal needs of County residents.	(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),	materials, services, equipment, and wages.
Wicomico	Bennett Construction Inc. (Privately Owned)	Creates a larger tax base to the local community and the only waste collection facility in the area. Provides employment opportunities in the area.	Expanding the value of the facility in the County for other opportunities.	\$ 328,000/15 employees.	Fuel and Maintenance Cost to the local economy - \$238,000/year. Offers lower tipping fees to the customers.
Worcester	Ocean City Transfer Station (Publicly Owned)	Provides for the consolidation of solid waste collected in the Town of Ocean City for transport 26 miles to the County's MSWLF.	No information provided.	No information provided.	No information provided.

APPENDIX B

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Permitted Solid Waste Acceptance Facilities

Table B1 – Permitted Solid Waste Acceptance Facilities*

County	Facility Name	Type	Owner Type	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
Allegany	Mountainview Municipal Landfill	WMF	PRI	2021-WMF-0010	12/9/2026	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	2021-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
	World Recycling Company	WPT	PRI	2019-WPT-0689	9/16/2026	- / 4.05	2740 Wilmarco Ave, Baltimore, MD 21223
	Baltimore	Central Acceptance Facility	WPT	CTY	2017-WPT-0657	12/6/2022	6.0 / 7.3
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	401Sweetwater Road, Lusby MD 20678.
	Appeal Transfer Station	WTS	PRI	2017-WTS-0519	12/13/2022	- / 1	401Sweetwater 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	3/3/2022	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.
	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	2021-WPT-0572	12/29/2026	- / 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 Mid-Shore Counties.
St. Mary's	Knott Landclearing Debris Landfill	WLC	PRI	2021-WLC-0134	7/5/2026	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	2021-WPT-0675	10/13/2026	- /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	2021-WMF-0663	1/20/2027	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, 2021 – 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	2
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	21
WTE: Waste to Energy/MSW Incinerator	2
TOTAL	82

Type of Ownership	Number of Facilities
CTY: County Government	30
PRI: Private (Commercial)	44
MUN: Municipal Government	3
FED: Federal Government	2
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
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 48,853,125 tons with 2,338,004 tons being disposed of in CY21. Thus, at the current disposal rate, there would be approx. 21 years (48,853,125 tons ÷ 2,338,004 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 2021 (CY)	Landfilled in 2021 (Tons)	Used in 2021 ^
Alpha Ridge Municipal Landfill	13,521,900	5,954,791	3,275,135	7,567,109	4,161,910	2054	0	4	0.09%
Appeal Municipal Landfill	2,779,290	618,511	371,107	2,160,779	1,308,467	5230	673	404	0.02%
Beulah Sanitary Landfill	2,360,325	2,203,645	1,935,945	156,680	101,842	2024	96,175	62,514	4.10%
Brown Station Road Landfill	16,505,000	15,052,722	10,453,495	1,452,278	778,216	2025	261,900	384,862	2.00%
Cecil County Central Landfill – Horizontal Expansion **	23,327,539	5,934,916	3,560,950	17,392,623	10,439,050	2080	170,510	119,731	0.73%
Central Sanitary Landfill	4,800,000	2,513,994	1,759,796	2,286,006	1,600,204	2050	81,540	57,078	1.70%
Charles County Municipal Landfill	4,374,700	2,879,698	2,056,927	1,495,002	1,116,473	2032	185,242	132,316	4.00%
Eastern Sanitary Landfill	23,474,559	16,574,030	8,026,204	6,900,529	3,335,483	2027	778,621	490,059	3.30%
Fort Detrick – Area B & Main Post	1,000,900	149,257	151,123	851,643	862,288	2209	4,547	4,603	0.45%
Forty West Municipal Landfill	24,752,000	5,479,215	2,346,343	19,272,785	7,245,057	2080	281,029	154,384	1.04%
Garrett County Solid Waste Disposal & Recycling Facility	2,568,470	1,464,345	870,912	1,104,125	608,100	2037	56,388	31,885	2.20%
Harford Waste Disposal Center	4,870,330	1,005,357	402,576	3,864,973	1,728,724	2215	14,297	5,782	0.29%
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	2,398,527	1,415,226	5,401,473	3,264,774	2046	237,483	152,830	3.04%
Millersville Landfill & Resource Recovery Facility	14,156,000	7,055,083	4,233,050	7,100,917	4,260,550	2048	383,535	173,678	2.70%
Montgomery County Site 2**	0	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	4,474,122	4,372,220	3,193,261	101,902	73,370	2023	65,182	76,666	1.50%
Newland Park Municipal Landfill	6,420,000	5,157,678	2,785,146	1,262,322	681,654	2025	299,351	161,649	4.66%
Northern Municipal Landfill	3,504,187	989,953	1,220,810	2,514,234	1,257,117	2070	29,438	15,779	0.84%
Quarantine Road Landfill	18,320,799	15,653,479	18,340,618	2,667,320	3,094,694	2028	273,570	276,944	1.49%
Reichs Ford/Site B Municipal Sanitary Landfill	7,326,426	3,947,893	2,220,706	3,378,533	1,900,409	2045	27,535	8,944	0.38%
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	1,080,012	635,313	529,988	158,477	2036	48,187	27,892	4.00%
Totals	193,371,541	104,170,021	71,287,124	89,201,520	48,853,125		3,295,203	2,338,004	1.70%

- * 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 2021 (CY) ÷ Permitted Capacity (CY)

Construction and Demolition Debris landfills (Table C2) reported a total available capacity of 10,260,984 tons with 768,362 tons disposed of in CY21. At the current disposal rate, there would be over 13 years (10,260,984 tons ÷ 768,362 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 2021 (CY)	Landfilled in 2021 (Tons)	Used in 2021 ^
Baker Rubble Landfill	820,000	789,349	497,470	30,651	19,130	2022	38,413	24,200	5.00%
Days Cove Rubble Landfill – Lateral Expansion	6,017,847	3,779,316	2,267,320	2,238,531	1,343,388	2030	192,239	160,121	3.19%
Honeygo Run Reclamation Center	11,723,461	7,165,357	4,598,009	4,558,104	2,568,840	2033	431,666	250,062	3.68%
Ritchie Land Reclamation Partnership Phase	9,680,800	4,765,798	2,859,482	4,915,002	2,948,998	2035	506,266	303,763	5.60%
Tolson & Associates	5,762,060	409,723	191,849	5,352,337	3,380,628	2042	65,783	30,216	1.20%
TOTALS	34,004,168	16,909,543	10,414,130	17,094,625	10,260,984		1,234,367	768,362	3.63%

^ Equal to Landfilled in 2021 (CY) ÷ Permitted Capacity (CY)

Industrial landfills (Table C3) reported a total available capacity of 7,961,907 tons. At a current disposal rate of 96,093 tons, there would be approx. 83 years (7,961,907 tons ÷ 96,093 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 2021 (CY)	Landfilled in 2021 (Tons)	Used in 2021 ^
W.R. Grace and Co. – Davison Chemical Division	495,000	272,700	314,207	222,300	180,793	2030	15,297	13,687	2.77%
Essroc Cement Corporation	273,000	0	0	273,000	273,000	N/A	0	0	0.00%
Hawkins Point Plant	3,228,044	2,314,173	3,702,445	913,871	1,462,425	2035	25,150	35,924	0.77%
Fort Armistead Road – Lot 15	6,300,000	812,406	884,311	5,487,594	6,045,689	2129	50,744	46,482	0.80%
TOTALS	10,296,044	3,399,279	4,900,963	6,896,765	7,961,907		91,191	96,093	0.89%

^ Equal to Landfilled in 2021 (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 land clearing 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 2021 (CY)	Landfilled in 2021 (Tons)	Used in 2021 ^
Howlin Landclearing Debris Landfill	64,120	49,633	62,041	14,487	18,109	2022	0	0	0.00%
Knott Landclearing Debris Landfill	94,500	75,805	6,894	18,695	1,106	2025	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 2021 (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-NWWW-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-NWWW-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-NWWW-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-NWWW-GP01	5.90	4/24/2022	(410) 682-2992	(410) 574-0123
	Edrich Lumber, Inc. 9700 Old Court Road Baltimore, MD 21244	IP	2021-NWWW-0003	12.00	3/1/2026	(410) 922-5959	(410) 521-2778
	Hollins Organic Products, Inc. 6247 Falls Road Baltimore, MD 21209	GP	2020-NWWW-GP01	2.00	6/25/2025	(410) 828-0210	(410) 823-7645
	Hollins Organic Products, Inc. 10155 Beaver Dam Road Cockeysville, MD 21030	IP	2021-NWWW-0004	4.5	12/10/2026	(410) 771-1499	(410) 771-1911
	Northwest Recycling, LLC 212 Cockeys Mill Road Baltimore, MD 21136	GP	2020-NWWW-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-NWWW-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	IP	2018-NWWW-0005	11.25	9/19/2023	(410) 586-3404	(410) 586-2843
Caroline	Cahall Construction, LLC 24480-A Pinewood Road Preston, MD 21655	GP	2017-NWWW-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-NWWW-GP01	1.76	10/15/2025	(410) 253-6570	(410) 634-2733
Carroll	C.J. Miller, LLC 390 Vision Way Westminster, MD 21158	GP	2021-NWWW-GP01	40.00	9/16/2026	(410) 239-8006	(410) 239-4204
	Hidey's Landscape Supply Yard 3112 Ridge Road, Westminster, MD 21157	GP	2021-NWWW-GP01	9.00	9/28/2026	(410) 875-0289	(410) 875-0289
	WeCare Denali, LLC 7901 Kabik Court, Woodbine, MD 21797	GP	2019-NWWW-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-NWWW-GP01	25.00	7/14/2025	(410) 392-0770	(410) 392-2317
Charles	Beuchert Excavating, Inc. 12340 Crain Highway Newburg MD 20664	GP	2019-NWWW-GP01	12.50	3/5/2024	(301) 399-5088	(301) 274-2454
	Calvert Wood Recycling 6585 Ripley Road Ripley, MD 20646	GP	2021-NWWW-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-NWWW-GP01	11.7	11/15/2022	(443) 968-2381	(443) 968-2381
	Mona Recycling 6970 Our Place Port Tobacco, MD 20677	IP	2019-NWWW-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-NWWW-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-NWWW-GP01	2.00	11/14/2024	(301) 865-3925	(301) 865-8496
	Grant County Mulch Inc. 6720 Manor Road Frederick, MD 21703	GP	2017-NWWW-GP01	3.00	11/1/2022	(301) 732-5194	(301) 732-5195

Harford	Arthur D. Heston 2304 Whiteford Road Whiteford, MD 21169	GP	2017-NWWW-GP01	3.67	10/23/2022	(410) 692-2673	(410) 692-2253
	Comer Construction, Inc 900 Circelli Court Aberdeen, MD 21001	IP	2020-NWWW-0006	6.00	6/11/2025	(410) 879-6094	(410) 638-0289
	Crouse Construction Co. 1001 Philadelphia Road Aberdeen, MD 21001	GP	2020-NWWW-GP01	25.00	6/7/2025	(410) 879-1822	(410) 893-0045
	Harford Industrial Minerals, Inc. 40 Fort Hoyle Road, Joppa, MD 21085	GP	2022-NWWW-GP01	5.00	1/12/2027	(410) 679-9191	(410) 679-9191
Howard	Level Land Lisbon Mulch Yard 1100-1281 Madison Street Lisbon, MD 21765	GP	2018-NWWW-GP01	5.00	7/9/2023	(410) 489-5206	(410) 489-4316
	Oak Ridge Farm 2700 Woodbine Road Woodbine, MD 21797	GP	2019-NWWW-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-NWWW-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-NWWW-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-NWWW-GP01	107.50	11/26/2024	(301) 540-2968	(301) 540-9630
	Country Nursery 3330 Spencerville Road Burtonsville, MD 20866	GP	2018-NWWW-GP01	11.5	6/6/2023	(301) 421-9593	(301) 421-9593
	Grant County Mulch Inc. 24420 Frederick Road Clarksburg, MD 20841	GP	2018-NWWW-GP01	6.35	9/11/2023	(304) 749-7451	(304) 749-7451
	Spring Garden Farm 4900 Brookeville Road Brookeville, MD 20833	GP	2019-NWWW-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-NWWW-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-NWWW-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-NWWW-GP01	15.98	4/26/2026	(410) 778-2016	(410) 778-2022
	Grange Hall Yard 437 Grange Hall Road Centreville, MD 21617	GP	2020-NWWW-GP01	9.06	9/6/2025	(410) 974-0397	(410) 974-0397
St. Mary's	Charlotte Hall Lumber Yard	GP	2020-NWWW-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-NWWW-GP01	343	10/14/2025	(410) 822-6363	(410) 820-7789
Washington	Hess Road Recycling Center 6502 Hess Road Hancock, MD 21750	GP	2017-NWWW-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-NWWW-GP01	10.00	8/25/2024	(410) 742-7429	(410) 742-7429
	Grant County Mulch Inc. 34052 Old Ocean City Road Pittsville, MD 21850	GP	2020-NWWW-GP01	60	9/27/2025	(301) 732-5194	(301) 732-5194
General Permits (GP):							37
Individual Permits (IP):							7
TOTAL							44

* The status of the facilities is current as of December 31, 2021 – 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	35,000	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 20711	GP/Tier 2	Food Scraps/Manure/Wood Chips	24,000	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
	PEH Organics Recycling Inc. 11239 Philadelphia Road White Marsh, MD 21162	GP/Tier 2	Food Scraps/Manure/Yard Trimmings	132,000	2021-GCF-0024	3/27/2026	443-409-1922
Caroline	Twin Maples Facility 14130 Clarks Lane Ridgely, MD 21660	GP/Tier 2	Poultry Byproducts, Hatchery Waste, Chicken Litter, Seafood Waste, and Wood Waste	15,000	2021-GCF-0007	3/27/2026	336-207-9310
Carroll	WeCare Denali, LLC 7901 Kabik 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	35,000	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	50,000	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	24,000	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):							17
Refuse Disposal Permits (RD):							4
Individual Permits (IP):							1
TOTAL							22

* The status of the facilities is current as of December 31, 2021 – the period covered by the report.

APPENDIX E

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All-Star News

All State Agencies Recycle

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

Maryland Department of the
Environment
Land and Materials Administration
www.mde.maryland.gov/recycling

Christy Bujnovszky
Recycling Unit
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Maryland’s Food Waste Diversion Bill

During the 2021 legislative session [HB264, Organics Recycling and Waste Diversion—Food Residuals](#) was passed. Beginning on January 1, 2023, the bill requires certain food waste generators that produce 2 tons of food residuals a week and within 30 miles of a composting facility to either reduce, divert to food rescue organizations, farms for animal feed operations, or compost or anaerobically digest the residuals.

The Maryland Department of the Environment (MDE) is working to implement the provisions of the law including providing outreach and education to persons subject

to the law. Persons subject to the law have options for their waste diversion including: reduction, donating servable foods, managing food on-site, divert to agricultural use, and/or divert to an organics recycling facility (compost or anaerobic digestion).

Increasing participation in food residual diversion, has the potential to improve organic recycling capacity throughout the state. Reducing the amount of food waste in our landfills is a major strategy to address climate change by reducing the amount of methane released into the atmosphere and extend the life of landfills.



To sign up for more information and to participate in discussions go to <http://bit.ly/MDEFoodWasteSignup>, or contact Shannon McDonald or Tim Kerr by phone at 410-537-3314 or at shannon.mcdonald@maryland.gov, timothy.kerr2@maryland.gov, respectively.

Eleven State Agencies Reach 30 Percent Recycling Rate in 2020

State government, as a whole, is required to recycle 30 percent of its waste. In 2020, eleven State agencies recycled at least 30 percent of their waste and eight agencies recycled more than 40 percent. State government, as a whole, recycled 23.5 percent of the waste it generated.

The following State agencies reached a recycling rate of at least 30 percent in 2020:

- Comptroller of Maryland;
- Dept. of Education;
- Dept. of Environment;
- Dept. of Planning;
- Dept. of Transportation;
- Maryland Automobile Insurance Fund;
- Maryland Environmental Service;
- Maryland State Archives;
- Maryland State Police;
- Subsequent Injury Fund;
- University System of Maryland.

Results for all State Agencies are available on the Maryland State Agencies 2020 Recycling Rates Table.

Maryland State Agencies 2020 Recycling Rates

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	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	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
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

APPENDIX F

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Department of Commerce

ABOUT THE MARYLAND DEPARTMENT OF COMMERCE

As the state's primary economic development agency, the Maryland Department of Commerce stimulates private investment and creates jobs by attracting new businesses, encouraging the expansion and retention of existing companies, and providing workforce training and financial assistance to Maryland companies. The Department also promotes the state's many economic advantages and markets local products and services at home and abroad to spur economic development and international investment, trade, and tourism. Between 2010 and 2016, Maryland Commerce has assisted nearly 4,000 small businesses and organizations; helped create or retain 40,000 jobs and leveraged nearly \$3 billion in private investment.

MARYLAND COMMERCE'S FINANCING & INCENTIVE RESOURCES

The Maryland Department of Commerce Office of Finance Programs provides the business community with financing and incentive-based solutions for economic development projects to maximize job creation and retention, leverage capital investment, and encourage growth in targeted business sectors and specific geographic areas throughout the state. To remain competitive in the marketplace, Commerce responds quickly to changing requirements with the development of incentives that address the identifiable needs of the business community.

Financial Incentives Provide:

- Entrepreneurs with access to capital markets
- Funding of economic development efforts for local jurisdictions
- Impetus to encourage capital investments and job creation
- Employment opportunities by attracting, creating, expanding, and retaining businesses

Note that Commerce, except in specific instances, only supports for-profit businesses operating within the State. Its programs are not generally intended to support non-profit or governmental activities, though there are exceptions. These exceptions are noted in the individual program descriptions below.

GEOGRAPHIC PROGRAM RESTRICTIONS

Most Commerce programs are restricted to providing assistance to businesses located within Priority Funding Areas (PFAs), as defined by State statute, the Maryland Department of Planning, and the State's 24 jurisdictions. The following areas qualify as Priority Funding Areas:

- Every Maryland municipality, as they existed in 1997;
- Areas in Maryland that are inside the Washington Beltway and the Baltimore Beltway;
- Areas that have been designated as Enterprise Zones, neighborhood revitalization areas, Heritage Areas, and existing industrial land;
- Other designated areas nominated by counties that meet certain guidelines.

Depending upon the program, many business operations located outside of a PFA may not be eligible for assistance through Commerce. Businesses should check with other State or Federal agencies to see if assistance is available through their programs. In addition, there are certain programs that are tied to geographic areas, and only businesses located within those areas are

eligible to obtain assistance from them. Examples are the Maryland Enterprise Zone Program and the Regional Institution Strategic Enterprise (RISE) Zone Program.

BUSINESS ACTIVITY PROGRAM RESTRICTIONS

Most Commerce programs are restricted to providing assistance to businesses operating in certain industries or engaged in certain activities. Some programs are highly restrictive, while others have broader application. Examples of program restrictions are:

- Line of business or NAICS code
- Business activity, such as research and development
- Workforce training
- Hiring new employees
- Capital investment in buildings or equipment

Some programs have few restrictions other than the creation of a minimum number of jobs, while others are highly targeted to certain industries or activities.

SMALL BUSINESS ASSISTANCE

The Maryland Department of Commerce offers multiple programs that support small business creation and growth.

Maryland Small Business Development Financing Authority (MSBDFFA) Economic Development Article §§5-501 to 5-575

The Maryland Small Business Development Financing Authority (MSBDFFA) was created by the General Assembly in 1978. This program promotes the viability and expansion of businesses owned by economically and socially disadvantaged entrepreneurs. MSBDFFA assists small businesses unable to obtain adequate business financing on reasonable terms through normal financing channels. Meridian Management Group, a private contractor, manages the program's four components and Commerce provides financing and loan servicing for the approved small businesses. The four components are:

- Contract Financing Program – Provides loan guarantees and direct working capital and equipment loans to socially or economically disadvantaged businesses awarded contracts mainly funded by government agencies and/or public utilities.
- Equity Participation Investment Program – Provides direct loans, equity investments, and loan guarantees to small businesses.
- Long-Term Guaranty Program – Provides loan guarantees and interest rate subsidies.
- Surety Bonding Program – Assists small businesses in obtaining bonding primarily for government or public utilities contracts that require bid, performance, and payment bonds.

Geographic Restrictions: The MSBDFFA program is restricted to businesses that operate within Priority Funding Areas.

Business Activity Restrictions: The MSBDFFA program has no activity restrictions other than proof that a business is owned by economically and socially disadvantaged entrepreneurs.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products is eligible for this program if they meet the geographic and business activity restrictions.

Small, Minority and Women-Owned Business Account—Video Lottery Terminal Fund (VLT)

Economic Development Article §5–1501; State Government Article §9-1A-27

Article XIX of the Maryland Constitution authorized video lottery terminals (VLTs) to contribute towards funding education. This provision was enacted pursuant to Chapter 5, Acts of the 2007 Special Session, and ratified by Maryland voters in the November 2008 General Election. As a result, Chapter 4, Acts of the 2007 Special Session also became effective and established the Small, Minority, and Women-Owned Businesses Account (the Account) under the Authority of the Board of Public Works (BPW). This law requires that 1.5 percent of VLT proceeds be paid into the Account to be used to make grants to eligible fund managers to provide investment capital and loans to small, minority, and women-owned businesses in the State. In 2017, the authority to operate the Fund was transferred to the Department of Commerce.

The State's VLT fund uses proceeds from Maryland's casinos to assist small, minority, and women-owned businesses located in targeted areas surrounding six Maryland casinos: Maryland Live in Anne Arundel County, Hollywood Casino Perryville in Cecil County, Rocky Gap in Allegany County, Ocean Downs in Worcester County, MGM National Harbor in Prince George's County, and Horseshoe Casino in Baltimore City. At least 50% of the VLT allocations support small, minority and women-owned businesses located within a 10-mile radius of the casinos. The other 50% is available to small, minority and women-owned businesses located throughout Maryland.

In FY 2020, there were nine designated fund managers that received funds for the purpose of making loans to small, minority, and women-owned businesses in the State:

- Anne Arundel Economic Development Corporation (AAEDC)
- Baltimore County Department of Economic and Workforce Development
- Baltimore Development Corporation (BDC)
- FSC First Prince George's
- Howard County Economic Development Authority (HCEDA)
- Maryland Capital Enterprises Inc. (MCE)
- Meridian Management Group, Inc. (MMG)
- Montgomery County Economic Development Corporation (MCEDC)
- Tri County Council for Western Maryland

Geographic Restrictions: The VLT program prioritizes businesses located within a 10-mile radius of one of Maryland's casinos but offers funding to businesses throughout the State.

Business Activity Restrictions: The VLT program has no activity restrictions other than proof that a business is a small, minority, or women-owned business.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products is eligible for this program if they meet the geographic and business activity restrictions.

Military Personnel and Veteran-Owned Small Business No-Interest Loan Program (MPVSBLP)

Economic Development Article §§5-1001 to 5-1007

The Military Personnel and Veteran-Owned Small Business No-Interest Loan Program (MPVSBLP) was enacted originally in 2006 to assist with costs that result from the call to active duty for businesses owned by military reservists and National Guard members and for small businesses that employ such persons. In the 2013 legislative session, the Maryland General Assembly approved Chapter 105, which altered the name and expanded eligibility for participation in the program to include all veteran-owned small businesses. The change eliminated the requirement for a veteran to have a service-related disability to use the program.

MPVSBLP provides no-interest loans of up to \$50,000, from one to eight years, for businesses owned by military reservists, veterans, National Guard personnel and for small businesses that employ or are owned by such persons.

Geographic Restrictions: The MPVSBLP program restricts funding to businesses that operate within

Priority Funding Areas.

Business Activity Restrictions: The MPVSBLP program has no activity restrictions other than proof that the loan is going to a small business owned by military reservists, veterans, National Guard personnel, or is a small business that employs or is owned by such persons.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products is eligible for this program if they meet the geographic and business activity restrictions.

Maryland Economic Adjustment Fund (MEAF)

Economic Development Article §§5-201 to 5-209

The Maryland Economic Adjustment Fund (MEAF) was established in 1994 as a non-lapsing revolving fund. The U.S. Economic Development Administration (EDA) and the State of Maryland provided funds to capitalize the program.

The goal of the program is to enable small businesses to upgrade or modernize operations, develop, or expand commercial applications for technology or enter and compete in new or different markets. The program provides financing assistance to small and underserved businesses that are unable to qualify for loans from traditional lending sources. Eligible businesses include manufacturers, wholesalers, retail, service companies, technology firms, and skilled trades.

Geographic Restrictions: The MEAF program restricts funding to businesses that operate within Priority Funding Areas.

Business Activity Restrictions: The MEAF program is restricted to companies involved in manufacturing, wholesale, certain services, and skilled trades. Funds can only be used for working capital machinery and equipment, building renovations, real estate acquisitions, or site improvements.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products is eligible for this program if they meet the geographic and business activity restrictions.

ECONOMIC DEVELOPMENT INCENTIVES

Maryland Economic Development Assistance Authority and Fund (MEDAAF) Economic Development Article §§5-301 to 5-349

The Maryland Economic Development Assistance Authority and Fund (MEDAAF) is the primary economic development finance tool offered by the Department. MEDAAF was enacted in 1999 to provide below market, fixed-rate financing to growth industry sector businesses locating or expanding in priority funding areas of the State. The MEDAAF program is administered under five capabilities that address appropriate economic development opportunities for both the business community and political jurisdictions as follows:

- MEDAAF Capability 1 - Significant Strategic Economic Development Opportunities
- MEDAAF Capability 2 - Local Economic Development Opportunities
- MEDAAF Capability 3 - Direct Assistance to Local Jurisdictions or MEDCO
- MEDAAF Capability 4 - Regional or Local Revolving Loan Funds
- MEDAAF Capability 5 - Special Purpose Grants and Loans/Brownfields

The primary job creation capabilities are MEDAAF-1 and 2. MEDAAF-3 provides direct assistance to local jurisdictions for economic development projects and MEDAAF-4 provides funding to local governments to create revolving loan funds to assist small businesses. MEDAAF-5 has several special purposes including day care facility finance, Arts and Entertainment Districts, and brownfield remediation.

MEDAAF Capability 1 - Significant Strategic Economic Development Opportunities Projects under this capability are normally regarded as producing significant economic development opportunities on a Statewide or regional level. Assistance is provided directly to businesses or through the Maryland Economic Development Corporation (MEDCO) in the form of a loan. The maximum assistance under this capability cannot exceed the lesser of \$10,000,000 or 20 percent of the current fund balance.

MEDAAF Capability 2 - Local Economic Development Opportunities

Capability 2 of MEDAAF provides assistance in the form of a loan, a conditional loan, investment, or a grant directly to a business or to MEDCO for use in the project. All assistance under this capability must be endorsed through a formal resolution by the governing body of the jurisdiction in which the project is located. In addition, the local jurisdiction must participate in an amount

equal to at least 10 percent of the total assistance. Funds may be used for land acquisition, infrastructure improvements, buildings, fixed assets, and leasehold improvements.

MEDAAF Capability 3 - Direct Assistance to Local Jurisdictions or MEDCO

Capability 3 of MEDAAF provides assistance directly to a local jurisdiction or MEDCO for local economic development needs including feasibility studies, economic development strategic plans, and infrastructure. Funds may be used for buildings, infrastructure improvements, fixed assets, and leasehold improvements. All assistance under this capability must be endorsed through a formal resolution by the governing body of the jurisdiction in which the project is located. Assistance provided may be in the form of a loan, a conditional loan, investment, or a grant.

MEDAAF Capability 4 - Regional or Local Revolving Loan Funds

Capability 4 of MEDAAF provides assistance to local jurisdictions to help capitalize local economic development revolving loan funds. The typical revolving loan fund client is a small business that may be in an industry sector, such as retail service, that is not otherwise eligible for assistance. The final recipient of financing is determined by the local jurisdiction. Jurisdictions may receive funding of up to \$250,000 annually. To qualify for funding, local jurisdictions must provide acceptable matching funds into the designated revolving loan fund.

MEDAAF Capability 5 - Special Purpose Grants and Loans

This capability contains targeted programs for specialty initiatives that at one time had been deemed critical to the State's economic health and development by the General Assembly. These specialty programs may be exempt from local participation and certain other MEDAAF requirements. The special purpose initiatives include Brownfields, Seafood and Aquaculture, Animal Waste, Day Care, and Arts and Entertainment. The funds do not have a direct job creation component.

Geographic Restrictions: The MEDAAF program restricts funding to businesses that operate within Priority Funding Areas.

Business Activity Restrictions: The MEDAAF program has multiple components and is very complex. Businesses can receive direct assistance, local governments can receive funding for their revolving loan funds, jurisdictions can receive direct funding for certain activities, and special programs can receive assistance.

Relevance to Study:

- Any business engaged in any activities related to recycling, recycled materials or recycled products is eligible for this program as long as they meet the geographic and business activity restrictions.
- Any jurisdiction can apply for assistance with land acquisition, infrastructure improvements, acquisition of fixed assets, leasehold improvements, up to 70% of the cost of a feasibility study and up to 50% of the cost of preparing a local economic development strategic plan. Any of these activities may be related to recycling, recycled materials or recycled products or infrastructure creation or expansion.
- Revolving loan funds may be used to support business engaged in the activities under study, depending on the rules of each fund.

**Economic Development Opportunities Program Fund (Sunny Day)
State Finance and Procurement Article §7-314**

The Economic Development Opportunities Program Fund, known as Sunny Day, was enacted in 1988 to enable Maryland to act on extraordinary economic development proposals that required financial assistance beyond the capabilities of other state and local financing programs. The Sunny Day fund supports extraordinary economic development opportunities that create and retain employment as well as create significant capital investments. Projects must generate significant jobs in areas of high unemployment; they are evaluated on a competitive basis. Participants must provide a minimum capital investment of at least five times the amount of the Sunny Day assistance.

Geographic Restrictions: The Sunny Day program restricts funding to businesses that have investments within areas of high unemployment. In addition, these investments are expected to occur within Priority Funding Areas.

Business Activity Restrictions: The Sunny Day program is restricted to companies that are creating “extraordinary” economic development opportunities and “significant” capital investments.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for this program. if they are considered an extraordinary economic development opportunity and meet the geographic and business activity restrictions.

**Partnership for Workforce Quality (PWQ)
Economic Development Article §§3-401 to 3-412**

The Partnership for Workforce Quality (PWQ) is an incumbent worker training program established by the Maryland General Assembly in 1989 and administered by the Maryland Department of Commerce. PWQ was developed to encourage Maryland companies, especially manufacturing and technology companies, to invest in incumbent worker training for job-specific skills to upgrade or retain full-time, Maryland-based employees.

PWQ provides matching training grants and support services targeted to improve the competitive position of small and mid-sized manufacturing and technology companies. Grants are used to increase the skills of existing workers for new technologies and production processes, improve employee productivity, and increase employment stability. Matching grant funds are used to reimburse up to 50% of the costs of qualified projects.

Applicants must be a Maryland employer, may not be in arrears with any State taxing agency, and not be in default with any Commerce program. Applicants should have a minimum of 10 full-time employees. At least 60% of available funds must be awarded to employers with 150 or fewer employees in the State. The Program encourages the participation of small and minority-owned businesses. Priority will be given to manufacturing and technology companies. In areas of the State where regionally important industries have been identified beyond manufacturing and technology, justification should be provided to approve PWQ funding.

Geographic Restrictions: The PWQ program restricts funding to businesses located within Priority Funding Areas.

Business Activity Restrictions: The PWQ program is restricted to companies that wish to offer incumbent and new employee training and have at least 10 full-time employees. Preference is given to manufacturing and technology companies.

Relevance to Study: Any business engaged in manufacturing or technology-related activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion may be eligible for this program. In addition, “regionally important industries” other than manufacturing or technology firms, may also be eligible.

CREDIT ENHANCEMENTS

Maryland Industrial Development Financing Authority (MIDFA) Economic Development Article §§5-401 to 5-466

The Maryland Industrial Development Financing Authority (MIDFA) was established by the Maryland General Assembly in 1965 to promote significant economic development by providing financing support to manufacturing, industrial, and technology businesses located in or moving to Maryland. MIDFA encourages private sector investments using insurance, the issuance of tax-exempt and taxable revenue bonds and linked deposits, which reduces a lender’s risk and increases access to capital for small and mid-sized companies. The Program has increased its commitment to growth and development of small business by increasing outreach efforts to community banks. The Fund does not provide direct loans but provides insurance to transactions resulting in reduced credit risks, and enabling better terms from private financial institutions.

MIDFA offers two types of support: Credit insurance and private activity revenue bonds.

Credit Insurance

- Bond Program: Insures bonds up to 100% not to exceed \$7.5 million of taxable or tax-exempt bonds.
- Conventional Program: Insures up to 80% not to exceed \$2.5 million of a transaction made by a financial institution. Export transactions may be insured up to 90%.
- Private Activity Revenue Bonds
- Taxable Bond: Provides access to long-term capital markets primarily for fixed asset financing.
- Tax-Exempt Bond: Provides access to long-term capital markets for fixed asset financing at tax-exempt rates. Eligibility is limited by Federal tax law to 501(c)(3) non-profit organizations,
- manufacturing facilities and certain solid waste projects. Additional limitations apply to the specific transaction type.

Geographic Restrictions: The MIDFA program restricts funding to businesses that operate within Priority Funding Areas.

Business Activity Restrictions: The MIDFA program is restricted to providing financing support to manufacturing, industrial, and technology businesses located in or moving to Maryland. The Fund

does not provide direct loans but provides insurance to transactions resulting in reduced credit risks, and enabling better terms from private financial institutions.

Relevance to Study: Any business engaged in any manufacturing, industrial, or technology-related activities involving recycling, recycled materials or recycled products or the creation of infrastructure related to these activities AND who is seeking a loan from a private institution is eligible for this program if they meet the geographic and business activity restrictions.

TAX INCENTIVES

Brownfields Revitalization Incentive Program (BRIP) Tax Property Article §§9-229 and 14-902

A site that qualifies for this incentive program may also qualify for real property tax credits. The site must be located in a jurisdiction that participates in the BRIP and be owned by an inculpable person. For five years after cleanup, a site may qualify for a real property tax credit between 50% and 70% of the increased value of the site. (In an Enterprise Zone, the tax credit may last for up to 10 years). This credit, combined with other real property tax credits, may not exceed 100% of the tax on the increased value of the site.

Geographic Restrictions: The BRIP program restricts funding to brownfields sites that are located within jurisdictions that participate in the program.

Business Activity Restrictions: The BRIP program is restricted to property that is an eligible brownfields site that is owned by an inculpable person or a property where there is a release, discharge, or threatened release of oil so long as the property is not owned by the person responsible for the discharge.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion that may wish to set up operations on an existing brownfields site may be eligible for this program as long as they meet the geographic and business activity restrictions.

Enterprise Zone Tax Credit Tax General Article §10-702 and Tax Property Article §9-103

Maryland's Enterprise Zone Tax Credit Program is a joint effort between the State and local governments to provide tax incentives to businesses and property owners located in some of the State's most economically distressed communities. The Program was created in 1982 with two enterprise zones (EZs) in two jurisdictions. As of December 2017, there are 36 EZs across the State, along with four Focus Areas in Baltimore City and Prince George's County. There are currently seven State-designated zones in Western Maryland, 15 on the Eastern Shore, seven in Southern and Suburban Maryland, and seven in Central Maryland.

The Enterprise Zone program provides real property and state income tax credits for businesses located in a Maryland enterprise zone. The real property tax credit is 80% of the incremental increase in property taxes over the first five years, decreasing 10% annually during the next five years. The income tax credit is a \$1,000 credit per new employee. For economically disadvantaged employees, the credit increases to \$6,000 per new employee over three years. Enhanced credits for both property and income tax credits are available in Enterprise Zone Focus Areas.

Geographic Restrictions: The Enterprise Zone program restricts funding to businesses and property developers that operate within established enterprise zones.

Business Activity Restrictions: For a business to qualify for the Enterprise Zone property tax credit, it must meet all state and local eligibility requirements. To be qualified the business must satisfy one of the two specific statutory requirements, which are that the business must either (1) make an investment in capital improvements, or (2) hire new employees. The business must contact the local enterprise zone administrator regarding the local eligibility requirements because the local eligibility requirements vary by the enterprise zone.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for the Enterprise Zone program if they meet the geographic and business activity restrictions.

Job Creation Tax Credit (JCTC) Economic Development Article §§6-301 to 6-309

The Job Creation Tax Credit (JCTC) was enacted in 1996 to encourage businesses to create new jobs in Maryland. The credit is available Statewide, but lower job thresholds and increased credits are available in targeted areas. The credits are available for full-time jobs paying at least 150 percent of federal minimum wage in targeted industry sectors. The JCTC is available anywhere in the State in a variety of targeted industry sectors.

Businesses that create a minimum number of new full-time positions may be entitled to state income tax credits of up to \$3,000 per job or up to \$5,000 per job in a “revitalization area.” Businesses engaged in an eligible activity must create at least 60 new full-time jobs in a 24-month period; this is reduced to 25 new full-time jobs if they are located in a Priority Funding Area. In counties with (1) annual average employment less than 75,000 or (2) median household income less than two thirds of the statewide median household income, the minimum requirement is reduced to 10 jobs. A business may not claim more than \$1 million in a credit year. The program is capped at \$4 million in tax credits in a calendar year. Credits are certified on a first-come, first-served basis based on when the Maryland Department of Commerce (Commerce) receives the final application and the availability of credits. Unused credits may be carried forward for five years.

A business may qualify for the JCTC program if it is primarily engaged in:

- manufacturing or mining;
- transportation or communications;
- agriculture, forestry, or fishing;
- research, development, or testing;

- biotechnology;
- computer programming, information technology, or other computer–related services;
- central services for a business entity engaged in financial services, real estate services, or
- insurance services;
- the operation of central administrative offices;
- the operation of a company headquarters other than the headquarters of a professional
- sports organization;
- the operation of a public utility;
- warehousing;
- business services, if the business facility established or expanded is located in a state priority funding area

Geographic Restrictions: The JCTC program offers greater benefits to businesses that operate within Priority Funding Areas as defined in the JCTC statute. The JCTC PFA definition differs slightly from the definition used for other programs. Businesses located outside of a JCTC-defined PFA have higher job creation requirements.

Business Activity Restrictions: The JCTC program is restricted to companies involved in certain activities listed above, and creating a minimum number of jobs as required by the geographic area in which it is located.

Relevance to Study: Any business engaged in any activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for this program as long as they meet the geographic and business activity restrictions.

Innovation Investment Incentive Tax Credit Tax General Article §10-733

The Innovation Investment Incentive Tax Credit was adopted in 2021 to encourage private investment in Maryland-based early-stage technology companies. To qualify, the technology company must be organized for profit to engage in the research, development, or commercialization of innovative and proprietary technology. Eligible technology sectors currently include advanced manufacturing, aerospace, agriculture, artificial intelligence, blue technology, cybersecurity, education, energy, and sustainability, financial, life sciences, quantum and sensor and robotics. Qualified investments in technology companies may be eligible for a refundable State income tax credit equal to 33% of the investment amount not to exceed \$250,000 in tax credits, or 50% of the investment amount not to exceed \$500,000 in tax credits if the technology company is located in Allegany, Dorchester, Garrett and Somerset counties. Enhanced credit amounts are also available if the technology company is located in an Opportunity Zone or RISE Zone, subject to certain limitations. The minimum investment amount is \$25,000.

Geographic Restrictions: There are no geographic restrictions other than the requirement that the eligible R&D activities take place within the State of Maryland. Foreign or out-of-state investors may participate provided they meet the requirements of a qualified investor.

Business Activity Restrictions: The Innovation Investment Incentive Tax Credit is restricted to certain technology companies in eligible industry sectors.

Relevance to Study: Any business engaged in qualified activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for this program if they are located in Maryland and meet other programmatic requirements.

**More Jobs for Marylanders Incentive Program for Manufacturers (MJM)
Economic Development Article §§6-801 to 6-809**

The More Jobs for Marylanders (MJM) program was created in 2017 to promote the growth of manufacturing in Maryland by providing tax incentives for manufacturing job creation, encouraging manufacturers to invest in new equipment through accelerated and bonus depreciation, and funding job training and apprenticeship programs to help strengthen Maryland's manufacturing workforce. The program was expanded in 2019 to provide the income tax credit benefit to non-manufacturers, except for retailers and other prohibited activities, located in Opportunity Zones which are considered Tier 1 Areas. As of June 1, 2022, manufacturers and non-manufacturers in Tier 1 Areas are required to create and retain at least 10 new full-time positions and are eligible for a 10-year consecutive benefit period; while manufacturers and non-manufacturers in Tier 2 Areas are required to create and retain at least 20 new full-time positions and are eligible for a 5-year consecutive income tax credit. The income tax credit is equal to 4.75% of the annual wages paid to the full-time positions.

Tier 1 Areas include Opportunity Zones, Baltimore City and Allegany, Baltimore, Caroline, Dorchester, Garrett, Kent, Prince George's, Somerset, Washington, Wicomico and Worcester counties. Tier 2 Counties include all other Maryland counties.

Geographic Restrictions: The MJM program restricts funding to Maryland-based businesses.

Business Activity Restrictions: The MJM program is restricted to companies that are involved in manufacturing activities (NAICS 31-33), except for refiners as well as certain non-manufacturers in Opportunity Zones.

Relevance to Study: A business operating in areas related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for this program if they meet the geographic, business activity and job creation limitations.

**One Maryland Tax Credit
Economic Development Article §§6-401 to 6-407**

The One Maryland Tax Credit (OneMD) was enacted in 1999 to promote job creation and investment in qualified distressed communities, those counties with high unemployment, and low per capita income compared to the rest of Maryland. To qualify for the credits, the business must create at least 10 new jobs and expend at least \$500,000 in eligible project costs in a Tier 1 County. The jobs must be full-time, pay at least 120 percent of State minimum wage, and the business must be in a targeted industry sector. The tax credit is tiered based on the number of jobs created and capital expenditure:

- For businesses that create 10-24 qualified positions: maximum \$1 million in credits based on eligible project costs.
- For businesses that create 25-49 qualified positions: maximum \$2.5 million in credits based on eligible project costs.
- For businesses that create at least 50 qualified positions: maximum \$5 million in credits based on eligible project costs.

The credit can be carried forward 10 years and is refundable after the fourth credit year, subject to certain limitations. As of July 1, 2018, no business may claim both the One Maryland Tax Credit and Job Creation Tax Credit in the same tax year.

Geographic Restrictions: The One Maryland program restricts funding to businesses that operate within Priority Funding Areas located within Tier 1 Counties. As of January 1, 2022, these jurisdictions are Baltimore City and Allegany, Caroline, Dorchester, Garrett, Kent, Somerset, Washington, Wicomico, and Worcester counties.

Business Activity Restrictions: The One Maryland program is restricted to companies that conduct or operate a trade or business in Maryland or are an organization operating in Maryland that is exempt from taxation under §501(c)(3) or (4) of the Internal Revenue Code, and are expanding employment and investing at least the minimum amount of money required by statute.

Relevance to Study: Any business making a large investment in facilities and new employment in any activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for this program as long as they meet the geographic and business activity restrictions.

Research and Development Tax Credit Tax General Article §10-721

The Research and Development Tax Credit (R&D Tax Credit) was enacted in 2000 to encourage businesses to increase R&D expenditures in the State. The R&D tax credit is not a tax credit that specifically targets job creation although it likely supports the increase in R&D jobs in the State.

The R&D tax credit is 10% of eligible R&D expenses in excess of the Maryland Base Amount. The credits are capped at \$12 million each annually, with \$3.5 million reserved for small businesses. If the amount of credits all businesses apply for exceeds the cap, each business receives its pro rata share. The income tax credit is refundable for a small business if the tax credits exceed the income tax liability. Businesses must submit an application to the Maryland Department of Commerce by November 15 for expenses incurred in the previous tax year.

Geographic Restrictions: There are no geographic restrictions other than the requirement that the eligible R&D activities take place within the State of Maryland.

Business Activity Restrictions: The R&D Tax Credit program is restricted to companies involved in R&D activities, as defined by the Federal definition of qualified R&D and qualified R&D expenses. To qualify the business must incur Qualified Research and Development Expenses, as defined by § 41(b) of the Internal Revenue Code in Maryland.

Relevance to Study: Any business engaged in qualified Research and Development activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion is eligible for this program as long as they are located in and perform their R&D within Maryland.

**Regional Institution Strategic Enterprise (RISE) Zone Program
Economic Development Article §§5-1401 to 5-1408**

A RISE Zone is a geographic area that has a strong connection with a qualified institution and is targeted for increased economic and community development. Qualified institutions include institutions of higher education, regional higher education centers, or non-profits affiliated with a federal agency. The purpose of the RISE Zone program is to access institutional assets that have a strong and demonstrated history of commitment to economic development and revitalization in the communities in which they are located. Qualified institutions and local governments develop a targeted strategy to use the institutional assets and financial incentives to attract businesses and create jobs within the zone.

A RISE Zone designation is in effect for 5 years, with a possible additional 5-year renewal. Counties and municipalities are limited to a maximum of three RISE Zones. Current RISE Zones are located in Baltimore City, Montgomery County, Prince George's and Wicomico counties. Businesses locating in a RISE Zone or an existing business doing a significant expansion within the Zone before January 1, 2023, may qualify for real property tax credits and income tax credits related to capital investment and job creation. In addition, each zone may create a rental assistance program for certain businesses that have nexus with the Qualified Institution within the RISE Zone. The local rental assistance program is funded by the administering local jurisdiction and the State.

The designation of a RISE Zone requires a two-step process. Institutions must first apply to Commerce to be designated a Qualified Institution. Qualified Institutions applying to Commerce to designate a RISE Zone shall jointly apply with a county, municipality, or the economic development agency of a county or municipality to designate a RISE Zone. Once designated, the RISE Zone may establish a rental assistance program and apply to Commerce for matching funds.

Geographic Restrictions: All eligible business activities must occur within an established RISE Zone.

Business Activity Restrictions: The RISE Zone program is restricted to companies who have business or research connections to qualified RISE Zone institutions.

Relevance to Study: Any business linked to a qualified RISE Zone institution and operating within a RISE Zone who is engaged in activities related to recycling, recycled materials or recycled products or infrastructure creation or expansion may be eligible for this program.

Department of General Services



Report on DGS Activities Related to HB 164 – Development of Recycled Content Markets

June 2022

Introduction

This report is submitted by the Maryland Department of General Services to the Maryland Department of the Environment to comply with the reporting mandate included in HB 164 which requires DGS, and other agencies, to support MDE in the development of recycling markets. Specifically, this report addresses the following requirement:

On or before July 1, 2022, the Commerce, DGS, MDOT, and MES shall report to the Office of Recycling in MDE on:

- Relevant programs, tools, training guides, campaigns, and technologies available for promoting the development of markets for recycled materials and recycled products in the state
- Including efforts in state government to increase the use, reuse, and remanufacturing of recycled materials and the use of recycled products

Maryland Green Purchasing Committee

The Maryland Department of General Service can have a significant impact on supporting demand for recycled content products, primarily through the Green Purchasing Committee. DGS chairs and staffs the Green Purchasing Committee (GPC) which is recognized nationally as a leader in sustainable procurement in the public sector.

Established in 2010 by the Green Maryland Act, the State's green purchasing program is administered by the Maryland Dept. of General Services with one and a half staff positions dedicated to carrying out the State's green purchasing initiatives. Unique to Maryland is the inter-agency "Green Purchasing Committee" (Chaired and staffed by DGS with 8 other statutory member agencies) that convenes ~8 times per year to develop tools, best practices, training programs, and approve environmentally preferable specifications for State agencies to adopt.

By statute, the GPC adopts and publishes specifications for environmentally preferable products and services that State agencies must then adopt. To learn more about the GPC, please visit: <https://dgs.maryland.gov/Pages/GreenPurchasing/index.aspx>

Relevant State Procurement Activities

The conservation of resources and the reduction of landfill waste have long been pillars of Maryland's [Green Purchasing Program](#), led by DGS. To meet these goals, Maryland's Green Purchasing Committee (GPC) has engaged in 4 strategic actions to ensure continued progress: 1) Data Collection and Analysis; 2) Training and Resource Development; 3) Vendor Engagement; and 4) Contract Integration. The outcomes of recent efforts are as follows:

Data Collection and Analysis

- Verified 1,860,992.39 lbs. of recycled content purchases in FY21.
- Used standardized data collection template with fields for material type and weight to capture recycled content benefits.

Training and Resource Development

- Developed a factsheet and held a webinar (120+ participants) on how to [Save Money by Buying Green](#) which emphasized the purchase of reusable and remanufactured products.
- [Held Office Supply Purchaser Training](#) on how to find green products on Statewide contracts – with an emphasis on recycled content products.
- Included recycled content requirements in 3 new GPC published specifications.
- Arranged training sessions for Maryland staff: *Driving Markets for Recycled Content* training by Lynn Rubenstein (NERC); *Buy Recycled in Maryland* training by Richard Keller (Baltimore County).

Vendor Engagement

- 7 vendor one-on-one sessions held (to date) with vendors to promote green products. Outcomes included the blocking of non-compliant products such as copy paper with less than 30% minimum post-consumer recycled content.
- Engaged a preferred provider in regular quarterly meetings to identify opportunities to increase recycled content percentages in targeted product categories.
- Developed purchasing guides that show the amount of recycled content in products offered on statewide contracts.

Contract Integration

- New contract for antifreeze required antifreeze to be reclaimed/remanufactured and adhere to the EPA CPG for Vehicular Products.
- New contract for food service ware included requirements that items be certified compostable or 100% recycled.
- Maryland participated in the development of a cooperative purchasing janitorial supplies contract (led by Massachusetts). This contract only offered green products and included minimum requirements for recycled content.

The GPC prioritizes a data driven approach for the development of its green purchasing program. The GPC engages targeted vendors on reporting to increase the amount of data collected on recycled content products - for instance, additional data points on material and weight were requested. Vendors are required to submit quarterly sales and environmental data to the GPC for the products and services procured by the State. This data is then verified by the GPC for accuracy and to limit occurrences of greenwashing. After data collection and analysis is complete for all vendors, the results are used to determine green purchasing benefits, successes, opportunities, and challenges; this in turn is used to inform the GPC's strategy for the upcoming years. The calculation of benefits is particularly important as it is a reliable tool to increase top-down support for green purchasing efforts.

The State of Maryland, through the GPC, is a Northeast Recycling Council (NERC) Government Recycling Demand Champion. As a Recycling Demand Champion, DGS has already pledged to Increase Public-Sector Demand for Recycled Content Products through our procurement activities. DGS reports data annually as part of this voluntary program.

Conclusion

The Maryland Green Purchasing Program is an established state-wide program addressing environmental impacts of the products and services procured by the State. There is opportunity to

leverage State procurement and purchasing power to drive markets for recycled content. It is recommended to coordinate with DGS and the Maryland GPC to ensure that any specifications and purchasing guidance reflect shared goals to drive markets for recycled content.

Questions about this report may be directed to: Kshirajaa Ramesh
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Maryland Department of Transportation

HB164 – MDOT Submission

Relevant programs, tools, training guides, campaigns, and technologies available for promoting the development of markets for recycled materials and recycled products in the State, including efforts in State government to increase the use, reuse, and remanufacturing of recycled materials and the use of recycled products.

MDOT - Introduction

The Maryland Department of Transportation (MDOT) is an organization comprised of five business units and one Authority. They are: The Secretary's Office, MDOT State Highway Administration, MDOT Maryland Transit Administration, MDOT Motor Vehicle Administration, MDOT Maryland Port Administration, MDOT Maryland Aviation Administration and the Maryland Transportation Authority. This unique approach provides the state's leadership with the ability to develop a coordinated and balanced approach to transportation.

Maryland Green Purchasing Committee

MDOT participates in many legislatively-established working groups, one being the Maryland Green Purchasing Committee. The Maryland Green Purchasing Committee (GPC) was established by the Green Maryland Act of 2010, to administer environmentally preferable purchasing program for the State. To do this, the GPC develops and executes statewide green purchasing policies, guidelines, programs, best practices, regulations, and trainings to raise general awareness for these issues. Work by the GPC also supports Maryland's established targets for greenhouse gas reductions and energy efficiency. The Maryland Department of Transportation has been a Statutory Member of the GPC since its inception; participating in quarterly meetings, subgroup meetings, purchasing specification development, and electric vehicle interagency workgroups. By leveraging green procurement tools developed in this Committee, MDOT is better able to increase the proportion of dollars spent on green purchases. The inclusion of the Maryland GPC is critical to meeting the goals outlined in HB164. In the May 2022 GPC quarterly meeting, the HB164 working group was discussed and the GPC Chair along with the group's statutory members agreed that their mission is in direct alignment with supporting the State procurement of recycled goods.

Procurement and Statewide Contracts

In Maryland, Statewide contracts are typically managed by the Department of General Services (DGS). This State Agency also develops green purchasing specifications for all State procurement. MDOT, in addition to all State agencies, must report annually, dollars spent on green purchases to the DGS.

State Agencies, Legislation and Working Groups

MDOT participates in external and internal committees and working groups that can help promote the market for recycled goods in Maryland. A non-exhaustive list of related committees in which MDOT participates:

- Maryland Green Purchasing Committee
- Maryland Green Building Council
- Maryland Commission on Climate Change
- Sustainable Materials Management Maryland (SM3)
- MDOT SHA's Recycled Material Task Force
- MDOT MPA's Innovative Reuse Committee
- MDOT MPA's Dredged Material Management Program (DMMP)
- Association of Climate Change Officers (ACCO)
- MDOT/MPA/MDE/MEA Air Agreement Working Group
- Project Green Classrooms

For MDOT information, please contact:

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Office of Environment, MDOT's Secretary's Office

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Maryland Environmental Service

MES is a non-budgeted instrumentality of the State that is wholly reliant on revenues generated from contractual agreements with clients (mostly State and local government entities). As such, the costs for any tasks that MES takes on that are non-revenue generating activities (including staff who are assigned to certain projects) are ultimately borne on clients in the form of higher prices for services. With that in mind, MES has not had much activity by way of marketing recycled products, and while we would be happy to contribute to this effort moving forward, a funding source would need to be identified.

MES's efforts on this issue.

Around the year 2011, MES published the 7th edition of the "Buy Recycled" Training Manual. MES also received a small grant of \$5,000 to assist with training for various counties and organizations. Please go to our website at for further information.

Beyond this effort in 2011, since there has not been a funding source for marketing of recycled products, MES has not had much activity in this space. However, on behalf of our clients, we do quite a bit of market development and outreach. A few feature projects include:

- A \$6 million plastics processing upgrade completed at the Prince George's County Material Recovery Facility. This upgrade allows Prince George's County to separate plastics and send them directly to markets, improving recyclability and market values. This upgrade also included upgrades to the fiber screen that improved paper quality.
- MES has done a significant amount of work on market and vendor development for both recyclable commodities and compost products. On behalf of our clients, we have developed and expanded relationships with various vendors east of the Mississippi to move Maryland recyclables to market.
- We also do a variety of education and outreach programs at the request of our clients. These include facility tours, school visits, and other public programs. In particular, MES staff based in Harford County have a significant outreach program at the County elementary schools.
- MES staff have been asked to speak on recycling and recycling markets at various events to promote recycling and recycling markets.

APPENDIX G

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