



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

February 16, 2018

The Honorable Mike V. Miller, Jr., President
Senate of Maryland
State House, H-107
Annapolis MD 21401-1991

The Honorable Michael E. Busch, Speaker
House of Delegates
State House, H-101
Annapolis MD 21401-1991

The Honorable Joan Carter Conway, Chair
Senate Education, Health and
Environmental Affairs Committee
Miller Senate Office Building
2 West Wing
11 Bladen Street
Annapolis MD 21401-1991

The Honorable Kumar P. Barve, Chair
Environment and Transportation Committee
House of Delegates
House Office Building, Room 251
6 Bladen Street
Annapolis MD 21401-1991

Dear President Miller, Speaker Busch, Chairs Conway and Barve:

As required in Sections 9-204(n) and 9-1702(e) of the Environment Article, Annotated Code of Maryland, I am enclosing a copy of the 2016 Maryland Solid Waste Management and Diversion Report.

If the Department can provide you with any additional information, please contact me or Ms. Hilary Miller, Director of the Land and Materials Administration, at 410-537-3304 or via email at hilary.miller@maryland.gov.

Sincerely,

Ben Grumbles
Secretary

Enclosures

cc: Sarah Albert, Department of Legislative Services, Mandated Report Specialist
Hilary Miller, Director, Land and Materials Administration



MARYLAND

Department of the Environment

MARYLAND SOLID WASTE MANAGEMENT and DIVERSION REPORT

– 2016 –

(Calendar Year 2015 Data)

Prepared by:

Resource Management Program
Land and Materials Administration

Prepared for:

Senate Education, Health, and Environmental Affairs Committee

House Environment and Transportation Committee

Lawrence J. Hogan, Jr., Governor
State of Maryland

Boyd K. Rutherford, Lt. Governor
State of Maryland

Thomas V. Mike Miller, Jr., Senate President
Maryland General Assembly

Michael E. Busch, House Speaker
Maryland General Assembly



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PARTNERSHIPS.....	47
COUNTY WASTE DIVERSION PROGRAMS.....	48

TABLE OF FIGURES

FIGURE 1 – WASTE MANAGED BY MARYLAND PERMITTED FACILITIES.....	6
FIGURE 2 – WASTE MANAGED ORIGIN.....	19
FIGURE 3 – MARYLAND WASTE MANAGED PER STATE.....	20
FIGURE 4 – WASTE DIVERSION RATE.....	26
FIGURE 5 – MRA RECYCLING TONNAGE.....	27
FIGURE 6 – MRA MATERIALS RECYCLED BREAKDOWN.....	27
FIGURE 7 – ALL STAR RECYCLING RATE.....	31
FIGURE 8 – ALL STAR RECYCLING TONNAGE.....	32
FIGURE 9 – eCYCLING TONS.....	41

TABLE OF TABLES

TABLE 1 – MARYLAND WASTE GENERATION TOTALS.....	2
TABLE 2 – WASTE GENERATED IN MARYLAND VS. WASTE MANAGED BY MARYLAND PERMITTED SOLID WASTE ACCEPTANCE FACILITIES.....	5
TABLE 3 – WASTE MANAGED IN 2014 BY MARYLAND PERMITTED SOLID WASTE ACCEPTANCE FACILITIES.....	6
TABLE 4 – PERMITTED MSW LANDFILLS.....	8
TABLE 5 – PERMITTED C&D LANDFILLS.....	9
TABLE 6 – PERMITTED INDUSTRIAL WASTE LANDFILLS.....	10
TABLE 7 – PERMITTED LANDCLEARING DEBRIS LANDFILLS.....	10
TABLE 8 – PERMITTED SOLID WASTE TRANSFER STATIONS.....	11
TABLE 9 – PERMITTED SOLID AND MEDICAL WASTE PROCESSING FACILITIES.....	12
TABLE 10 – PERMITTED SOLID WASTE PROCESSING FACILITIES AND TRANSFER STATIONS.....	12
TABLE 11 – PERMITTED INCINERATOR/WASTE-TO-ENERGY FACILITIES.....	14
TABLE 12 – PERMITTED NATURAL WOOD WASTE RECYCLING FACILITIES.....	15
TABLE 13 – MARYLAND IMPORTED WASTE.....	18
TABLE 14 – MARYLAND EXPORTED MATERIAL TONNAGE BY STATE DESTINATION.....	20
TABLE 15 – MARYLAND SOLID WASTE MANAGEMENT PRACTICES.....	20
TABLE 16 – MSW LANDFILL CAPACITY.....	21
TABLE 17 – C&D LANDFILL CAPACITY.....	22
TABLE 18 – INDUSTRIAL LANDFILL CAPACITY.....	23
TABLE 19 – LANDCLEARING DEBRIS LANDFILL CAPACITY.....	23
TABLE 20 – COUNTY RECYCLABLES BY COMMODITY IN TONS FOR CALENDAR YEAR 2014.....	28
TABLE 21 – RECYCLING OF NON-MRA MATERIALS IN TONS.....	30
TABLE 22 – MARYLAND STATE AGENCIES’ 2014 RECYCLING RATES.....	32
TABLE 23 – PER TON GREENHOUSE GAS EMISSIONS.....	34
TABLE 24 – PER TON ENERGY USE.....	34

TABLE 25 – MARYLAND WASTE DIVERSION AND GREENHOUSE GAS EMISSIONS FOR CALENDAR YEAR 2014.....	35
TABLE 26 – MARYLAND WASTE DIVERSION AND ENERGY USE FOR CALENDAR YEAR 2014.....	35
TABLE 27 – MARYLAND NEWSPAPER PUBLISHERS.....	37
TABLE 28 – eCYCLING COLLECTION PROGRAMS	40
TABLE 29 – BATTERY RECYCLING COMPANIES	44
TABLE 30 – COUNTY RESIDENTIAL RECYCLABLES BY COMMODITY	50

APPENDICES

APPENDIX.....	52
ECONOMIC BENEFITS OF PERMITTED SOLID WASTE ACCEPTANCE FACILITIES.....	A-1
PERMITTED SOLID WASTE ACCEPTANCE FACILITIES.....	B-1
PERMITTED NATURAL WOOD WASTE ACCEPTANCE FACILITIES	C-1
ALL STAR NEWS, WINTER 2017	D-1
COUNTY RECYCLING COORDINATORS	E-1

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Overview

Introduction

The Maryland Department of the Environment (the “Department”) respectfully submits to the Governor, General Assembly, House Environment and Transportation Committee, and Senate Education, Health and Environmental Affairs Committee the Department's Annual Report describing how solid waste was managed in Maryland **during calendar year (CY) 2015**. 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 the Department 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 the Department to prepare an annual report detailing recycling in Maryland.

Part I of the report addresses solid waste managed by Maryland 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, 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; and natural wood waste (NWW) recycling facilities, must provide the Department with the information needed to prepare this report on an annual basis. The recycling data reported in Part I represents only the recycling activities conducted by Maryland 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 CY 2015**, and an overview of the State’s technical assistance activities **during fiscal year 2016 (*i.e.*, July 2015 through June 2016)**. Data contained in Part II comes from annual reports submitted to the Department by Maryland’s 23 counties and Baltimore City, annual reports filed by Maryland permitted solid waste acceptance facilities, State government agencies participating in the All StAR (**All State Agencies Recycle**) Program, and newspaper and telephone directory publishers. Counties also provide the Department information on their collection programs, institutional recycling programs, public education efforts, source reduction activities, and disposal facilities.

Executive Summary

In 2015, Maryland counties and Baltimore City generated 12,471,636 tons of solid waste (see Table 1 – Maryland Waste Generation Totals, including footnotes, for details). The total represents solid waste managed by all sources, not just Maryland permitted solid waste acceptance facilities. As businesses in Maryland are not required to report the waste they generate, this total represents the best available solid waste generation data. This total is an increase of 3.09 percent from the 12,098,317 tons generated in 2014. The Maryland Recycling

Act (MRA) outlines the types of waste that count towards a county's recycling rate. MRA waste is equal to municipal solid waste (MSW) plus industrial waste from non-private, industrial waste landfills. MRA waste is comprised of 2,807,589 tons of MRA recyclables + 3,913,922 tons of MRA waste disposed (without recycled MSW ash and backend scrap metal) for a total of 6,721,511 tons of MRA waste generated in Maryland.

A total of 8,624,933 tons of waste was accepted at Maryland permitted solid waste acceptance facilities. Of the 8,624,933 tons of solid waste accepted, a total of 8,065,760 tons was managed by Maryland permitted solid waste acceptance facilities during CY 2015 by recycling, disposal (incineration and landfilling), or transportation out of State (see Table 3).

Table 1 – Maryland Waste Generation Totals

County	Total Waste (tons)
Allegany	640,273
Anne Arundel	1,143,611
Baltimore City	1,481,522
Baltimore County	1,581,184
Calvert	115,308
Carroll	403,741
Cecil	176,797
Charles	725,735
Dorchester	66,203
Frederick	422,465
Garrett	54,696
Harford	304,241
Howard	674,482
Mid-Shore *	379,571
Montgomery	1,490,532
Prince George's	1,572,502
Somerset	35,211
St. Mary's	150,078
Washington	194,541
Wicomico	250,058
Worcester	143,466
State Highways	465,419
MARYLAND TOTAL ^	12,471,636

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

^ Due to rounding the Maryland Total differs from the actual value of 12,471,636.25. County total is 12,006,217.25.

Maryland achieved a 47.23 percent MRA waste diversion rate. This was comprised of a 43.19 percent MRA recycling rate (2,807,589 tons of MRA recycling, plus 95,715 tons resource

recovery facility credit) plus a 4.04 percent (282,918 tons reduced) source reduction credit. An additional 3,797,244 tons of materials (*e.g.*, scrap metal, asphalt, soils, etc.) that do not count towards the MRA recycling rate were also recycled for a grand total of 6,700,548 tons recycled in Maryland, including the resource recovery facility credit. (See Tables 20 and 21, including footnotes, for details.)

Other highlights for CY 2015:

- * Nearly 2,478,144 tons (31 percent) of the waste managed by Maryland permitted solid waste acceptance facilities was landfilled in Maryland;
- * 1,152,315 tons (14 percent) were recycled/reused in Maryland;
- * 1,484,477 tons (19 percent) were incinerated in Maryland; and
- * 2,529,871 tons (31 percent) 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 2,529,871 tons of waste was exported from Maryland, while only 271,005 tons of waste was imported to Maryland. (See Tables 13 and 14, including footnotes, for details.)
- * Maryland landfills reported a total available capacity of 85,541,178 tons in 2015. (See Tables 16, 17, 18, and 19, including footnotes, for details.)

Part I – Waste Management by Permitted Solid Waste Acceptance Facilities

Introduction

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

- * The amount of solid waste managed in each of the following categories:
 - MSW;
 - C&D;
 - LCD;
 - Industrial Waste;
 - Incinerator Ash;
 - NWW; and
 - Any other solid waste identified by the Department.
- * 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 reported information, permitted solid waste acceptance facilities may submit optional information related to the economic benefits provided by those permit holders 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.
- * 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, the Department has reviewed and compiled the data reported in the Annual Tonnage Reports submitted by permitted solid waste acceptance facilities that accepted solid waste in CY 2015. 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 the Department 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 the 2015 calendar year, the Department reviewed and analyzed the information contained in the Annual Tonnage Reports from permitted solid waste acceptance facilities. The **recycling data** reported in **Part I** of this report represents **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 Solid Waste Acceptance Facilities in 2015

In 2015, over 8.62 million tons of solid waste was accepted by Maryland permitted solid waste acceptance facilities and NWW recycling facilities. The 8.62 million tons includes waste stored on site and waste sent from one facility to another. Of the 8.62 million tons accepted, over 8 million tons were actually managed by storing, recycling and disposal in Maryland, or

transportation out of State. Table 2 details the difference between the amounts of waste generated in Maryland, highlighted in green, and the waste managed by Maryland permitted solid waste acceptance facilities, highlighted in blue and yellow. Table 3 details the waste managed by Maryland permitted solid waste acceptance facilities.

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

Waste Detail		Tons
A	Total Waste Generated in Maryland (see Table 1, including “^” footer)	12,471,636
B	Total Maryland Waste Recycled (see Table 20, including “*” footer)	6,604,833
C	Total Maryland Waste Disposed (A – B)	5,866,803
D	Total Maryland waste recycled that was not managed through a Maryland permitted SWAF (6,604,833 (Table 20) – 1,398,507 (Table 3))	5,206,326
E	Total waste disposed by Maryland counties but not captured by a Maryland permitted solid waste acceptance facility ^	173,813
F	Natural Wood Waste Disposed or Stored (see Table 12)	62,958
G *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment ^^	197,396
H	Total waste imported into Maryland (see Table 13)	271,005
I **	Disposed Ash, Back-End Scrap Metal, and By-Pass ^^	442,904
Total Waste Managed by Maryland permitted solid waste acceptance facilities (A-D-E+F+G+H+I) (see Table 3)		8,065,760
Waste generated in Maryland		Waste generated vs. managed adjustments
		Waste managed by Maryland Permitted Solid Waste Acceptance Facilities

* 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 and included in the 12,471,636 waste generated tons.

^^ Reported by permitted solid waste acceptance facilities via the Solid Waste Tonnage Report. 174,554 tons of ash and bypass recycled + 22,842 tons of back-end scrap metal recycled = 197,396 tons. 275,870 tons of disposed MSW-ash, back-end scrap metal, & by-pass + 167,034 tons of disposed Non-MSW ash & bypass = 442,904 tons.

The amount of out-of-State waste that was managed in Maryland in 2015 decreased to 271,005 tons, compared to 284,091 in 2014. The quantity of solid waste accepted, processed, and disposed at the permitted refuse disposal systems in Maryland is similar to previous years. Over 2.47 million tons of waste was landfilled and over 1.48 million tons was incinerated in Maryland. Figure 1 depicts the tons of waste managed by Maryland permitted facilities in previous years. Over 1.15 million tons of reclaimed recyclables were collected, sorted, and transferred to recycling facilities.

The use of out-of-State facilities for the disposal of Maryland generated waste continued in 2015. There was an increase, to 2,529,871 tons, in the amount of waste exported compared to 2014 (2,303,402 tons). Very large out-of-State commercial landfills may be operated more efficiently than smaller local landfills, and the cost savings are currently being passed along to customers, and consequently, counties. Several local governments are using the cost differential to save money by transferring waste out-of-State while conserving their available landfill space.

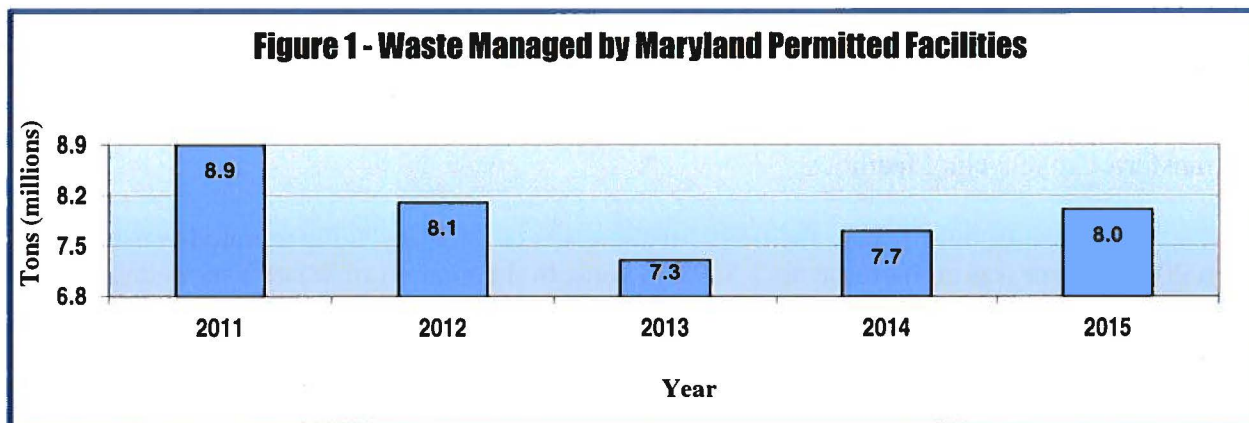
The cost of motor fuel may make long-haul disposal less attractive, and increase interest in other disposal and recycling options, however.

Table 3 – Waste Managed in 2015 by Maryland Permitted Solid Waste Acceptance Facilities

Solid Waste Category	Tons Accepted ¹	Tons Recycled/ Reused ²	Tons Disposed	Tons Stored	Tons Managed ³
Municipal Solid Waste	5,285,387	304,394	4,180,568	73,795	4,558,757
Construction & Demolition Debris	2,235,644	481,187	1,457,005	269,556	2,207,748
Natural Wood Waste	494,516	431,558	12,944	62,958	507,460
Industrial Waste	53,688	0	52,669	0	52,669
Land Clearing Debris	22,034	8,494	4,586	1,316	14,396
Other Wastes ⁴	101,786	0	95,624	14	95,638
Total Waste Received	8,193,055	1,225,633	5,803,396	407,639	7,436,668
Tons of Incinerator Ash	431,878	172,874	442,904	13,314	629,092
TOTAL REPORTED	8,624,933	1,398,507	6,246,300	420,953	8,065,760

- 1 "Tons Accepted" includes all waste accepted by permitted facilities including waste sent from one Maryland permitted facility to another.
- 2 Only includes recycling/reused waste that was captured by Maryland permitted solid waste acceptance facilities.
- 3 "Tons Managed" is equal to "Tons Recycled/Reused" + "Tons Disposed" + Tons Stored. "Tons Managed" is waste that was managed both in Maryland and outside of Maryland (see Figures 3 and 4 and Tables 14 and 15).
- 4 "Other Wastes" includes special medical waste, asbestos, and sewage sludge.

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 U.S. Environmental Protection Agency's (EPA) Advancing Sustainable Materials Management: Facts and Figures, MSW is comprised of approximately 26.5% paper and paperboard, 14.9% food scraps, 13.3% yard trimmings, 12.9% plastics, 9% metals, 6.2% wood, 9.5% rubber, leather and textiles, 4.4% glass, and 3.3% other (*i.e.*, electrolytes in batteries, fluff pulp, feces, and urine in diapers).



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. The regulated activities that are part of this System are as follows:

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 2015, 25 Refuse Disposal Permits for municipal landfills were in effect. Of the 25 permits, 23 facilities have been developed. Of the 23 developed facilities, 21 facilities accepted MSW, managed/disposed MSW, and/or transferred recyclables to the marketplace.

A new Refuse Disposal Permit was issued to the Cecil County Central Landfill for the facility’s horizontal expansion in future years. The construction of Montgomery County Site 2 Municipal Landfill, Montgomery County’s proposed back-up facility to handle the County’s waste capacity in the future, is currently on hold. The Mid-Shore Regional Solid Waste Municipal Landfill in Talbot County ceased its landfill operations and did not accept any waste in 2015. Under a multi-jurisdictional agreement, waste from the four Mid-Shore counties (Caroline, Kent, Queen Anne’s, and Talbot) is currently disposed at the Midshore II Landfill in Caroline County. Harford County Waste Disposal Center Landfill did not accept any waste in 2015 and the facility’s Refuse Disposal Permit expired in 2015.

Over 1.69 million tons of solid waste was disposed at the permitted facilities in 2015. The two facilities that disposed the most waste were Quarantine Road Landfill (302,125 tons) in Baltimore City and Brown Station Road Landfill (301,160 tons) in Upper Marlboro, Prince George’s County. Details 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 Sanitary	Private	75,426	75,426	0
Anne Arundel	Millersville Resource Recovery Facility	County	167,787	107,315	37,366
Baltimore City	Quarantine Road	City	302,346	302,125	221
Baltimore	Eastern Sanitary	County	235,585	170,955	2,204
Calvert	Appeal Sanitary	County	5,335	401	3,649
Caroline	Midshore II	County	112,727	111,938	566
Carroll	Northern Municipal	County	7,052	6,799	253

Jurisdiction	Facility Name(Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Cecil	Cecil County Central	County	104,928	87,569	7,114
	Cecil County Central-Horizontal Expansion	County	0	0	0
Charles	Charles County Municipal	County	113,344	94,842	1,164
Dorchester	Beulah Municipal	County	49,685	48,226	77
Frederick	Fort Detrick Area B	Federal	7,692	7,692	0
	Reichs Ford/Site B	County	22,888	14,294	10,867
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	28,994	28,619	84
Harford	Harford Waste Disposal Center	County	0	0	0
Harford	Harford Waste Disposal Center (Expansion)	County	112,952	61,989	20,947
Howard	Alpha Ridge Municipal	County	46,528	1,619	7,204
Montgomery	Montgomery County Site 2	County	0	0	0
Prince George's	Brown Station Road	County	303,063	301,160	1,903
St. Mary's	St. Andrew's Municipal	County	12,430	0	12,430
Somerset	Somerset County	County	23,113	22,904	209
Talbot	Midshore Regional Solid Waste Facility	County	0	0	0
Washington	Forty West Municipal	County	93,351	88,139	1,597
Wicomico	Newland Park Municipal	County	105,882	105,882	0
Worcester	Central Sanitary	County	62,507	53,329	2,163
TOTAL			1,993,615	1,691,223	110,018

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

Construction and Demolition (C&D) Landfill

A rubble (C&D) landfill is a solid waste acceptance facility that is restricted to accepting waste derived from building construction, demolition, or remodeling, such as: wood, metal, bricks (excluding refractory type) and masonry, cement and concrete, glass, shingles and roofing material, plaster and plasterboard, carpets, floor and wall tile, asphalt, insulation material, pipes, wires, and appliances; and debris derived from land clearing operations such as: tree stumps, root mats, brush and limbs, logs, topsoil, vegetation, and rock. Paper or cardboard packaging or building materials are accepted, provided that they do not exceed ten percent 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 one percent of the waste accepted at the rubble landfill by volume. During 2015, a new Refuse Disposal Permit was issued to the Tolson & Associates Rubble Landfill. The new rubble landfill is being constructed and adds up to the total active permits to six during 2015. Of the six permitted rubble landfills, four landfills disposed 561,026 tons of waste. The two that disposed the most waste by weight were Ritchie Land

Reclamation (Phase I & Phase II) – Marlboro Road (215,276 tons) in Upper Marlboro, Prince George’s County, and Days Cove Rubble Landfill (183,123 tons) in White Marsh, Baltimore County. Details 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	0	0	0
Baltimore County	Days Cove Rubble Landfill Lateral Expansion	Private	208,082	183,123	655
	Honeygo Run Reclamation Center	Private	178,576	146,339	78
Prince George's	Ritchie Reclamation Phase I & II	Private	349,573	215,276	4,857
Queen Anne's	Baker Rubble	Private	19,448	16,288	290
Washington	Washington County Rubble	County	0	0	0
TOTAL			755,679	561,026	5,880

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

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 wastes. Industrial wastes may also be disposed in permitted MSW landfills. In 2015, five industrial waste landfill permits were in effect. Of the five permits, four facilities have been developed to accept waste. All permitted and developed industrial waste landfills accepted and disposed waste in 2015. Essroc Cement’s Industrial Landfill (permitted in 2012) is still being constructed. In 2015, Fort Armistead Road – Lot 15 Landfill in Baltimore City disposed the most industrial waste (169,044 tons). Details 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	169,044	169,044	0
	Hawkins Pt. Plant	Private	570	570	0
	W. R. Grace and Co. – Davison Chemical Division	Private	22,311	22,311	0
Frederick	Eastalco Aluminum Company	Private	32,791	32,791	0
	Essroc Cement Corporation	Private	0	0	0
TOTAL			224,716	224,716	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

Landclearing Debris (LCD) Landfill

A LCD landfill is a solid waste acceptance facility that is restricted to acceptance of the following waste: earthen material such as clays, sands, gravels, and silts; topsoil; tree stumps; root mats; brush and limbs; logs; vegetation; and rock. During 2015, two of the three permitted facilities accepted 8,043 tons of waste, with the disposal occurring at the Howlin Landclearing Debris landfill (1,179 tons). Details 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	6,864	0	0
	Howlin Landclearing Debris	Private	1,179	1,179	0
St. Mary's	Knott Landclearing Debris	Private	0	0	0
TOTAL			8,043	1,179	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

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. During 2015, there were nine permitted transfer stations in operation that accepted a total of 620,745 tons of solid waste. The two busiest transfer stations in Maryland during 2015 were the Western Acceptance Facility (290,649 tons accepted) and the Eastern Transfer Station (97,709 tons accepted) in Baltimore County. Details 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	63,464	0	63,464
Baltimore	Eastern	County	97,709	0	97,709
County	Western Acceptance	County	290,649	355	290,370
Calvert	Appeal	Private	96,539	0	96,539
Cecil	Stemmers Run	County	518	0	518
	Woodlawn	County	1,445	0	1,445
Howard	Workplace Essentials	Private	170	0	170
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	36,511	0	36,511
Worcester	Ocean City	Municipal	33,740	0	33,740
TOTAL			620,745	355	620,466

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

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. During 2015, nine Refuse Disposal Permits for processing facilities were in effect. Of the nine permits, seven facilities accepted a total of 325,633 tons of waste. The largest of these facilities were Roll-off Express, Inc. in Carroll County, which accepted 100,475 tons of MSW and C&D waste, and Sun Services Processing and Recycling Center in Prince George’s County accepted 94,484 tons of MSW and C&D waste. Details are presented in Table 9.

Table 9 – Permitted Solid and Medical Waste Processing Facilities

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore City	L & J Waste Recycling, LLC	Private	29,093	0	29,093
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0
Calvert	Southern Maryland Processing	Private	15,351	0	15,351
Carroll	Roll-Off Express, Inc.	Private	100,475	0	100,475

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Montgomery	C&D Recovery Processing	Private	71,729	0	72,928
Prince George's	Dower House Recycling and Processing	Private	0	0	0
	Sun Services Processing & Recycling Center	Private	94,484	0	94,716
Wicomico	Peninsula Regional Medical Center **	Private	171	0	171
	Bennett Processing	Private	14,330	0	14,331
TOTAL			325,633	0	327,065

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

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

Solid Waste Processing Facility & Transfer Station

Solid waste processing facilities and transfer stations are facilities that perform the functions of both a transfer station and a processing facility. During 2015, a total of 17 permitted facilities were in operation. Of the 17 facilities, 15 accepted 2,717,374 tons of waste in 2015. The two facilities that accepted the most waste in 2015 were Montgomery County Solid Waste Transfer Station in Montgomery County (719,506 tons) and Annapolis Junction Recycling and Transfer Station in Anne Arundel County (575,480 tons). The details 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	31,400	2	31,398
Anne Arundel	Curtis Creek Recovery Systems	Private	190,636	0	190,636
	Annapolis Junction Recycling and Transfer Station	Private	575,480	0	575,480
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	0	0	0
	Stericycle, Inc.	Private	22,035	0	22,035
	Baltimore Recycling Center, LLC	Private	122,594	0	122,594
	Daniels Sharpsmart	Private	2,077	0	2,077
Baltimore County	Baltimore County Central Acceptance Facility	County	341,140	2,617	339,712

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Carroll	Northern Municipal Landfill	County	89,725	0	89,725
Frederick	Reichs Ford Landfill	County	180,089	0	180,089
Harford	Auston Processing and Transfer Facility	Private	3,060	183	2,981
Howard	Alpha Ridge Municipal Processing & Transfer Facility	County	38,155	0	38,155
	Ameriwaaste Processing and Transfer Station	Private	198,187	0	198,187
Montgomery	Montgomery County Solid Waste Transfer Station	County	719,506	0	719,506
Prince George's	Recycle One Processing & Transfer Station	Private	102,740	0	102,740
	Sheriff Road Processing Transfer Facility	Private	100,550	0	100,550
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0
TOTAL			2,717,374	2,802	2,715,865

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

Municipal Solid Waste Incinerator/Waste-to-Energy Facility

A MSW incinerator/waste-to-energy facility is equipped with a furnace or combustion unit that uses controlled flame combustion for the thermal destruction of MSW, industrial waste, or special medical waste. Incinerators that are “waste-to-energy” facilities use the heat generated by combustion to create steam that is either used directly for heat or to drive electrical powered generators. During 2015, the eight permitted facilities in operation accepted 1,484,612 tons of solid waste. Wheelabrator Baltimore, LP. in Baltimore City and the Montgomery County Resource Recovery Facility incinerated the bulk of the material in this category, accounting for 730,153 tons and 601,460 tons, respectively. Details 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	730,702	730,153	222,171
	Curtis Bay Energy	Private	25,542	25,542	11,011
	University of Maryland – Baltimore	State	120	0	120

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Incinerated	Waste Transported
Charles	Naval Support Facility Indian Head Incinerator	Federal	30	0	74
Frederick	Fort Detrick – Area B and Main Post	Federal	2,932	2,926	616
Harford	Harford County Resource Recovery Facility	County	125,945	124,305	54,345
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	599,250	601,460	183,857
Somerset	Smith Island Incinerator	County	91	91	22
TOTAL			1,484,612	1,484,477	472,216

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

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 that are generated when land is cleared for construction purposes. 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 26.04.09. A natural wood waste recycling (NWWR) facility does not include a collection or processing facility operated by a nonprofit or governmental organization located in the State, or a single individual or business that provides recycling services solely for its employees or for its own recyclable materials generated on its own premises.

During 2015, 36 of the 43 permitted operations accepted 494,516 tons of NWW and recycled 431,558 tons. The two highest volume facilities, Grant County Mulch in Prince George's County and Elkridge Recyclery in Howard County, recycled 112,001 tons and 53,498 tons, respectively. Details on the waste managed at NWWR facilities are presented in Table 12. Additional details on the NWWR facilities are presented in Appendix C.

Additional information on Maryland's NWW program is available at <http://mde.maryland.gov/programs/Land/SolidWaste/Pages/index.aspx> on the Department's web page, or by contacting the Department's Solid Waste Program at 410-537-3315 or kaveh.hosseinzadeh@maryland.gov.

Table 12 – Permitted Natural Wood Waste Recycling Facilities

Jurisdiction	Facility Name	Permittee	Waste Accepted	Waste Handled	
				Waste Recycled*	Waste Marketed*
Allegany	Braddock Construction, LLC.	Braddock Construction, LLC.	8	8	0
Anne Arundel	A-A Recycle & Sand, Inc.	A-A Recycle & Sand, Inc.	18,151	0	20,858
	Bronson Contracting, Inc.	Bronson Contracting, Inc.	0	0	0
	L and W Recycling	L & W Recycling, Inc.	33,034	33,034	24,872
Baltimore County	King Mulch and Pallet	Albert J. Bierman	5,206	5,206	4,086
	Edrich Lumber, Inc.	Edrich Lumber, Inc.	19,844	19,844	30,185
	Northwest Recycling, LLC.	Northwest Recycling LLC.	18,098	18,098	17,458
	Wirtz & Daughters, Inc.	Wirtz And Daughters, Inc.	12,149	12,353	33,855
	Hollins Organic Products, Inc.	Hollins Organic Products, Inc.	10,330	10,330	4,774
Calvert	A.H. Hatcher, Inc.	Quality Built Homes, Inc.	15,250	4,347	4,364
	231 Materials & Recycling Products, LLC.	231 Materials & Recycling Products, LLC.	0	0	0
Caroline	Cahall Construction, LLC	Cahall Construction, LLC	138	0	0
Carroll	C. J. Miller, LLC.	C. J. Miller, LLC.	3,023	3,023	8,100
	Harvest RGI, LLC	Harvest RGI, LLC	32,865	37,560	37,560
Cecil	Chesapeake Wood Recycling	Chesapeake Investment, Inc.	5,025	5,125	5,125
	Grass Busters Landscaping Company, Inc.	Grass Busters Landscaping Company, Inc.	534	534	534
	Mountain Mulch Elkton, LLC	Mountain Mulch Elkton, LLC	7080	7521	7,309
Charles	Beuchert Excavating, Inc.	Beuchert Excavating, Inc.	595	2,503	259
	Calvert Wood Recycling	Calvert Wood Recycling LLC	6,686	6,688	4,834
	Mona Recycling	Michael Mona Jr.	80	0	0
Frederick	Butler Wood Recycling	William Lee Butler	779	1,078	1,137
	Grant County Mulch	Grant County Mulch, Inc.	19,730	20,810	42,301
	Bussard Brothers Landscape	R. W. Bussard & Sons, Inc.	6,678	6,678	5682
Harford	Heston's Mulch	Arthur D. Heston	631	1,421	499
	Brian Baker, Inc.	Brian Baker, Inc.	3135	2,342	2,165

Jurisdiction	Facility Name	Permittee	Waste Accepted	Waste Handled	
				Waste Recycled*	Waste Marketed*
	Crouse Construction Company, Inc.	Crouse Construction Co., Inc.	0	0	0
	Comer Construction, Inc.	Comer Construction, Inc.	5,983	5,495	4,609
Howard	Elkridge Recyclery	RLO Contractors, Inc.	47,732	53,498	55,945
	Level Land Lisbon Mulch Yard	Level Land, Inc.	6,941	7,675	8,222
	Oak Ridge Farm	Oak Ridge Farm, LLC	0	0	0
Kent	Sharp Lawn & Tree, Inc.	Sharp Lawn & Tree, Inc.	0	413	309
Montgomery	Allentuck Landscaping, Inc.	Allentuck Landscaping, Inc.	0	0	0
	Acme Biomass Reduction, Inc.	Acme Biomass Reduction, Inc.	23,005	19,554	8,684
	Country Nursery	Country Nursery	0	0	0
	Grant County Mulch Ground Covers	Grant County Mulch, Inc.	5,217	7,482	5,174
Prince George's	Grant County Mulch Facility	Grant County Mulch, Inc.	122,149	112,001	119,933
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	2,956	2,956	925
	Grange Hall Yard	Cole Ventures, Inc.	1,087	0	1,726
	Pardoe's Lawn and Tree Service, Inc.	Pardoe's Lawn and Tree Service, Inc.	190	1,354	1,210
St. Mary's	Charlotte Hall Lumber Yard	Bay Works Wood Processing, LLC	56495	18907	16207
Talbot	Dependable Sand and Gravel Company, Inc.	Dependable Sand and Gravel Company, Inc.	2,982	2,990	3,392
Washington	Hess Road Recycling Center	Universal Contractor Inc.	217	217	0
Wicomico	Dunn's Tractor Service, Inc.	Dunn's Tractor Service Inc.	513	513	513
TOTAL			494,516	431,558	482,806

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2015, but not managed until 2016.

Composting Facilities

In July 2015, the Department adopted composting regulations (COMAR 26.04.11) to provide a streamlined permitting process for composting facilities while protecting the environment and public health. The regulations required existing composting facilities to submit an existing composting facility notification (EFN) to the Department by September 1, 2015. A facility that submitted an EFN may continue to operate without a composting permit until January 1, 2017. Nineteen (19) facilities submitted the EFN. Information on permitted composting facilities will

be included beginning in the 2017 version of this report. Detailed information regarding the permitting status of the composting facilities is available on the Department's composting web page at <http://www.mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/composting.aspx>

Imported Solid Waste

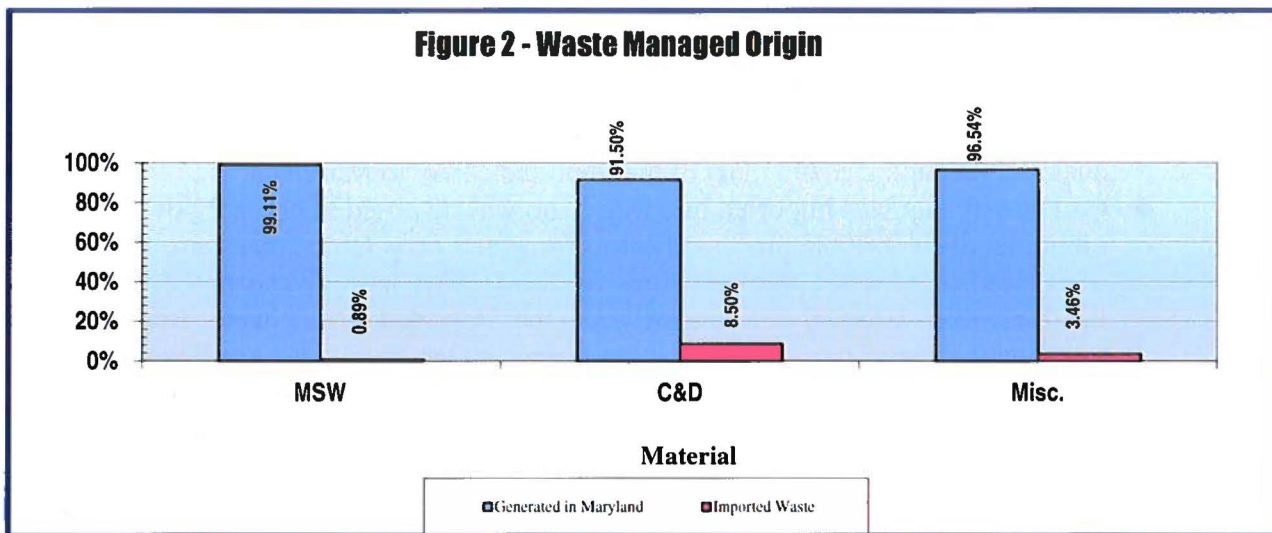
Table 13 compares the tonnage of solid waste, by category, which was imported into the State to the total amount of solid waste managed at permitted solid waste acceptance facilities in Maryland. Figure 2 illustrates the amount of imported versus Maryland-generated solid waste managed at permitted solid waste acceptance facilities. In CY 2015, Maryland's permitted solid waste acceptance facilities accepted waste from Alabama, California, Canada, Connecticut, Delaware, Georgia, Kentucky, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Texas, Virginia, Washington D.C., West Virginia, and Wisconsin. Highlights include:

- * In 2015, there was a decrease of approximately 5 percent in the amount of solid waste imported (271,005 tons) into Maryland compared to calendar year 2014 (284,091 tons).
- * The solid waste imported into Maryland comprises 3.4 percent of the 8.06 million tons of solid waste managed at permitted Maryland solid waste acceptance and Natural Wood Waste Recycling facilities.
- * The Mountainview Sanitary Landfill in Allegany County received and disposed the bulk (25,795 tons) of the imported MSW to Maryland.
- * C&D waste that was imported into Maryland was disposed at privately owned rubble landfills, or was processed into segregated recyclables that were then transferred to Mid-Atlantic recycling facilities. The landfill and processing facilities that received the majority of the imported C&D were Ritchie Reclamation Phase I & II (86,348 tons), Recycle One Processing and Transfer Station (38,296 tons), Sheriff Road Processing and Transfer Facility (15,218 tons), and Sun Services Processing and Recycling Center (2,942 tons) in Prince George's County; and Honeygo Run Reclamation Center (33,704 tons) in Baltimore County.

Table 13 – Maryland Imported Waste

Solid Waste Category	Tons of Solid Waste Imported Into Maryland	Jurisdictions Where the Solid Waste Originated	Tons Managed in Maryland
MSW	37,769	PA, VA, WASHINGTON DC, WV	4,558,757
C&D	187,656	DE, NJ, PA, VA, WASHINGTON DC, WV	2,207,748
Miscellaneous *	45,580	AL, CA, CANADA, CT, DE, GA, KY, ME, MA, MI, NH, NJ, NY, NC, PA, RI, SC, TX, VA, WASHINGTON DC, WV, WI	1,299,255
TOTAL	271,005		8,065,760

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



Exported Solid Waste

Due to economic considerations and the desire to conserve disposal capacity in Maryland landfills, most of the counties (21) and Baltimore City transport some of their solid waste out of State for recycling or disposal. There was a decrease of 1.8 percent in the amount of solid waste exported in 2015 compared to the amount of waste exported in 2014. Forty-two (42) of the 82 permitted solid waste acceptance facilities exported waste to 17 states.

Virginia was the most prevalent export destination for Maryland waste and accepted approximately 75 percent of the total exported waste. Ash from the Montgomery County Resource Recovery Facility in Dickerson was exported to Old Dominion Landfill in Virginia for recycling. Also, ash from Curtis Bay Energy Limited Partnership facility was disposed in King George Landfill in Virginia. Figure 3 illustrates, by percentage, where solid waste captured by

Maryland's permitted solid waste acceptance facilities was managed. Table 14 gives a destination breakdown of solid waste exported by Maryland permitted solid waste acceptance facilities. Highlights include:

- * An estimated 2,529,871 tons of material (*i.e.*, recyclables and solid waste), consisting of MSW, C&D and miscellaneous wastes (including incinerator ash and recyclables) were exported. This represents 31 percent of the total solid waste managed at Maryland facilities.
- * The majority (1,897,832 tons) of the material exported went to Virginia.
- * Approximately 183,900 tons (172,874 recycled tons) of the exported material was incinerator ash that was sent to Virginia.
- * The Annapolis Junction Recycling and Transfer Station, which transferred 530,624 tons of material, was the largest State exporter of solid waste.
- * The King George Landfill in Virginia, which accepted 771,197 tons of material, was the largest recipient of Maryland's solid waste.

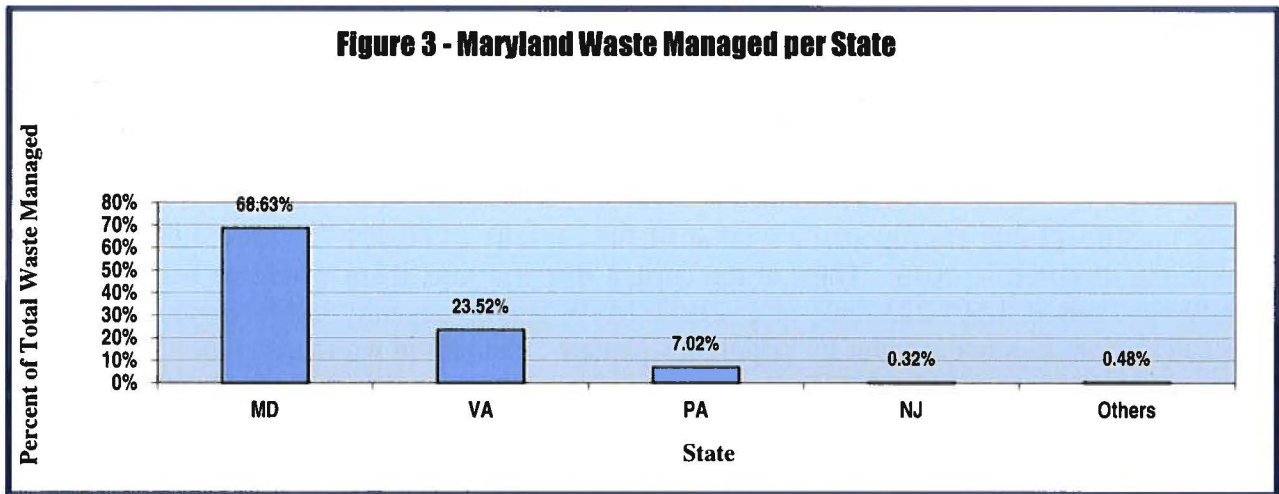


Table 14 – Maryland Exported Material Tonnage by State Destination

Solid Waste Category	Virginia	Pennsylvania	New Jersey	Other	Total (Tons)
MSW	1,172,985	457,292	26,274	37103	1,693,654
C&D	538,849	82,239	0	1676	622,764
Miscellaneous *	185,998	26,789	0	666	213,453
TOTAL (Tons)	1,897,832	566,320	26,274	39,445	2,529,871

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

Solid Waste Management Practices

In 2015, the solid waste accepted at Maryland permitted solid waste acceptance facilities was managed by transporting the waste out of State or landfilling, incinerating, or recycling/reusing the waste in Maryland. Table 15 gives a breakdown of the management practices by the Maryland permitted solid waste acceptance facilities.

Table 15 – Maryland Solid Waste Management Practices

Solid Waste Management Method	Tons	Percentage of Total Solid Waste Managed
Landfilled in Maryland	2,478,144	31%
Exported and Disposed	2,283,679	28%
Exported and Recycled	246,192	3%
Recycled/Reused in Maryland *	1,152,315	14%
Incinerated in Maryland	1,484,477	19%
Stored in Maryland Facilities	420,953	5%
TOTAL	8,065,760	100%

* Calculated by subtracting the total recycled out-of State (Table 14) from Tons Recycled/Reused (Table 3).

Landfill 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 16) reported a total available capacity of 60,499,777 tons with 1,691,223 tons being disposed in 2015. Thus, at the current disposal rate, there would be over 36 years (60,499,777 tons ÷ 1,691,223 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 16 – 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 2015 (CY)	Landfilled in 2015 (Tons)	Used in 2015 ^
Alpha Ridge Municipal Landfill	13,521,900	5,979,086	3,288,497	7,542,814	4,148,548	2053	0	1619	0.01%
Appeal Municipal Landfill	2,799,290	615,267	369,160	2,184,023	1,310,414	2028	668	401	0.02%
Beulah Sanitary Landfill	1,910,325	1,678,121	1,602,359	232,204	285,042	2018	50,156	48,226	2.63%
Brown Station Road Landfill	16,505,000	11,709,088	8,553,342	4,795,912	2,678,310	2027	440,000	301,160	2.67%
Cecil County Central Landfill	6,527,539	4,971,308	3,082,211	1,556,231	964,863	2026	144,460	87,569	2.21%
Cecil County Central Landfill – Horizontal Expansion **	16,800,000	0	0	16,800,000	10,080,000	2062	0	0	0.00%
Central Sanitary Landfill	4,800,000	2,187,789	1,531,452	2,612,211	1,828,548	2048	76,184	53,329	1.59%
Charles County Municipal Landfill	5,289,000	1,949,425	1,390,666	3,339,575	1,782,734	2037	141,023	94,842	2.67%
Eastern Sanitary Landfill	23,474,559	13,056,829	5,965,719	10,417,730	4,990,093	2053	370,336	170,955	1.58%
Fort Detrick – Area B & Main Post	1,000,900	125,018	102,412	875,882	691,301	2186	7,097	7,692	0.71%
Forty West Municipal Landfill	24,752,000	4,183,344	1,642,554	20,568,656	7,948,845	2119	190,620	88,139	0.77%

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 2015 (CY)	Landfilled in 2015 (Tons)	Used in 2015 ^
Garrett County Solid Waste Disposal & Recycling Facility	2,568,470	1,176,087	688,038	1,392,383	790,974	2041	51,896	28,619	2.02%
Harford Waste Disposal Center	2,980,000	2,864,795	1,096,578	115,205	103,685	2017	0	0	0.00%
Harford Waste Disposal Center (Expansion)	4,870,330	748,375	314,834	4,121,955	1,816,466	2043	207,624	61,989	4.26%
Midshore Regional Solid Waste Facility	3,924,994	3,684,695	2,032,481	240,299	126,266	2010	0	0	0.00%
Midshore II Regional Solid Waste Facility	7,800,000	1,073,251	570,397	6,726,749	4,109,603	2052	207,999	111,938	2.67%
Millersville Landfill & Resource Recovery Facility	14,156,000	5,260,458	3,156,275	8,895,542	5,337,325	2043	215,524	107,315	1.52%
Montgomery County Site 2**	0	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	3,971,631	3,666,612	2,584,961	305,019	215,039	2022	107,025	75,426	2.69%
Newland Park Municipal Landfill	7,200,000	3,579,360	1,932,854	3,620,640	1,955,146	2035	196,079	105,882	2.72%
Northern Municipal Landfill	3,504,187	1,212,989	606,494	2,291,198	1,145,599	2071	13,597	6,799	0.39%
Quarantine Road Landfill	18,320,622	13,872,436	16,230,751	4,448,186	5,204,561	2026	258,226	302,125	1.41%
Reichs Ford/Site B Municipal Sanitary Landfill	7,326,426	3,962,386	2,197,070	3,364,040	1,924,045	2045	25,411	14,294	0.35%
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	827,885	481,360	782,115	312,370	2031	44,972	22,904	2.79%
Totals	197,113,173	88,384,604	59,420,465	108,728,569	60,499,777		2,748,897	1,691,223	1.39%

* St. Andrews Municipal Landfill closed in 2001 (Permit No. 2000-WMF-0138). The current permit was issued for a new landfill that was never constructed. St. Mary's County uses permit 2015-WMF-0138 to operate the closed St. Andrews Municipal Landfill as a transfer station.

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

^ Equal to Landfilled in 2015 (CY) ÷ Permitted Capacity (CY)

Construction and Demolition Debris landfills (Table 17) reported a total available capacity of 16,054,391 tons with 561,026 tons disposed in CY 2015. At the current disposal rate, there would be approximately 29 years (16,054,391 tons ÷ 561,026 tons) of available C&D landfill capacity in Maryland.

Table 17 – 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 2015 (CY)	Landfilled in 2015 (Tons)	Used in 2015 ^
Baker Rubble Landfill	820,000	661,732	379,303	158,268	55,697	2020	30,730	16,288	3.75%
Days Cove Rubble Landfill – Lateral Expansion	3,192,000	2,556,270	1,562,522	635,730	597,478	2018	325,301	183,123	10.19%
Honeygo Run Reclamation Center	11,723,461	4,793,300	3,267,100	6,930,161	3,899,749	2048	248,032	146,339	2.12%
Ritchie Land Reclamation Partnership Phase I & II	12,655,800	7,186,791	7,043,274	5,469,009	3,281,405	2030	358,793	215,276	2.84%
Tolson & Associates	5,762,060	0	0	5,762,060	7,202,575	2035	0	0	0%
Washington County Rubble Landfill	2,201,664	166,690	83,345	2,034,974	1,017,487	2061	0	0	0.00%
TOTALS	36,354,985	15,364,783	12,335,544	20,990,202	16,054,391		962,856	561,026	2.65%

^ Equal to Landfilled in 2015 (CY) ÷ Permitted Capacity (CY)

Industrial landfills (Table 18) reported a total available capacity of 8,897,755 tons. At a current disposal rate of 224,716 tons, there would be approximately 40 years (8,897,755 tons ÷ 224,716 tons) of available industrial landfill capacity in Maryland.

Table 18 – 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 2015 (CY)	Landfilled in 2015 (Tons)	Used in 2015 ^
W.R. Grace and Co. – Davison Chemical Division	495,000	162,654	193,697	332,346	301,303	2028	18,184	22,311	3.67%
Eastalco Aluminum Company	380,000	131,060	166,981	248,940	317,169	2016	24,923	32,791	0.00%
Essroc Cement Corporation	273,000	0	0	273,000	273,000	2020	0	0	0.00%
Hawkins Point Plant	3,228,044	2,288,535	3,661,496	939,509	1,503,944	2077	456	570	0.52%
Fort Armistead Road – Lot 15	6,300,000	388,783	427,661	5,911,217	6,502,339	2047	153,676	169,044	2.44%
TOTALS	10,676,044	2,971,032	4,449,835	7,705,012	8,897,755		197,239	224,716	1.85%

^ Equal to Landfilled in 2015 (CY) ÷ Permitted Capacity (CY)

Landclearing Debris landfills (Table 19) reported a total available capacity of 89,255 tons with 1,179 tons disposed in CY 2015. At the current disposal rate, there would be approximately 76 years (89,255 tons ÷ 1,179 tons) of available landclearing debris landfill capacity in Maryland.

Table 19 – 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 2015 (CY)	Landfilled in 2015 (Tons)	Used in 2015 ^
Howlin Landclearing Debris Landfill	64,120	49,633	62,041	14,487	18,109	2018	943	1,179	1.47%
Knott Landclearing Debris Landfill	94,500	75,805	6,894	18,695	1,106	2020	0	0	0.06%
Hance Landclearing Debris Landfill	267,053	126,973	63,486	140,080	70,040	2044	0	0	0.00%
TOTALS	425,673	252,411	132,421	173,262	89,255		943	1,179	0.22%

^ Equal to Landfilled in 2015 (CY) ÷ Permitted Capacity (CY)

Part II – Waste Diversion

Introduction

In Maryland, waste diversion is defined as the amount of waste recycled and the amount of waste diverted from entering the waste stream through source reduction activities. Waste diversion saves energy, reduces greenhouse gases and other pollutants generated in the manufacturing process and at landfills, saves natural resources, and reduces the amount of waste disposed at solid waste acceptance facilities (e.g., incinerators, landfills, etc.). The Department promotes and encourages waste diversion across Maryland by partnering with Maryland's

jurisdictions and the public and private sectors. The Department also works with other State agencies to increase the volume of materials that are diverted from landfills.

The quantities of solid waste disposed in this Part are gathered from Maryland Recycling Act (MRA) Tonnage Reporting Surveys, submitted by Maryland counties (including Baltimore City) to the Department, which capture solid waste known to the counties to be exported directly out of State without passing through a Maryland permitted facility, **and** from Solid Waste Tonnage Reports submitted by permitted facilities to the Department.

Maryland's Legislative Mandate

In 1988, the **Maryland Recycling Act (MRA)** (Chapter 536) mandated that the Department reduce the disposal of solid waste in Maryland through management, education, and regulation. Since the original passage, additional legislation has passed to improve recycling in Maryland.

Timeline of legislative requirements:

1. Requiring each jurisdiction to develop and implement recycling programs by January 1, 1994. Jurisdictions with populations greater than 150,000 are currently required to recycle 20 percent or more of their waste and jurisdictions with populations less than 150,000 are currently required to recycle 15 percent or more of their waste. In no case is the recycling rate to be less than 10 percent (1988). (See Number 22 for an update.)
2. Requiring each jurisdiction to select the materials to be recycled and the manner in which they are separated and processed. If a jurisdiction fails to meet the specified reductions, State and local authorities can prohibit the issuance of building permits for all new construction (1988).
3. Directing State Government to reduce by recycling the amount of the solid waste stream generated for disposal by at least 20 percent or to an amount that is determined practical and economically feasible, but in no case may the amount to be recycled be less than 10 percent. Additionally, State Agency recycling plans shall include a system for the recycling of aluminum, glass, paper, and plastic generated for disposal (1988). (See Number 22 for an update.)
4. Requiring telephone directories distributed in the State to have a recycled content, by weight, of 40 percent in 2005 and all subsequent years (1988).
5. Providing that newsprint distributed in the State must have a 3-year rolling average recycled content, by weight, of 40 percent in 2005 and all subsequent years (1988).
6. Banning scrap tires from disposal in a landfill after January 1, 1994 (1991).
7. Including composting in the calculation of the recycling rate (1992).
8. Requiring counties to address the feasibility of composting mixed solid waste when developing solid waste management plans (1992).
9. Requiring private natural wood waste recycling facilities to obtain permits (1992).

10. Banning separately collected yard waste from disposal at solid waste acceptance facilities (1994).
11. Requiring mercuric oxide battery manufacturers to be responsible for the collection, transportation, and recycling or disposal of these batteries sold or offered for promotional purposes in the State (1994).
12. Establishing a program or system for the collection, recycling, or disposal of each cell, rechargeable battery or rechargeable product sold in the State (1994).
13. Establishing a voluntary, state-wide waste diversion goal of 40 percent by the year 2005, consisting of a 35 percent MRA recycling rate plus up to 5 percent credit for source reduction activities (2000).
14. Reducing the impact of mercury in the environment by requiring that the Department provide outreach assistance to schools, businesses, and the general public relating to the proper management and recycling of mercury-containing products; prohibiting the sale of mercury thermometers beginning in 2002 (2001).
15. Prohibiting the sale of mercury containing thermostats by October 2007; requiring the Department to report to the Governor and Legislature detailing the state-wide collection, reclamation, and recycling of all products containing mercury (2006).
16. Requiring motor vehicle manufacturers to develop and submit to the Department a mercury minimization plan that includes information on mercury switch removal from motor vehicles (2009).
17. Requiring a county recycling plan to address the collection, processing, marketing, and disposition of recyclable materials from county public schools; requiring a county to submit a revised recycling plan to the Department by October 1, 2010 (2009).
18. Directing that by July 1, 2010, the State Agency Recycling Plan must address the placement of collection bins and the recycling of aluminum, glass, paper, and plastic; each agency and unit of State government must implement the plan by January 1, 2012 (2009).
19. Requiring a county recycling plan to address the collection and recycling of fluorescent and compact fluorescent lights that contain mercury; requiring a county to submit a revised recycling plan to the Department by October 1, 2011 (2010).
20. Requiring each property owner or manager of an apartment building or a council of unit owners of a condominium with 10 or more units to provide recycling for the residents of the dwelling units by October 1, 2014 (2012).
21. Requiring a covered electronics device (CED) manufacturer to pay an annual registration fee based on the number of covered electronic devices sold in Maryland the previous year. The registration revenue may be used to provide grants to counties and municipalities for CED recycling activities (2012).
22. Requiring a county with a population greater than 150,000 to recycle 35 percent and a county with a population less than 150,000 to recycle 20 percent of its waste stream by December 31, 2015. State agencies must

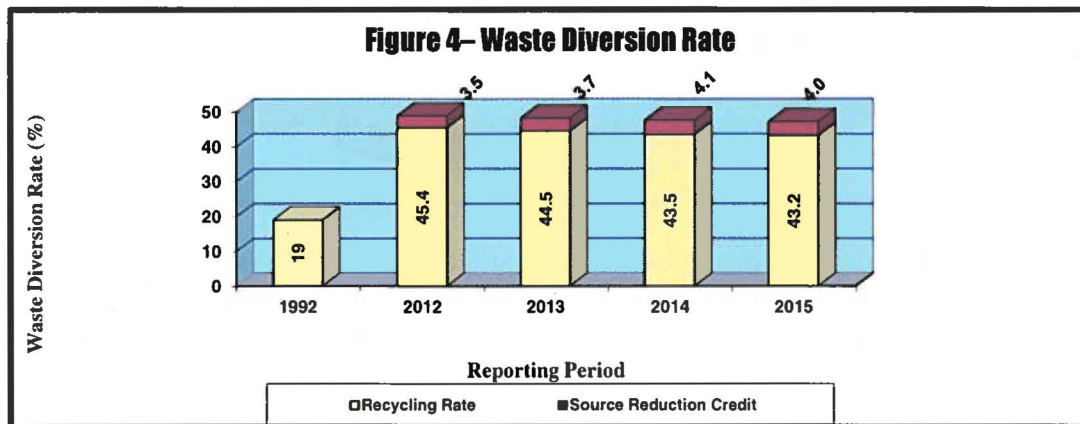
implement a recycling plan with a 30 percent recycling rate mandate (2012).

23. Increasing the voluntary statewide recycling and waste diversion goals to 55 percent and 60 percent, respectively for 2020 (2012).
24. Requiring a person that operates a composting facility to do so only in accordance with regulations, orders, or permits adopted by the State (2013).
25. Requiring a county recycling plan to address, by October, 2015, recycling at certain special events held on publicly owned property (2014).

The MRA excludes from its scope scrap metal, land clearing debris, construction and demolition debris, sewage sludge, hospital wastes, and waste generated by a single individual or business and disposed in a facility dedicated solely for that entity's waste.

Maryland's 47.2 Percent 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 State-wide waste diversion rate of 47.2 percent in calendar year (CY) 2015. The 47.2 percent waste diversion rate was composed of a 43.2 percent MRA recycling rate and a 4 percent SR credit. This exceeds the voluntary MRA 40 percent waste diversion goal targeted for 2005 in 2000's Senate Joint Resolution 6 but is less than the 60 percent waste diversion goal for 2020 established in 2012 under § 9-1706.1 of the Environment Article. All except three jurisdictions met the mandatory county recycling rate of 20 or 35 percent, based on population. See Table 20 for details. Figure 4 provides a historical breakdown of Maryland's waste diversion rate.

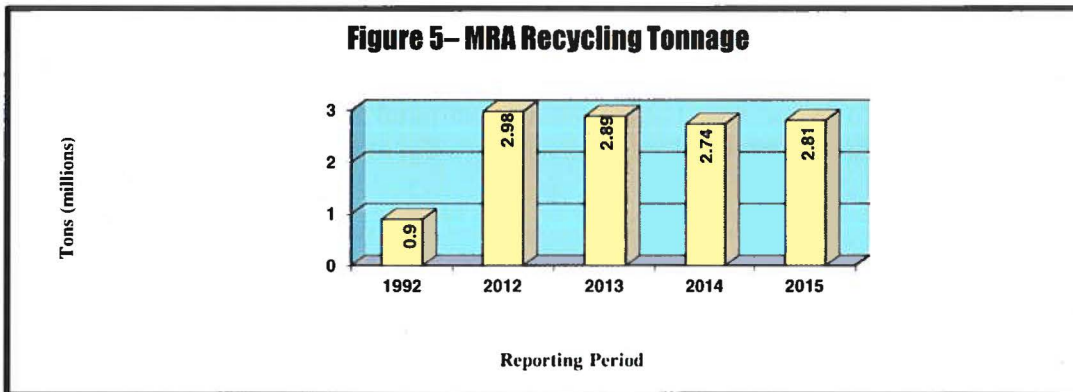


Maryland's 43.2 Percent Recycling Rate

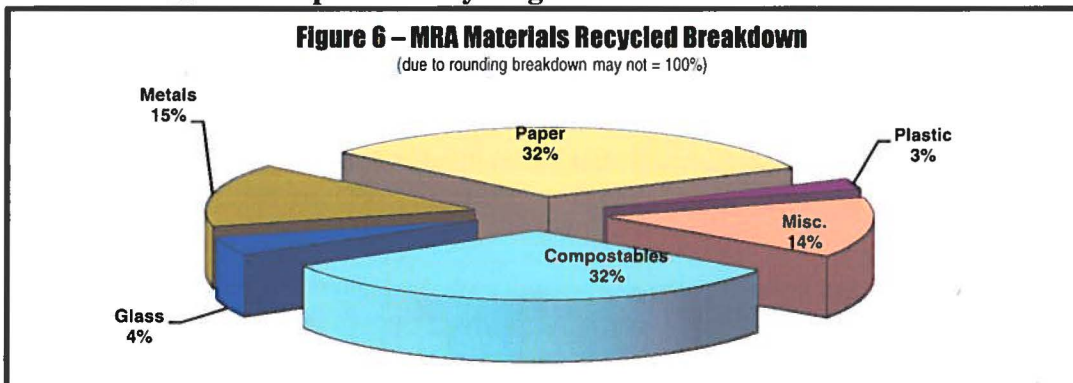
In CY 2015, Maryland residents and businesses recycled 43.2 percent of the municipal solid waste generated. The MRA recycling rate is calculated as: $(\text{MRA recycling tonnage} + \text{resource recovery facility credit}) \div (\text{MRA recycling tonnage} + \text{MRA waste disposed})$. The resource recovery facility (RRF) credit is provided under the MRA in Environment Article, Section 9-1703(d), Annotated Code of Maryland. The provision specifies that a 5 percent recycling credit applies to each county that “achieves a reduction of at least 5 percent in the

volume of its waste through the utilization of one or more resource recovery facilities in operation as of January 1, 1988.”

Figure 5 summarizes the tons of recycling over the past several years, compared with recycling in 1992. Figure 6 shows the total MRA tons recycled by material in CY 2015. Compostables and paper materials constituted the largest portion of materials recycled. Table 20 details recycling and waste diversion totals for each of Maryland's jurisdictions.



Estimated Material-Specific Recycling Rates



A more detailed more detailed look at the MRA materials recycled reveals varying degrees of recycling success. Using data compiled by the EPA in the Advancing Sustainable Materials Management: Facts and Figures publication on the breakdown of waste generated in the U.S. by material, the Department is able to estimate the amount of specific materials generated in Maryland. This, along with data on the tons of each material recycled in Maryland (reported by the counties) allows for calculation of an estimated recycling rate for specific materials. The data shows that Maryland recycled:

- ✱ 38.5 percent of compostables;
 - 71.4 percent of yard trimmings;
 - 12.8 percent of food scraps;
- ✱ 42.6 percent of glass;
 - 70.5 percent of metal;

50.2 percent of paper products; and
* 8.4 percent of plastic.

Table 20 – County Recyclables by Commodity in Tons for Calendar Year 2015

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2015

County	MRA Rate ² (%)	Mandatory Recycling Rate (%)	Waste Diversion Rate ³ (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables ⁴	Total Recycling *
				Compostables	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	40.04	20.00	42.04	14,389	341	6,018	8,872	1,810	6,598	38,028	532,039	570,067
Anne Arundel	35.86	35.00	38.86	120,289	12,427	11,513	87,115	6,814	17,795	255,953	245,996	501,949
Baltimore City	17.80	35.00	21.80	20,081	6,313	13,006	33,019	1,579	15,694	89,692	432,099	521,791
Baltimore County	34.80	35.00	39.80	64,371	12,735	75,415	81,824	10,031	23,858	268,234	424,966	693,200
Calvert	26.00	20.00	26.00	2,247	1,171	1,686	8,567	741	1,921	16,333	25,218	41,551
Carroll	44.07	35.00	49.07	40,813	9,756	7,541	15,400	4,420	3,721	81,651	192,621	274,272
Cecil	56.35	20.00	60.35	55,004	712	5,699	14,161	1,802	1,231	78,609	8,268	86,877
Charles	48.01	35.00	53.01	36,045	5,898	13,356	20,511	2,604	1,777	80,191	483,199	563,390
Dorchester	31.80	20.00	31.80	618	8,474	2,121	419	3,263	69	14,964	1,873	16,837
Frederick	46.21	35.00	51.21	34,319	3,309	4,147	44,155	2,440	26,173	114,543	68,682	183,225
Garrett	49.98	20.00	50.98	15,696	323	624	2,395	101	1,792	20,931	4,462	25,393
Harford	43.70	35.00	48.70	36,258	4,086	11,596	25,192	3,125	12,971	93,228	28,310	121,538
Howard	44.93	35.00	49.93	100,250	12,738	4,331	95,187	6,166	12,536	231,208	49,084	280,292
Mid-Shore ¹	50.07	20.00	50.07	26,160	4,050	2,024	27,194	2,029	55,085	116,542	107,862	224,404
Montgomery	56.01	35.00	61.01	183,344	25,860	101,005	138,389	11,094	165,715	625,407	106,691	732,098
Prince George's	59.59	35.00	64.59	107,207	12,860	155,809	190,310	9,823	10,394	486,403	435,831	922,234
Somerset	13.88	20.00	13.88	480	47	1,321	248	38	386	2,520	9,683	12,203
St. Mary's	35.88	20.00	39.88	11,133	1,373	1,678	5,500	814	1,889	22,387	57,548	79,935
Washington	53.20	35.00	53.20	2,848	1,699	763	67,670	864	1,345	75,189	31,056	106,245
Wicomico	42.32	20.00	42.32	6,566	2,201	6,287	27,138	2,362	29,350	73,904	64,055	137,959
Worcester	23.33	20.00	23.33	13,126	701	401	1,708	422	5,316	21,674	22,282	43,956
State Highways of Additional Asphalt and Concrete Recycled											465,419	465,419
TOTAL*	43.19	N/A	47.23	891,244	127,074	426,341	894,974	72,342	395,616	2,807,591	3,797,244	6,604,835

* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values (i.e., MRA Recyclables = 2,807,588.96, Non-MRA Recyclables = 3,797,244.11 tons, Total 6,604,833.07 tons. The MRA recycling rate includes an additional 95,715.20 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 282,918.32 tons.

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

Maryland's 38.2 percent U.S. Environmental Protection Agency (EPA) Recycling Rate

State recycling laws determine which types of materials count towards a state's recycling rate. The differences in state laws make the comparison of recycling activities between states difficult. In an effort to compare state data and generate a U.S. recycling rate, the EPA has developed recycling criteria that standardizes which materials count toward the recycling rate. This can then be used to compare data across states. The major differences between the EPA and Maryland recycling rates relate to Maryland allowing certain industrial materials and the reuse of certain materials (e.g., retread tires, refurbished pallets, etc.) to count toward the MRA recycling rate. Based upon the information currently available to the Department, adjusting Maryland's recycling rate to EPA protocol reduces the amount of material allowed to count toward the recycling rate by 394,685 tons to 2,412,904 tons. Maryland's EPA recycling rate of 38.2 percent exceeds the overall U.S. recycling rate of 34.6 percent for 2014 (most recent available as of the writing of this report).

Maryland's 4 Percent Source Reduction Credit

In 2015, 14 of Maryland's jurisdictions were able to add from 1 point to 5 points to their waste diversion rates by conducting SR activities as a. They accomplished this by utilizing internet resources, demonstration sites (*i.e.*, backyard food waste and yard waste composting), and publications on reuse practices and yard waste reduction. A complete list of SR activities and a breakdown of Maryland SR activities in calendar year 2015 is available in the "State, County, and City Recycling Rates" section of the Department's web page at

<http://mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/recyclingrates.aspx>

Beyond the Maryland Recycling Act

The Department encourages the recycling of all materials because of the environmental and economic benefits provided. Local governments continue to seek recycling opportunities beyond those that apply toward the MRA rate, while businesses are constantly looking for recycling opportunities to reduce the cost of waste disposal. However, since these "non-MRA recyclables" do not count toward a county's mandated recycling rate, counties place varying levels of importance on gathering this information. This should be taken into account when assessing the completeness of Non-MRA recyclables data. Almost 3.3 million tons of non-MRA materials were reported as recycled in 2015. Table 21 offers a breakdown by category of the non-MRA materials reported as recycled in 2015.

Table 21 – Recycling of Non-MRA Materials in Tons

*Compiled by the Maryland Department of the Environment
from Reports Submitted for Calendar Year 2015*

MATERIAL	TONS RECYCLED
Antifreeze	1,740
Asphalt & Concrete	1,164,160
Coal Ash	511,480
Construction/Demolition Debris	429,042
Landclearing Debris	90,849
Scrap Automobiles	129,458
Scrap Metal	577,583
Sewage Sludge	132,872
Soils	216,126
Waste Oil	27,881
Other Materials	50,634
TOTAL	3,331,825

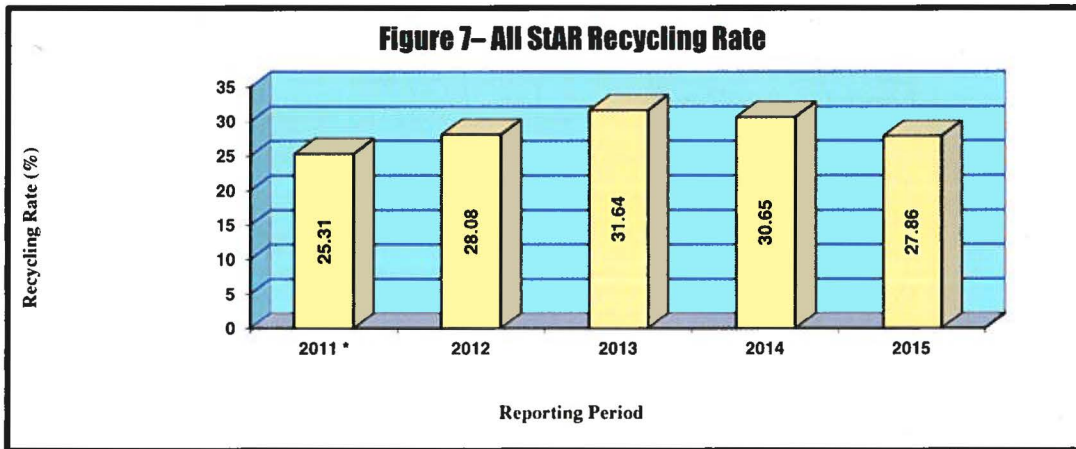
Maryland's 27.86 Percent All StAR Recycling Rate

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

Maryland State government is required under Section 9-1706 of the Environment Article, Annotated Code of Maryland to achieve a recycling rate of at least 30 percent, or an amount that is determined "practical and economically feasible," but in no case less than 15 percent. By January 1, 2012, State agencies were required to have a recycling plan that addresses the placement of collection bins and the recycling of aluminum, glass, paper, and plastic at all State-owned or State-operated buildings where it is determined to be practical and economically feasible. Each State agency's recycling plan is on file with the Department. Individual site recycling plans are maintained by each agency recycling coordinator and at each State facility. In order to implement the 30 percent State government recycling rate, State agencies revised their recycling plans to include steps towards reaching the 30 percent goal.

In 2015, State agencies recycled 25,170.14 tons of MRA materials for an overall MRA recycling rate of 27.86 percent. Beginning with calendar year 2012 data, a change was made to the volume-to-weight conversion factors used by some State agencies when estimating the amount of waste disposed. As a result, State agencies using the new conversion factors would show a recycling rate reduction, compared to previous years, even if the amount of material recycled remained constant. The conversion factors were revised as part of the Department's ongoing effort to provide an accurate representation of waste disposed totals. The new conversion factors are in line with the current volume-to-weight conversion factors published by the U.S. Environmental Protection Agency. A review of volume-to-weight conversion factors is

needed as waste disposal technologies change and improve (e.g., waste compactors) and the amount of material used in the manufacture of a product changes (e.g., in 1972 a 12-fluid-ounce aluminum can weighed approximately 0.727 ounces; presently the same type of can weighs approximately 0.46 ounces). Figure 7 provides a 5-year history of Maryland's All StAR recycling rate and Figure 8 summarizes the recycling tonnages since 2011. Table 22 summarizes the performance of each State agency participating in the All StAR program.



* In order to compare the recycling rate trend, the original 2011 recycling rate was recalculated using the updated volume-to-weight conversion factors. The recycling rate reported here will not agree with the recycling rate reported in the 2012 report. Please see text in this section for further details.

Also, State government recycled 182,376.56 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 2015 All StAR statistics is available under "State Agency Recycling" on the Department's web page at www.mde.maryland.gov. MRA tonnages reported by State agencies are included in the 2015 recycling totals reported by the counties (Table 20).

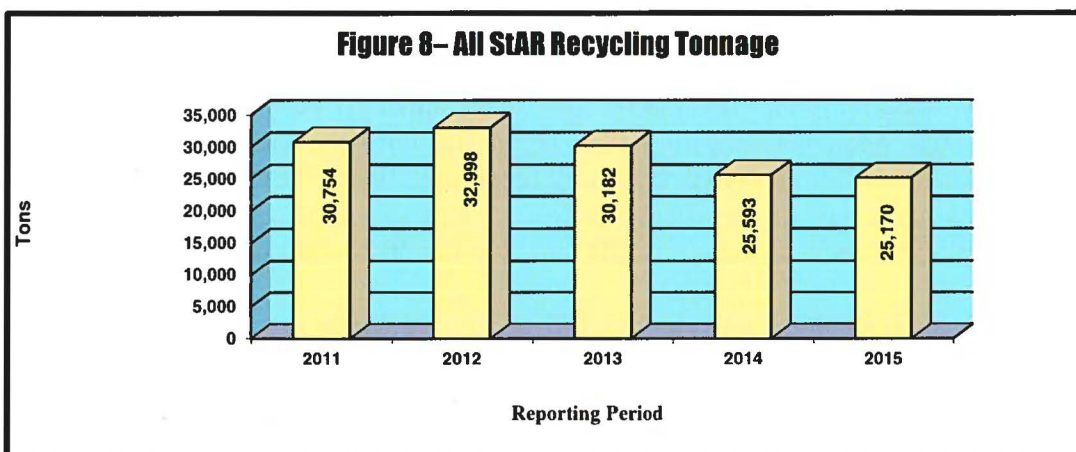


Table 22 – Maryland State Agencies' 2015 Recycling Rates

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2015

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2015 (tons)	2015 MRA Recycling Rate (%)
Baltimore City Community College	1	1	396	7.53	0.56
Comptroller of the Treasury	1	1	800	109.39	79.16
Department of Agriculture	2	2	222	24.50	19.59
Department of Assessments and Taxation	15	13	1053	23.78	7.46
Department of Budget and Management	1	1	185	8.17	16.42
Department of Education	30	30	1414	119.86	29.00
Department of General Services	23	23	8228	855.99	35.43
Department of Health and Mental Hygiene	18	12	6545	533.73	13.55
Department of Human Resources	33	23	5514	258.57	13.84
Department of Juvenile Services	15	15	2954	629.65	18.48
Department of Labor, Licensing & Regulation	14	13	1338	183.05	25.40
Department of Natural Resources	6	6	537	34.82	17.04
Department of the Environment	5	5	1009	41.22	38.47
Department of Transportation	83	83	25,988	9043.80	37.99
Department of Veterans Affairs	12	7	866	326.44	35.22
Dept. of Housing and Community Development	3	3	436	199.55	35.64
Dept. of Public Safety and Correctional Services	35	8	25,415	3106.29	23.77
Gov's Office Crime Control Prevention	1	1	800	2.71	12.55
Judiciary of Maryland	2	2	407	15.37	6.49
Maryland Automobile Insurance Fund	1	1	520	93.80	39.18
Maryland Department of Disabilities	1	1	27	0.10	1.39
Maryland Department of Planning	1	1	185	81.77	29.86
Maryland Environmental Service	4	4	298	16.13	57.63
Maryland Food Center Authority	1	1	1327	343.41	4.99
Maryland General Assembly	1	1	852	127.25	39.46
Maryland Insurance Administration	1	1	978	28.50	52.38
Maryland Military Department	33	33	502	10.89	1.45
Maryland Public Broadcasting Commission	1	1	211	88.00	23.01
Maryland School for the Deaf	2	2	989	136.38	31.87
Maryland Stadium Authority	1	1	2500	611.90	27.27
Maryland State Archives	1	1	84	2.67	8.83
Maryland State Police	27	3	1959	36.41	17.50
Morgan State University	1	1	1241	132.19	6.70
St. Mary's College of Maryland	1	1	2235	311.50	27.16
Subsequent Injury Fund	1	1	17	3.77	61.60
University System of Maryland	17	15	127,125	7620.99	35.16
TOTAL	395	318	225,157	25,170.08	27.86

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

Bold Type – Satisfied the 30 percent recycling rate

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. Consider the following money-saving scenarios based upon 2015 data with an average Maryland tipping fee of \$58:

- s Maryland State government potentially realized \$1,459,868 of avoided disposal costs by recycling 25,170.14 tons of MRA material.
- s If each State agency achieves a 30 percent recycling rate by increasing its MRA tonnage, \$308,634 in additional avoided disposal costs would be realized for a potential total savings of \$1,768,502.
- s If each State agency achieves a 30 percent recycling rate by decreasing the amount of waste generated, additional avoided disposal costs of \$ 1,036,725 would be realized for a potential total savings of \$2,496,593.

The Department provides technical support and publishes the *All StAR News*, a newsletter devoted to recycling in State government; see Appendix D for an example. Finally, the Department 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. Legislation requiring State offices to recycle will not address this issue. To address this issue, State office leases issued through the Lease Management and Procurement Division of the Department of General Services (DGS) require recycling to be integrated into State office space leases and janitorial contracts. This requirement was phased in beginning in 2013.

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 such as funding to execute a recycling contract, establish material staging areas, and identify proper recycling bin locations.

Greenhouse Gases and Energy Consumption

Using the EPA's Waste Reduction Model (WARM), Tables 23 and 24 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). In all cases where either recycling or source reduction is used instead of landfilling, there are reductions in the GHG emissions and energy used. Only when combusting a material instead of landfilling it were there increases in the GHG emissions or energy used.

Table 23 – Per Ton Greenhouse Gas Emissions

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

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

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

Table 24 – Per Ton Energy Use

Material	BTU [^] (million) – Landfilled	BTU [^] (million) – Source Reduced	BTU [^] (million) – Recycled	BTU [^] (million) – Combusted
Aluminum Cans	0 **	(89.96) **	(153.03) **	0.33 **
PET Plastic Bottles	0 **	(50.53) **	(32.14) **	(10.40) **
Newspaper	0 **	(36.51) **	(16.54) **	(7.58) **
Glass	0 **	(7.17) **	(2.40) **	0.23 **

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

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

Tables 25 and 26 detail product lifecycle GHG emissions and energy use with and without waste diversion activities in Maryland in CY 2015. In Table 25, for example, the GHG emissions associated with the lifecycle of glass is 8,042 metric tons of CO₂ equivalent without waste diversion (*i.e.*, recycling and source reduction) activities, and -44,756 metric tons of CO₂ equivalent with Maryland’s waste diversion activities, for a total savings of 52,798 (*i.e.*, 8,042 + 44,756) metric tons of CO₂ equivalent. Additional information on EPA’s WARM is available at www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html.

Table 25 – Maryland Waste Diversion and Greenhouse Gas Emissions for Calendar Year 2015

MRA Material	MTCO ₂ E* NWD [^]	MTCO ₂ E* WD ^{^^}	MTCO ₂ E* Savings	MTCE** NWD [^]	MTCE** WD ^{^^}	MTCE** Savings
Compostables	168,165	(123,005)	(291,170)	45,863	(33,547)	(79,410)
Glass	8,042	(44,756)	(52,798)	2,193	(12,206)	(14,399)
Metals	(240,392)	(2,094,683)	(1,854,291)	(65,561)	(571,277)	(505,716)
Paper	(285,692)	(3,630,967)	(3,345,275)	(77,916)	(990,264)	(912,348)
Plastic	431,763	219,188	(212,575)	117,754	59,779	(57,975)
Miscellaneous	25,207	(241,516)	(266,723)	6,875	(65,868)	(72,743)
TOTAL	107,093	(5,915,739)	(6,022,832)	29,207	(1,613,383)	(1,642,591)

* MTCO₂E = Metric Tons of Carbon Dioxide Equivalent

** MTCE = Metric Tons of Carbon Equivalent

^ NWD = No Waste Diversion (baseline = 62.54% landfilled and 37.46% incinerated)

^^ WD = Waste Diversion from Maryland CY 2015 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 26 – Maryland Waste Diversion and Energy Use for Calendar Year 2015

(in million BTUs)

MRA Material	BTUs* NWD^	BTUs* WD^^	BTU* Savings
Compostables	(1,921,915)	(2,381,666)	(459,751)
Glass	124,134	(351,470)	(475,604)
Metals	(2,581,314)	(31,421,553)	(28,840,239)
Paper	(6,204,067)	(21,351,371)	(15,147,304)
Plastic	(4,701,410)	(9,378,387)	(4,676,977)
Miscellaneous	(1,783,225)	(5,788,577)	(4,005,352)
TOTAL	(17,067,797)	(70,673,024)	(53,605,227)

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

^ NWD = No Waste Diversion (baseline = 62.54% landfilled and 37.46% incinerated)

^^ WD = Waste Diversion from Maryland CY 2015 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 over 6 million metric tons of CO₂ equivalent emission savings produced by Maryland’s waste diversion activities in 2015 (Table 25) are the equivalent of removing over 1.27 million passenger cars from the roadway each year or conserving over 677 million gallons of gasoline, over 250 million cylinders of propane used for home barbeques, or over 32,294 railway cars of coal. The 53.6 trillion british thermal unit (BTU) energy savings reported in Table 26 are the equivalent of the annual energy consumption of over 466,000 households (*i.e.*, 19 percent of the estimated 2,434,307 households in Maryland in 2015), or the amount of energy contained in over 9.2 million barrels of oil or over 431 million gallons of gasoline. These reductions are important to meeting our climate change and GHG emissions reduction goals in Maryland.

Promoting Recycled Products

The collection, sorting, and use of recycled materials in the manufacturing of new products are just part of the recycling process. Once manufacturers turn recyclables into products, it becomes every citizen’s responsibility to "close the loop" and buy products made of recycled material. The Department 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.

The Department 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 FY 2016, buying paper products made with recycled content paper was the rule, not the exception, with nearly all of the paper products (*e.g.*, bond paper, computer paper, etc.) purchased made from recycled content paper.
 - Details on State procurement guidelines along with lists of products available with recycled content such as picnic tables, park benches, and re-refined motor oil are available on the DGS web page at www.dgs.maryland.gov/Pages/Procurement/index.aspx. Local jurisdictions in Maryland are able to piggyback on State procurement contracts.
 - Boilerplate language stating, "All products used in packing to cushion and protect during the shipment of commodities are to be made of recycled, recyclable, and/or biodegradable materials" is included in all Maryland Invitation to Bid Solicitations and Purchase Orders.

Special Programs

From July 2015 through June 2016, the Department continued implementing special programs designed to expand recycling and protect public health and the environment.

Newsprint

Maryland law mandates that, on a State-wide basis, newspapers distributed in Maryland shall contain at least 40 percent recycled content newsprint. To determine compliance with the law, publishers are required to file quarterly and annual reports with the Department. In the year following a reporting period (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 per ton for each ton a publisher falls below the 40 percent requirement. In the reporting period ending CY 2015, the newsprint recycled content percentage was 50.44 percent, exceeding the requirements of the MRA.

Table 27 contains 53 known publishers that distribute 145 different newspapers in Maryland. The Department continues to seek increased compliance from publishers who did not comply with the reporting requirements.

Table 27 – Maryland Newspaper Publishers

Publisher	Content %	Publisher	Content %
A&C Business News	5.98	Herald-Mail	17.35
Afro-American Newspapers	16.90	Independent Newspapers, Inc.	3.06
American Farm Publications	4.17	Kimbel Publications	34.60
Ascend Communications	NR	Korea Daily	83.88
Asian Fortune	14.70	Latin American Times	NR
Baltimore Business Journal	NR	Legal Times	NR
Baltimore Sun Media Group	84.01	Maryland Coast Dispatch	NR
Baltimore Times Publications	NR	Morgan Messenger	15.00
Bay Weekly	16.01	New York Daily News	84.17
Capital-Gazette Newspapers	58.18	New York Times Company	22.53
Carroll Publishing Company	11.30	News Journal, Wilmington	2.57
Catholic Review	11.24	Post Newsweek Media	58.10
Chatsworth Enterprises	NR	Prince George's Post	25.10
Chesapeake Publishing Corporation	28.68	Randall Family, LLC	16.03
Citizen Communications, Inc.	27.0	Sentinel Newspapers	24.63
City Paper	NR	Sincell Publishing Company	NR
Connection Publishing	NR	Southern Maryland Publishing Co.	NR
Courier	6.62	USA Today	1.01
Cumberland Times News	12.48	Washington Business Journal	NR
Daily Record	40.7	Washington County Pickett	NR
Dow Jones & Company	12.19	Washington Newspaper Company	NR
El Tiempo Latino	40.12	Washington Newspaper Publishing Co., LLC	39.80
Express Publications Company, LLC	58.31	Washington Post	40.05
Flag Communications	50.12	Washington Times	NR
FT Publications, Inc.	30.0	Western Montgomery Bulletin	NR
Gannett Company, Inc.	2.16		
Gay & Lesbian Community Ctr. Of Baltimore	0.0		
Greenbelt Cooperative Publishing	NR	Statewide	50.44
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 percent, by weight. If a publisher does not meet 40 percent recycled content, it is required to pay a fee of \$10 per ton for each ton the publisher falls below the 40 percent requirement. Publishers of telephone directories must submit to the Department 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 2015, recycled content for these directories was reported as follows:

- * Berry – Zero percent recycled content;
- * Dex Media – Zero percent recycled content;
- * Hibu – Did Not Report; and
- * Ogden Directories, Inc. – Distributes less than 50 tons of directory stock, therefore is exempt from reporting requirements.

In 2015, Dex Media was granted a 1-year exemption from meeting the 40 percent recycled content requirement.

Electronics Recycling (eCycling)

Computers, televisions, and other consumer electronics are a rapidly growing part of the waste stream. The potential environmental and health threats posed by 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, the Department in order to sell their products in Maryland. A retailer may not sell a CED unless the CED's 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 the Department to award grants to counties and municipalities to conduct CED recycling activities.

One-hundred fifty (150) manufacturers registered with the Department and were authorized to sell their products in Maryland in 2015. Forty-two (42) manufacturers have Department-approved free takeback programs. Acer America, Dell Marketing, Elo Touch Solutions, HTC America, Hewlett Packard, Hisense USA, Hitachi America, JVCKENWOOD USA, Kyocera Communications, Mitac Digital, Motorola Mobility, Nintendo of America, Panasonic Corp. of North America, PLR IP Holding, Rakuten Kobo, Sharp Electronics, Summer Infant, and TTE Technology reported recycling 256 tons of electronics through their free recycling programs in 2015.

In FY 2016, \$250,000 in grants were issued to 9 municipalities and 18 counties in support of their electronics recycling programs. Grant activities run through March 2017.

The Department performed 353 inspections at 347 electronics retailers during FY 2016. The inspection coverage rate was 41% (345 retailers inspected of the total 851 known sites). The inspections resulted in the issuance of 70 Site Complaints against retailers for selling unregistered manufacturer brands. All Site Complaints were successfully resolved.

Cumulative highlights of eCycling in Maryland include:

- * 289 special collection events (*i.e.*, 1 or 2-day collection events) have been held in 24 jurisdictions over the life of Maryland's eCycling program from October 2001 through December 2015.
- * There were 14 special events in 2015, a decrease from the 17 collection events in 2014.
- * Permanent collection programs have been established in Allegany, Anne Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Prince George's, Queen Anne's, St. Mary's, Somerset, Washington, Wicomico, and Worcester Counties, and Baltimore City.
- * Regularly scheduled eCycling collection events are held in the cities of College Park, Laurel, Annapolis and Salisbury.

Town of Ocean City collected 11.59 tons of electronic equipment in 2015 as part of a permanent collection program. Information on Maryland's eCycling program is available on the Department's web page at www.mde.maryland.gov/ecycling. Table 28 gives a breakdown of the electronics equipment collected in 2015. Figure 9 summarizes the electronics tonnage totals collected since collection began in 2001. An additional 6,867 tons of electronics from commercial businesses were reported by the counties in 2015 as having been recycled. These were not part of residential eCycling programs.

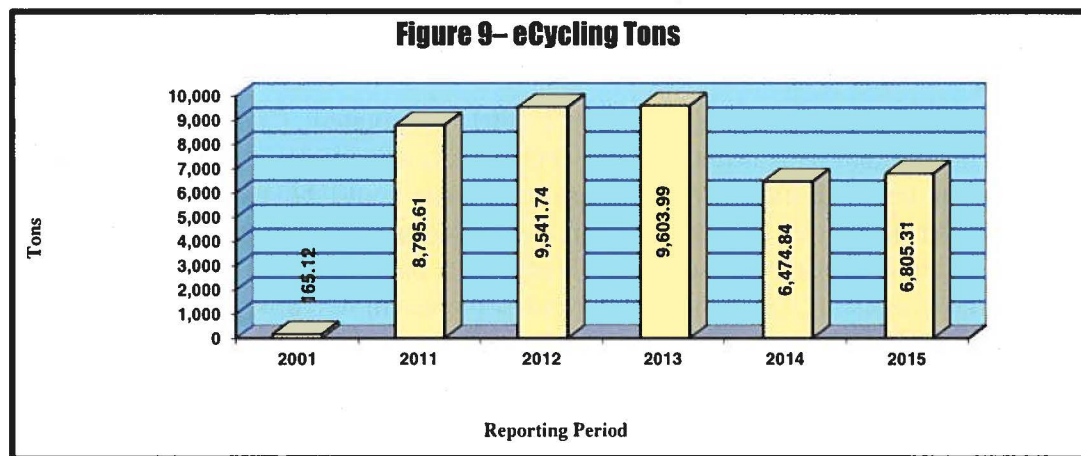
Table 28 – eCycling Collection Programs

County	Population	Type	Date(s)	No. of participants	Tons collected	Pounds collected	Pounds/participant
Subtotal Maryland	6,056,421	-	2001-2014	-	70,735.78	141,471,558	-
eCycling Special Events in 2015							
Allegany	75,194	1-day	Jan	450	32.21	64,420	143
Midshore (2)	148,522	1-day	Apr, Nov	715	24.06	48,120	67
Prince George's * (8)	892,660	1-day	Feb, Mar, Apr, Oct	414	15	30,000	72
Washington	159,190	2-week	Jan	475	29.51	59,020	124
Worcester (2)	53,852	1-day	Apr, Oct	597	34.29	68,580	115
Subtotal Events	1,329,418	-	2015	2,651	135.07	270,140	102
Permanent eCycling in 2015							
Allegany	75,194	-	2015	-	25.85	51,700	-
Anne Arundel **	546,878	-	2015	-	273.27	546,540	-
Baltimore City	621,849	-	2015	-	661.73	1,323,460	-
Baltimore County	823,815	-	2015	-	369.07	738,140	-
Calvert	94,594	-	2015	-	450.66	901,320	-
Carroll	182,267	-	2015	-	67.01	134,020	-

County	Population	Type	Date(s)	No. of participants	Tons collected	Pounds collected	Pounds/participant
Cecil	115,729	-	2015	-	231.62	463,240	-
Charles	161,876	-	2015	-	312.95	625,900	-
Frederick	260,643	-	2015	-	518.93	1,037,860	-
Garrett	30,849	-	2015	-	36.88	73,760	-
Harford	260,663	-	2015	-	122.21	244,420	-
Howard	299,993	-	2015	-	773.93	1,547,860	-
Midshore Region	148,522	-	2015	-	63.48	126,960	-
Montgomery	1,023,389	-	2015	-	1644.55	3,289,100	-
Prince George's **	892,660	-	2015	-	247.96	495,920	-
Somerset	27,385	-	2015	-	1.92	3,840	-
St. Mary's	117,626	-	2015	-	367.59	735,180	-
Washington	159,190	-	2015	-	108.91	217,820	-
Wicomico **	103,092	-	2015	-	273.72	547,440	-
Worcester	53,852	-	2015	-	118	236,000	-
Subtotal Permanent	6,000,066	-	2015	-	6,670.24	13,340,480	-
TOTALS (2001 – 2015)				2,651 (2015)	77,541.09	155,082,178	102 (2015)

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

** Totals from the City of Annapolis's permanent eCycling drop-off were included in Anne Arundel County's permanent total. Totals from the City of College Park's permanent eCycling program were included in Prince George's County's permanent total. Totals from the Ocean City's permanent eCycling drop-off were included in Worcester County's permanent total.



Mercury Recycling

Sections 9-905.4 to 905.6 of the Environment Article, Annotated Code of Maryland, (Mercury Switch Removal from Vehicles) require motor vehicle manufacturers to develop a mercury minimization plan that includes information on mercury switch removal from motor vehicles. The law also requires a vehicle recycler to remove mercury switches from its end-of-life vehicle inventory and vehicles processed into the vehicle recycler's inventory. The Department visited vehicle recyclers and scrap processing facilities in Maryland reminding them of the requirement to remove mercury switches from scrap automobiles and participate in the National Vehicle Mercury Switch Recovery Program (NVMSRP); the program set up by vehicle manufactures to manage mercury car switches. In addition to being free to vehicle recyclers and scrap processing

facilities, the NVMSRP pays vehicle recyclers and scrap processing facilities \$4 per mercury switch and \$6 per antilock braking system switch that is returned for recycling. One-hundred sixty-eight (168) inspections at 125 facilities were performed in FY 2016. The 168 inspections resulted in the issuance of 3 Site Complaints, all of which were resolved. In 2015, 7,745 mercury containing switches containing 17 pounds of recovered mercury were collected for recycling. As of December 31, 2015, 150 recyclers had enrolled in the program and the total amount of mercury containing switches recovered was 76,374 (168.07 pounds of mercury) since the beginning of the program in 2007.

Complete details on Maryland's mercury switch collection efforts is available in the annual "Collection of Mercury Switches and Mercury Switch Assemblies from Vehicles," report available in the Publications section of the Department's web page.

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

Household Hazardous Waste (HHW)

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

Business Resources

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

Market Locator

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 www.mdrecycles.org to find a market for recyclable materials. The web site is designed to promote commercial recycling in Maryland and is searchable by commodity. Additional links to other companies are available on the Department's recycling web pages for the specific commodity in question. For companies without access to the Internet, the Department can mail or fax a list of markets by material.

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. Most counties accept all types of batteries from residents as part of county Household Hazardous Waste (HHW) programs. Specific HHW information is available through each county. County contact information is available on the Department's household hazardous waste web page at www.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 1-800-8BATTERY (822-8837). Additional battery recycling resources for residents and businesses are available by accessing the Recycling Market Directory at www.mdrecycles.org. Table 29 details battery recycling companies listed in the "Recycling Market Directory." Please contact these companies for details.

Table 29 – Battery Recycling Companies

Company Name	Telephone Number	Website
AERC Recycling Solutions (Allentown, PA)	610-797-7608	www.aercrecycling.com
AERC Recycling Solutions (Richmond)	804-550-1762	www.aercrecycling.com
AERC Recycling Solutions (West Melbourne, FL)	321-952-1516	www.aercrecycling.com
Air Cycle Corporation	800-909-9709	www.aircycle.com/
Arundel Recycling Center, Inc.	410-761-6595	arundelrecycling.com/
B&B Lighting Supply, Inc.	410-523-7300	www.bnblightingsupply.com
Batteries & Bulbs	410-628-7999	www.batteriesplusbulbs.com
Battery Solutions, Inc.	810-852-8127	www.batterysolutions.com/
BPAL, LLC	410-662-6380	www.bpailc.com/
Broadview Waste Services (BWS Inc)	410-437-6590 800-660-6581	www.bwaste.com
C.N. Robinson Lighting	410-242-4172	
Call2Recycle	877-723-1297	www.call2recycle.org/

Company Name	Telephone Number	Website
Cambridge Iron & Metal Company	410-327-7867	www.cambridgeiron.com/
Capitol Asset Recycling, Inc.	877-247-2616	capasset.com/
Clean Venture, Inc.	410-368-9170	www.cleanventure.com/
Commercial Retrofitters & Recyclers	310-358-6324	www.commercialrnr.com/
Deckers Salvage Company, Inc.	410-752-2546	www.deckerssalvage.com/
Eco-Battery, Inc.	888-768-2004	www.eco-batteryinc.com/
Elkton Recycling, Inc.	410-392-2980	www.elktonrecycling.com/
Envirolight and Disposal Inc.	727-526-8870	www.envirolight.com/
Everlights, Inc.	773-734-9873	www.everlights.com/
Geller Lighting Recycling, Inc.	410-247-3636	www.gellerlighting.com/
Green Lights Recycling, Inc.	763-785-0456	www.glrnow.com/
Hewlett-Packard Company	800-474-6836	www.hp.com/country/us/en/welcome.html
Inmetco (The International Metals Reclamation Company, Inc.)	724-758-2800	horsehead.net/inmetco
Interstate Battery	866-842-53	www.interstatebatteries.com/m/recycling
Maryland Recycle Company (Elkridge)	410-796-0760	www.marylandrecycle.com/
Maryland Recycle Company (Glen Burnie)	410-760-9088	www.marylandrecycle.com/
Maryland Recycle Company (Owings Mills)	410-363-3347	www.marylandrecycle.com/
Maryland Recycle Company (Rosedale)	410-780-3060	www.marylandrecycle.com/
Metal Recyclers, LLC	410-674-2000	www.metalrecyclersusa.com/
Metech Recycling	508-795-1950	www.metechrecycling.com/
Office Depot		www.officedepot.com/
SAMR, Inc.	866-509-7267	www.samrinc.com/
Schultz & Sons Salvage	410-479-2110	None
Southeast Recycling Technologies Inc.	800-592-3970 423-282-2022	www.recyclebulbs.com/
The Wireless Alliance	866-366-5791 303-543-7477	www.thewirelessalliance.com/
United Iron & Metal, LLC	410-947-8000	www.scrapuim.com/
Universal Recycling Technologies	877-278-0799	www.urtrecycles.com/
Veolia ES Technical Solutions, LLC (Electronic Recycling Division)	774-296-6030	www.veolianorthamerica.com/en
Waldorf Metal Company	301-932-1220	www.waldorfmatal.com/

White Goods – White goods are defined as large household appliances such as refrigerators, stoves, air conditioners, and washing machines. Once collected, environmentally detrimental materials (e.g., chlorofluorocarbons, etc.) are removed for proper disposal, and the remaining materials (usually metal) from white goods are sold for scrap and made into new products. Every county and Baltimore City accepts white goods from residents for recycling. Contact each jurisdiction for details and any questions concerning the proper collection

procedures. Contact information is also available in the “State, County, and City Contact Info” section on the Department’s web page at <http://mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/default.aspx>. Additionally, resources for residents and businesses are available under “Metals” in the “Recycling Market Directory” available on the Department’s recycling web page.

Permitting Guidance

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

MDE Guide to Environmental Permits and Approvals – This Guide to Permits and Approvals is available on the Department’s web page at <http://www.mde.state.md.us/programs/Permits/Pages/busguide.aspx>. It contains important information about the different types of permits, licenses, and approvals issued by the Department. These permits affect businesses and individuals ranging from well drillers, dry cleaners, and gas stations, to power plants and other large industrial facilities. The Department 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 the Department’s composting web page at <http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/Pages/composting.aspx>.

Waste Diversion Guide

Commercial Waste Diversion Implementation Guide – This document assists local recycling coordinators working with businesses to promote recycling and source reduction. Case studies detailing successful commercial waste diversion efforts are provided. The guide is available on the Department’s web page at <http://mde.maryland.gov/programs/Land/Documents/www.mde.state.md.us/assets/document/recycling/commercialwasteguide.pdf>.

Public Resources

As waste diversion programs continue to mature, it is important for the Department to keep the public informed of waste diversion programs in the State. From July 2015 through June 2016, the Department provided assistance and public education through efforts such as America Recycles Day, web resources, and county solid waste and recycling managers meetings.

America Recycles Day (ARD)

America Recycles Day (ARD) is a national event that promotes recycling, source reduction, and buying products made from recycled materials as objectives for a more sustainable society. The Department held the 14th Annual "Rethink Recycling" Sculpture Contest on November 13, 2015 at the Department's headquarters.

The "Rethink Recycling" Sculpture Contest featured over 60 entries from 22 different high schools across Maryland. The Sculpture Contest challenged students to innovatively and artistically use recycled or reused materials as a solution to waste reduction. With instruction to create a sculpture that promotes America Recycles Day, students created artworks from items such as plastic bottles, cans, scrap metal, compact disks, 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.

A portrait of a young boy, a lion and a bison were among the winning pieces of artwork. Contest details are available on the "Education and Outreach" section of the Department's waste diversion web page at <http://mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Pages/EducationandOutreach.aspx>.

The Department's Web Site

Information on Maryland's waste diversion (*i.e.*, recycling and source reduction) activities is on the Department's waste diversion web page at <http://www.mde.maryland.gov/recycling>. The web page includes information on: State and County recycling programs, source reduction, special projects (*e.g.*, electronics and mercury recycling, composting, and household hazardous waste, etc.), setting up recycling programs at work and school, All StAR recycling, educational resources, and links to other sites. New information is added as it becomes available. The Department's website also offers Maryland's citizens and businesses the opportunity to e-mail the Department with questions or comments on recycling.

County Recycling & Solid Waste Managers Meetings

The Department 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. The Department 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

The Department 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 the Department's partnerships.

The Association of State and Territorial Solid Waste Management Officials, Inc. (ASTSWMO) – ASTSWMO (<http://www.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 (www.ecycleclearinghouse.org) was launched in 2010 by two leading non-profit 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 (www.menv.com/) recognizes that recycling is an element of effective waste management. MES assists the Department-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 the Department. Additional information is available at 1-800-4RECYCLE.

Maryland Recycling Network (MRN) – The MRN is a non-profit, volunteer organization (www.marylandrecyclingnetwork.org) committed to promoting waste reduction, recycling and the conservation of natural resources. MRN is dedicated to promoting partnerships and cooperation between private and public sectors. The Department supports the mission of the MRN through staff participation, funding, and projects. The Department attends MRN meetings and

reports the Department's activities and accomplishments to MRN Board members and attendees.

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

Northeast Recycling Council (NERC) – The NERC (<https://nerc.org/>) 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. The Department works cooperatively with each county to ensure that valuable market and program information is shared, analyzed, and discussed. Table 30 illustrates the elements of Maryland counties' individual recycling programs. Unless otherwise noted in Table 30, all counties collect "core" recyclables that include mixed paper (*i.e.*, all paper types, envelopes, books, cardboard, magazines, newspaper, and telephone books), containers (*i.e.*, glass, metal, and plastic), white goods (*i.e.*, appliances), and organics (*i.e.*, yard trimmings and Christmas trees). Additionally, the Department's waste diversion web page contains detailed information on the county recycling programs and source reduction activities. Highlights of county programs in 2015 include:

- * Thirteen (13) counties achieved waste diversion rates greater than the 2005 40 percent waste diversion goal.
- * Three (3) counties (Cecil, Montgomery, and Prince George's) achieved a recycling rate greater than the 2020 55 percent recycling goal.
- * Fourteen (14) counties earned SR credits. Eight (8) of these counties, Baltimore, Carroll, Charles, Frederick, Harford, Howard, Montgomery, and Prince George's earned the maximum 5 percent SR credit.
- * Eighteen (18) counties accept fluorescent lights for recycling.
- * Ten (10) Counties accept expired medication for proper disposal.
- * Twenty-one (21) Counties had permanent electronic drop-off locations.
- * Fourteen (14) eCycling collection events were held in 8 counties.
- * Fourteen (14) counties operated textile collection programs.
- * Sixteen (16) counties maintained mercury thermometer drop-off locations.
- * Thirteen (13) counties collected paint for recycling.
- * Eighteen (18) counties operated HHW programs.

Waste diversion programs are constantly changing. Appendix E includes contact information for Maryland's recycling coordinators, who can provide the most current information about waste diversion in their jurisdictions. For additional information, log onto the

Department's waste diversion web page at www.mde.maryland.gov/recycling and click on "State, County, and City Contact Info."

Table 30 -- County Residential Recyclables by Commodity

County	Fluorescent Lights	Medicine	Lead-Acid Batteries	Oil/Antifreeze	Established Electronic Drop-offs	Paints	Textiles	Hg°	HHW~	Comments/Additional Materials^
Allegany ^p	✓	✓	✓	✓/✓	✓					eCycle event; batteries, hard cover books, tire, propane tanks
Anne Arundel ^{cs}	✓		✓	✓/✓	✓	✓			✓	cooking oil, wood pallets, tires, propane tanks, shrink wrap, oyster/clam shells, empty fuel containers
Baltimore City ^{cs}	✓		✓	✓/✓	✓	✓			✓	polystyrene, bagged leaves and Christmas trees only
Baltimore County ^{cs}	✓	✓	✓	✓/✓	✓	✓		✓	✓	cooking oil, propane tanks, usable building material
Calvert ^s	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	cooking oil, printer cartridges, oil filters, auto tires, propane tanks, Freon units
Caroline	✓	✓	✓	✓/✓		✓	✓	✓	✓	eCycle event; Mid-shore program
Carroll			✓	✓/✓	✓		✓	✓	✓	scrap metal, vinyl siding, plastic bags, grease/oil, usable building material, polystyrene
Cecil ^{cs}	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	batteries, corks, latex paint, oil filters, propane tanks, refrigerant units, tires, wood pallets, vegetable oil
Charles ^{cps}	✓	✓	✓	✓/✓	✓	✓	✓		✓	cooking oil, household batteries, oil filters, propane tanks, tires
Dorchester	✓		✓	✓/✓				✓		No books
Frederick ^{cs}	✓	✓	✓	✓/✓	✓				✓	pesticide bottles, wood pallets, tires
Garrett	✓			✓/✓	✓					#1 & 2 plastic only, inkjet & toner cartridges, oil filters
Harford ^{cps}	✓		✓	✓/✓	✓	✓	✓	✓		gasoline, pesticide containers, oil filters, propane tanks, inkjet cartridges
Howard ^{cs}	✓		✓	✓/✓	✓	✓	✓	✓	✓	propane tanks, asphalt roof shingles, reusable building materials, carpet, vegetable oil, polystyrene, mattresses
Kent		✓	✓	✓/✓	✓		✓	✓	✓	eCycle event; pesticide containers, boat shrink-wrap; Mid-shore program
Montgomery ^c	✓		✓	✓/✓	✓	✓	✓	✓	✓	bicycles, cooking oil, propane tanks, tires, reusable building materials, bulky plastic
Prince George's ^{cs}	✓	✓	✓	✓/✓	✓	✓		✓	✓	eCycle event; cooking oil, mattress foam
Queen Anne's	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; boat shrink-wrap, passenger tires; Mid-shore program
St. Mary's ^s	✓		✓	✓/✓	✓	✓	✓		✓	oil filters, ink jet cartridges, cooking oil, rechargeable batteries, propane cylinders, tires, scrap metal
Somerset ^s	✓		✓	✓/✓	✓			✓		pesticide containers, oil filters, tires
Talbot			✓	✓/✓			✓		✓	eCycle event; pesticides, boat shrink-wrap; Mid-shore program
Washington			✓	✓/✓	✓			✓		eCycle event; propane tanks, cooking oil, tires, yard waste, polystyrene, rechargeable batteries
Wicomico ^c				✓/✓	✓		✓	✓	✓	pesticides, wood pallets
Worcester			✓	✓/✓	✓		✓	✓	✓	eCycle event

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

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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 2015 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.	4 full time positions	Estimated cost for the facility -1.5 millions
Anne Arundel	Annapolis Junction Recycling and Transfer Station (Privately Owned)	Facility pays Host Community Fee to County for each ton of solid waste received. Tip fee charged County is below 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.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Baltimore City	BFI Baltimore Processing and Transfer Center (Privately Owned)	Paid local taxes.	Convenient location for C&D haulers to offload.	12 employees mostly operators and a few sorters.	No information provided.
Baltimore City	Wheelabrator Baltimore LP. (Privately Owned)	Extends life of landfills by reducing MSW volume through incineration.	Sponsors several community outreach and partnership programs.	68 employees including professionals and skilled workers.	No information provided.
Baltimore City*	L & J Waste Recycling, LLC (Privately Owned)	The facility is located in a rehabilitated location and generates revenue through its solid waste recycling by turning waste into valuables. Also, the facility adds to the local economy through personal and business tax revenue annually.	The Facility diverts 76.6% of its waste accepted at the site for recycling and saves costs of disposal.	\$400,000/18 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 \$5,363.
Baltimore City*	Baltimore Recycling Center, LLC (Privately Owned)	The facility pays in excess of \$63,800 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.	\$1000,000/36 employees.	Purchased local goods and services for \$1.6 million. Fuel for 183,000. Paid \$35,000 for Tags and permits. Revenues of recycled material is in excess of \$825,000.
Baltimore City	Northwest Transfer Station (Publically Owned)	Not Provided	Provides the curbside collection of mixed refuse and recycling services.	17 employees.	Not Provided

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Calvert	Howlin Land Clearing Debris Landfill (Privately Owned)	Tax incentive.	Assisting county in disposing county solid waste.	3 employees.	No information provided.
Calvert	Southern Maryland Processing Facility (Privately Owned)	Assisting county in handling solid waste & promoting recycling.	Not provided.	4 employees.	\$10,000 annual purchase of goods and services, recycled products.
Calvert*	Appeal Sanitary Landfill/Transfer Station* (County Owned)	The landfill is the sole County operated facility for the final disposition of County and out-of-county waste. The transfer station provides value to Calvert County by allowing the Division of Solid Waste to extend the useful life of the Appeal Municipal Landfill by at least 20 years, providing a tangible economic benefit.	Revenues are collected from users of the landfill via user fees and excise taxes. County residents may use the convenience centers free of charge, and for chargeable items, county residents pay a lower fee at the landfill than commercial haulers for disposal. The transfer station is complementary to the Appeal Municipal Landfill, and is operated in conjunction with ongoing solid waste refuse collection, landfilling and recycling operations.	The landfill operations and convenience centers are supported by a group of 42.6 full time positions with \$1,822,587 in salaries. The employees associated with the transfer station are neither hired, managed, evaluated, nor compensated by Calvert County Division of Solid Waste. The number of, types and compensation of the employees at the transfer station are at the discretion of Garnet of Maryland, Inc. (Waste Management, Inc. [WM]).	The landfill capital and operational projects have utilized various contractors and vendors within Calvert County and surrounding jurisdictions.
Carroll	Roll-Off Express, Inc. (Privately Owned)	\$54,000/year paid in real estate, personal property and sales taxes.	\$2.25 million investment for facilities.	\$275,000/17 employees including equipment operators, drivers, laborers.	\$375,000 annual purchase of goods and services.
Cecil	Cecil County Central Landfill (County Owned)	Amnesty program for recycling materials, household hazardous waste days, and eCycling	Provides waste disposal and recycling opportunities for Cecil County's	\$1,250,000/20 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$2,700,000.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
		events. Mulch for minimum fees.	population. The facility works in conjunction with two transfer stations owned by Cecil County Government to accept MSW originating within the County for no cost.		Estimated value of materials recycled for the year: \$360,000.
Cecil*	Stemmers Run Transfer Station (County Owned)	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Total Salaries paid \$ 55,000	Estimated value of goods and services purchased from the locality for the facility: \$30,000. Estimated value of materials recycled for the year: \$5,000
Cecil*	Woodlawn Transfer Station (County Owned)	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	\$190,000/3 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$30,000. Estimated value of materials recycled for the year: \$15,000.
Frederick*	Essroc Industrial Waste Landfill	Land Assessment taxes paid for the industrial complex	Not Applicable	1-2 employee	None
Frederick	Reichs Ford/Site B Municipal Sanitary Landfill/Transfer Station (County Owned)	Free curbside recycling, a recycling drop-off center, HHW collection, free mulch, yard waste grinding & sampling and analysis of 29 off-site residential water wells adjoining landfill property.	Disposal of C&D and MSW.	\$3.2 Million/43 employees.	Spent \$2.8 million on various recycling contracts and programs.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Harford*	Harford Waste Disposal Center (HWDC)/HWDC Horizontal Expansion (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.	Provides County residents with non-profit disposal methodology and hierarchy. Provides recycling services at "no cost."	\$2.6 Million/40 full time employees.	For FY 2015: \$793,689 spent on local goods, vehicles, maintenance and other services.
Howard	Work Place Essentials Transfer Station (Privately Owned)	Paid taxes and provides waste collection services to locality.	Assists County in providing collection of sanitary waste products originating from commercial restrooms in Baltimore, Howard, Anne Arundel Counties and others.	\$800,000/18 employees.	No information provided.
Howard	Ameriwaaste Processing and Transfer Station (Privately Owned)	Payment of real estate, personal property and sales taxes to Howard County.	Facility supplements County facilities for solid waste disposal.	12 employees. Jobs include 53 equipment operators, 2 clerks, and 5 laborers.	\$200,000 in purchase from local vendors, \$19,000 in value of recycled items.
Montgomery*	Montgomery County Solid Waste Transfer Station (Publicly Owned)	Strategically located for easy access to accommodate residential, industrial and commercial use.	No information provided.	18 full time County employees. 63 full time Covanta Montgomery, Inc., 9 full time MES and 10 Temp employees.	Revenue from some materials partially offsets operating costs, allowing fees to remain relatively flat over the past several years.
Prince George's	Lawrence Street C & D Processing Facility	Benefits include taxes that support local infrastructure, jobs, and access to a facility close by for local users.	Strategically located for local customers.	Employs 10 people for estimated budget of \$650,200.	Goods and services purchased is approximately \$1.5 million, \$1.8 Million in recycled products produced.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
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 includes a manager, 4 equipment operators, 2 scale house operators, and 14 attendants (full & part time).	\$300,000 - County subsidy of Recycling. \$1.3 million - County subsidy for residential solid waste disposal.
Washington*	Forty West Municipal Landfill (Publicly Owned)	Centrally located in County for easy access to accommodate residential, industrial, and commercial use.	Facility owned and operated by Washington County for the solid waste disposal need of County residents.	\$1.2 million /29 employees. Jobs include: deputy director (1), assistant director (1), recycling coordinator (1), office staff (2), weigh clerk full time (3) and part time (5), equipment operators (6), mechanics (2), residential drop-off attendants (4), part time drop off attendants (2), inmate crew guards (2).	Approx. \$6.2 million annual operating budget spent locally for the purchase of materials, services, equipment, and wages.
Wicomico*	Bennett Construction Inc. (Privately Owned)	Creates a larger tax base to the local community and the only waste collection facility in the area. Provides employment opportunities in the area.	Expanding the value of the facility in the County for other opportunities.	\$280,000/year – 15 employees.	Fuel and Maintenance Cost to the local economy - \$213,000/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	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
Allegany	Mountainview Sanitary Landfill	WMF	PRI	262 / 652	2016-WMF-0010	5/4/2021	40 / 396	13300 New George's Creek Road, Frosburg MD 21532.
	Western Maryland Processing Facility and Transfer Station	WPT	PRI	801/710	2008-WPT-0632	10/30/2019	- / 5.85	13810 Hazmat Drive Cumberland, MD 21502 Facility Not Constructed
Anne Arundel	Annapolis Junction Recycling and Transfer Station	WPT	PRI	860 / 470	2016-WPT-0158	3/24/2021	- / 17	8077 Brock Bridge Road, Jessup MD 20794.
	Curtis Creek Processing Facility and Transfer Station	WPT	PRI	917 / 500	2013-WPT-0539	12/19/2018	- / 12.8	23 Stahl Road, Baltimore MD 21226. Accepts C&D Waste.
	Millersville Landfill and Resource Recovery Facility	WMF	CTY	895 / 460	2012-WMF-0240	11/13/2017	330 / 567	389 Burns Crossing Road, Severn MD 21144.
	Tolson & Associates Rubble Landfill	WRF	PRI	900/450	2003-WRF-0580	11/23/2019	72/184	1451 Capital Raceway Road, Crofton, MD 21114.
Baltimore City	BFI Baltimore Processing and Transfer Center	WPT	PRI	921 / 499	2013-WPT-0627	2/24/2019	- / 15.6	5800 Chemical Road, Baltimore MD 21226.
	Daniel's Sharpsmart Special Medical Waste Processing Facility	WPT	PRI	950 / 525	2015-WPT-0633	2/9/2020	- / <1	6611 Chandlery Street Baltimore, MD 21224 Accepts only Special Medical Waste.
	Curtis Bay Energy Medical Waste Incinerator	WMI	PRI	926 / 568	2011-WMI-0036	3/8/2017	- / 4.0	3200 Hawkins Point Road, Baltimore MD 21226. Formerly Phoenix Services.
	Fort Armistead Road – Lot 15 Industrial Landfill	WIF	PRI	927 / 500	2011-WIF-0653	9/26/2018	32 / 65	3601 Fort Armistead Road, Baltimore MD 21226.
	Hawkins Pt. Plant Industrial Landfill	WIF	PRI	925 / 501	2015-WIF-0527A	12/3/2020	57 / 95	3901 Fort Armistead Road, Baltimore MD 21226.
	Northwest Transfer Station	WTS	MUN	855 / 550	2015-WTS-0038	1/18/2021	- / 6.6	5030 Reisterstown Road, Baltimore MD 21215.
	Baltimore Recycling Center LLC Processing Facility and Transfer Station	WPT	PRI	535 / 920	2014-WPT-0631	12/28/2019	- / 12.5	1030 Edison Highway, Baltimore MD 21213. Accepts Only C&D Waste.
	Quarantine Road Landfill	WMF	MUN	922 / 502	2014-WMF-0325	11/9/2019	126 / 153	6100 Quarantine Road, Baltimore MD 21226.
	Stericycle Medical Waste Processing Facility and Transfer Station	WPT	PRI	921 / 501	2014-WPT-0591	12/10/2019	- / 2.4	5901 Chemical Road, Baltimore MD 21226.
	University of Maryland Medical Waste Incinerator	WMI	UMD	907 / 532	2010-WMI-0512	7/6/2015	- / < 1	714 W. Lombard Street, Baltimore MD 21201.
	Wheelabrator Baltimore, LP Waste-to-Energy Facility	WTE	PRI	904 / 523	2011-WTE-0030	10/6/2016	- / 15	1801 Annapolis Road, Baltimore MD 21230. Formerly BRESCO.
	W.R. Grace and Co. Industrial Landfill	WIF	PRI	921 / 500	2012-WIF-0613	1/30/2017	10.7/157	5500 Chemical Road, Baltimore MD 21226
	L & J Waste Recycling, LLC.	WPF	PRI	896 / 531	2008-WPF-0634	11/26/2016	- / <1	222 N. Calverton Road Baltimore MD 21223

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
Baltimore	Baltimore County Central Acceptance Facility	WPT	CTY	900 / 507	2011-WPT-0657	12/6/2017	6.0 / 7.3	10275 Beaver Dam Road, Cockeysville MD 21030.
	Days Cove Rubble Landfill – Lateral Expansion	WRF	PRI	975 / 570	2014-WRF-0592	10/13/2019	35.6 / 99	6425 Days Cove Road, White Marsh MD 21162.
	Eastern Sanitary Landfill	WMF	CTY	974 / 570	2008-WMF-0052A	12/16/2015	200 / 367	6259 Days Cove Road, White Marsh MD 21162.
	Eastern Sanitary Transfer Station	WTS	CTY	974 / 570	2011-WTS-0508	6/11/2017	- / 3.2	6260 Days Cove Road, White Marsh MD 21162.
	Honeygo Run Reclamation Center	WRF	PRI	958 / 564	2008-WRF-0579A	10/13/2019	77/117	10710 Philadelphia Road, Perry Hall MD 21128. Expansion of Existing Landfill.
	Recovermat Mid-Atlantic	WPF	PRI	888 / 506	2015-WPF-0341	1/6/2021	- / 8.5	2202 Halethorpe Farm Road, Baltimore MD 21227. Approved to accept C&D. Currently, only accepts scrap metal.
	Western Acceptance Facility Transfer Station	WTS	CTY	905 / 510	2015-WTS-0599	5/11/2020	6.0 / 6.0	3310 Transway Road, Halethorpe MD 21227.
Calvert	Appeal Municipal Landfill	WMF	CTY	961 / 200	2012-WMF-0531	11/19/2017	30 / 350	401 Sweetwater Road, Lusby MD 20678.
	Appeal Transfer Station	WTS	PRI	961 / 200	2012-WTS-0519	11/19/2017	- / 1	401 Sweetwater Road, Lusby MD 20678.
	Hance Landclearing Debris Landfill	WLC	PRI	923 / 246	2015-WLC-0252	11/23/2020	10.2 / 23.6	1/4 mile west of MD Rtes 2 & 506, Prince Frederick MD 20678.
	Howlin Landclearing Debris Landfill	WLC	PRI	961 / 200	2013-WLC-0577	5/28/2018	3.0 / 32.7	8580 Nursery Road, Lusby MD 20657.
	Southern Maryland Processing Facility	WPF	PRI	910 / 310	2014-WPF-0597	3/19/2020	- / 0.2	7659 Binnacle Lane, Owings MD 20736
Caroline	Midshore II Solid Waste Regional Municipal Landfill	WMF	MES	405/113	2013-WMF-0608	2/4/2019	- / 71.3	12236 River Road, Ridgely MD 21660.
Carroll	Northern Municipal Landfill	WMF	CTY	816 / 626	2015-WMF-0066	10/12/2020	80 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Northern Municipal Landfill	WPT	CTY	816 / 626	2008-WPT-0541	3/9/2019	3 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Roll-Off Express, Inc.	WPF	PRI	832 / 605	2012-WPF-0159	6/9/2018	- / 6.8	2900 Dede Road, Finksburg MD 21048.
Cecil	Cecil County Central Landfill	WMF	CTY	1107 / 644	2012-WMF-0532	11/13/2017	40 / 418	758 East Old Philadelphia Road, Elkton MD 21921.
	Cecil County Central Landfill – Horizontal Expansion	WMF	CTY	1107 / 644	2008-WMF-0629	4/22/2019	40 / 418	758 East Old Philadelphia Road, Elkton MD 21921 Planned Construction
	Stemmer's Run Transfer Station	WTS	CTY	1095 / 581	2015-WTS-0072	11/5/2020	- / 9.7	45 Stemmer's Run Road, Earleville MD 21919.
	Woodlawn Transfer Station	WTS	CTY	1058 / 658	2015-WTS-0074	11/5/2020	- / 37	Fire Tower & Waibel Roads, Port Deposit MD 21904.
Charles	Charles County Municipal Landfill	WMF	CTY	832 / 269	2014-WMF-0076A	4/30/2019	73 / 114	12305 Billingsley Road, Waldorf MD 20602.
	Naval Support Facility Indian Head Incinerator	WIN	FED	750 / 275	2009-WIN-0529	9/4/2019	- / 1	101 Strauss Avenue, Indian Head MD 20640.
Dorchester	Beulah Municipal Landfill	WMF	CTY	1115 / 307	2015-WMF-0628	2/22/2020	27 / 40	6812 East New Market-Ellwood Road, Hurlock MD 21643.
Frederick	Eastalco Aluminum Company Industrial Landfill	WIF	PRI	650 / 535	2014-WIF-0537	11/30/2019	10.2 / 20	5601 Manor Wood Road, Frederick MD 21703.
	Essroc Cement	WIF	PRI	672/547	2010-WIF-0640	1/22/2017	25/50	4120 Buckeystown Pike,

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
	Corporation.							Frederick, MD 21717. Limited to Essroc Waste Only. Planned Construction
	Fort Detrick – Area B & Main Post Municipal Landfill	WMF	FED	672 / 583	2015-WMF-0327	8/26/2020	61 / 297	Area B - Rosemont Avenue & Shookstown Road. Fort Detrick Waste Only.
	Fort Detrick – Area B & Main Post Incinerator	WIN	FED	678 / 582	2015-WIN-0341	3/24/2021	- / 1	Area A - East off Beasley Drive. Limited To Waste Only From Fort Detrick.
	Reichs Ford/Site B Municipal Landfill	WMF	CTY	702 / 561	2013-WMF-0582	6/11/2018	58 / 184	9031 Reichs Ford Road, Frederick MD 21704.
	Reichs Ford/Site B Municipal Sanitary Landfill	WPT	CTY	702 / 561	2016-WPT-0604	5/30/2021	58 / 184	9031 Reichs Ford Road, Frederick MD 21704.
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	WMF	CTY	116 / 604	2011-WMF-0094	3/29/2016	30 / 188	3118 Oakland-Sang Run Road, Oakland MD 21550.
Harford	Auston Process and Transfer Facility	WPT	PRI	983 / 583	2012-WPT-0616	1/14/2018	3.0 / 6.01	1202 Pauls Lane, Joppa MD 21085.
	Harford Waste Disposal Center	WMF	CTY	1000 / 650	2010-WMF-0098	11/15/2015 Expired	60 / 259	3241 Scarboro Road, Street MD 21154.
	Harford Waste Disposal Center Expansion	WMF	CTY	1000 / 650	2012-WMF-0570	10/3/2017	77.4 / 286	3241 Scarboro Road, Street MD 21154.
	Harford County Resource Recovery Facility	WTE	PRI	994 / 573	2013-WTE-0576	12/12/2018	- / 4	1 Magnolia Road, Joppa MD 21085. Produces Steam for APG Complex.
Howard	Alpha Ridge Municipal Landfill	WMF	CTY	823 / 539	2016-WMF-0110	5/2/2021	195 / 590	2350 Marriottsville Road, Marriottsville MD 21104.
	Alpha Ridge Processing and Transfer Station	WPT	CTY	823 / 539	2012-WPT-0578	3/19/2018	195 / 590	2350 Marriottsville Road, Marriottsville MD 21104.
	Ameriwaaste Processing Facility and Transfer Station	WPT	PRI	865 / 489	2011-WPT-0572	11/3/2016	- / 12.89	7150 Kit Kat Road, Elkridge MD 21075. Accepts Only C&D Waste.
	Workplace Essentials Transfer Station	WTS	PRI	885 / 550	2015-WTS-0594	6/4/2020	- / 1	7184 Troy Hill Drive, Suites J & K, Elkridge MD 21075. Accepts Diapers & Other Special Sanitary Wastes.
Montgomery	C & D Recovery Processing Facility	WPF	PRI	710 / 510	2014-WPF-0581	5/26/2019	- / 10.8	24120 Frederick Road, Clarksburg MD 20871.
	Montgomery County Resource Recovery Facility	WTE	CTY	671 / 501	2013-WTE-0538	12/26/2018	- / 35	21204 Martinsburg Road, Dickerson MD 20842.
	Montgomery Co. Site 2 Municipal Landfill	WMF	CTY	680 / 490	2014-WMF-0237	5/11/2019	125 / 650	3 miles southwest of Dickerson, MD 20842. Landfill Not Constructed.
	Montgomery County Solid Waste Transfer Station	WPT	CTY	845 / 465	2011-WPT-0617	1/10/2017	- / 43	16101 Frederick Road, Derwood MD 20850.
Prince George's	Brown Station Road Municipal Landfill	WMF	CTY	865 / 365	2015-WMF-0589	11/11/2020	134 / 164	3500 Brown Station Road, Upper Marlboro MD 20772.
	Dower House Recycling and Processing Center	WPF	PRI	843 / 355	2015-WPF-0563	10/26/2020	- / 10	5900 Dower House Road, Upper Marlboro MD 20772. Facility Not Constructed.
	Ritchie Reclamation Rubble Landfill Phase I	WRF	PRI	843 / 355	2015-WRF-0590	12/3/2020	78 / 258	2001 Ritchie Marlboro Road, Upper Marlboro MD 20772.
	Ritchie Reclamation Rubble Landfill Phase II	WRF	PRI	849 / 372	2015-WRF-0126	6/1/2020	78 / 258	2001 Ritchie Marlboro Road, Upper Marlboro MD 20772.
	Sheriff Road Processing &	WPT	PRI	826 / 391	2012-WPT-0218	2/21/2018	- / 1.5	5800 Sheriff Road, Fairmont Heights MD

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
	Transfer Facility							20743. Accepts Only C&D Waste.
	Sun Services Processing and Recycling Center	WPF	PRI	828 / 438	2016-WPF-0639	3/30/2021	4.3	11220 Somerset Ave Beltsville, MD 20705
	Lawrence Street C & D Processing Facility	WPF	PRI	818/400	2012-WPF-0626	1/30/2018	1.8/2.85	4700-A Lawrence Street. Hyattsville MD 20781
Queen Anne's	Baker Rubble Landfill	WRF	PRI	1046 / 429	2013-WRF-0622	4/24/2018	15.9 / 18.5	501 4-H Park Road, Queenstown MD 21658. Serves Mid-Shore Counties.
St. Mary's	Knott Landclearing Debris Landfill	WLC	PRI	946 / 140	2016-WLC-0134	5/11/2021	4.3 / 55	1/4 mile North - Flat Iron Rd 2 & Boothe Road, Great Mills MD 20634.
	St. Andrews Municipal Landfill	WMF	CTY	934 / 167	2015-WMF-0138	11/18/2020	36.8 / 55	44825 St. Andrews Church Road., California MD 20619. Landfill Operating as a Processing & Transfer Station.
	St. Andrews Waste Processing & Transfer Facility	WPT	CTY	934/ 167	2013-WPT-0624	1/23/2019	1 / 55	44861 St. Andrews Church Road, California MD 20619 Facility Not Constructed
Somerset	Somerset County Landfill – Fairmount Site	WMF	CTY	1158 / 184	2014-WMF-0268	6/24/2019	33 / 62	8716 James Ring Road, Westover MD 21871.
	Smith Island Incinerator	WIN	CTY	1076 / 057	2016-WIN-0140	4/7/2021	0.06	Smith Island Road, Ewell MD 21824.
Talbot	Midshore Regional Solid Waste Facility	WMF	MES	1080 / 356	2015-WMF-0144	2/24/2020	67 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties.
	Midshore Transfer Station	WTS	MES	1080 / 356	2015-WTS-0549	5/11/2020	0.5 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties
Washington	Forty West Municipal Landfill	WMF	CTY	575 / 673	2007-WMF-0266A	10/28/2019	189 / 425	12630 Earth Care Road, Hagerstown MD 21740.
	Washington County Rubble Landfill	WRF	CTY	568 / 652	2009-WRF-0270	10/28/2019	75 / 100	11112 Kemps Mill Road Williamsport MD 21740. Landfill Not Operating.
Wicomico	Bennett Processing Facility	WPF	PRI	0802 / 220	2011-WPF-0658	1/5/2017	5 / 14.3	513-515 South Camden Ave., Fruitland MD 21826.
	Newland Park Municipal Landfill	WMF	CTY	1180 / 200	2015-WMF-0283	7/16/2020	60 / 125	7161 Brick Kiln Road, Salisbury MD 21801.
	Peninsula Regional Medical Center	WPM	PRI	1201 / 186	2011-WPM-0505	2/11/2018	- / 23	100 East Carroll Street, Salisbury MD 21801.
Worcester	Central Sanitary Landfill	WMF	CTY	1278 / 140	2012-WMF-0663	9/6/2021	230 / 725	7091 Central Site Lane, Newark MD 21841.
	Ocean City Transfer Station	WTS	MUN	1353 / 207	2015-WTS-0156	6/7/2020	- / 2.2	306 - 65th Street, Ocean City MD 21842. Accepts Only MSW.

* The status of the facilities is current as of June 30, 2016 – 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	25
WRF: Construction & Demolition Landfill	5
WLC: Landclearing Debris Landfill	3
WIF: Industrial Landfill	5

Type Of Facility	Number of Facilities
WIN: MSW or Special Medical Waste Incinerator	3
WMI: Medical Waste Incinerator	2
WPF: Processing Facility	9
WPM: Special Medical Waste Processing Facility	1
WTS: Transfer Station	9
WPT: Processing Facility & Transfer Station	17
WTE: Waste to Energy/MSW Incinerator	3
TOTAL	82

Type of Ownership	Number of Facilities
CTY: County Government	33
PRI: Private (Commercial)	39
MUN: Municipal Government	3
UMD: University of Maryland System	1
FED: Federal Government	3
MES: Maryland Environmental Service	3
TOTAL	82

Table B3 – Permitted Solid Waste Acceptance Facilities NOT in Operation

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

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APPENDIX C

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Permitted Natural Wood Waste Acceptance Facilities

Table C1 – 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	2012-NWW-GP01	19.71	9/20/2017	(301) 689-5979	(301) 689-8826
Anne Arundel	A-A Recycling, Inc. 8217 Baltimore-Annapolis Blvd., Pasadena, MD 21122	GP	2016-NWW-GP01	9.90	9/11/2021	(410) 437-7718	(410) 437-7718
	Bronson Contracting, Inc. 1000 Kembo Road Baltimore, MD 21126	GP	2014-NWW-GP01	8.00	5/6/2019	(410) 360-8587	(410) 360-1243
	L and W Recycling, Inc. 8316 Lokus Road Odenton, MD 21113	GP	2016-NWW-GP01	12.00	9/11/2021	(410) 670-0860	(410) 670-0863
Baltimore	King Mulch and Pallet 1114 Hengemihle Avenue Essex, MD 21221	GP	2012-NWW-GP01	5.90	4/24/2017	(410) 682-2992	(410) 574-0123
	Edrich Lumber, Inc. 9700 Old Court Road Baltimore, MD 21244	IP	2015-NWW-0003	12.00	2/28/2021	(410) 922-5959	(410) 521-2778
	Hollins Organic Products, Inc. 6247 Falls Road Baltimore, MD 21209	GP	2015-NWW-GP01	2.00	6/14/2020	(410) 828-0210	(410) 823-7645
	Northwest Recycling, LLC 212 Cockeys Mill Road Baltimore, MD 21136	GP	2015-NWW-GP01	5.00	11/3/2020	(410) 833-9369	(410) 833-3963
	Wirtz & Daughters, Inc. 6275 Days Cove Road White Marsh, MD 21162	IP	2015-NWW-0552	14.00	5/28/2020	(410) 335-0400	(410) 592-6248
Calvert	A.H Hatcher, Inc. 7185 Sawmill Road Lusby MD 20657	GP	2011-NWW-GP01	11.25	5/1/2016	(410) 586-3404	(410) 586-2843
	231 Materials & Recycling Products, LLC 171 Skipjack Road Prince Frederick, MD 20678	GP	2016-NWW-GP01	4.00	6/12/2021	(410) 535-7666	(410) 968-2391
Caroline	Cahall Construction, LLC	GP	2012-NWW-GP01	24.49	9/27/2017	(410) 479-5384	(301) 479-5387
Carroll	C.J. Miller, LLC 390 Vision Way Westminster, MD 21158	GP	2016-NWW-GP01	40.00	9/1/2021	(410) 239-8006	(410) 239-4204
	Harvest RGI, LLC 7901 Kabik Court Woodbine, MD 21797	GP	2014-NWW-GP01	30.00	2/12/2019	(301) 674-6689	(301) 942-6734
Cecil	Chesapeake Wood Recycling 1726 East Old Philadelphia Road Elkton, MD 21421	GP	2015-NWW-GP01	25.00	6/2/2020	(410) 392-0770	(410) 392-2317
	Grass Busters Landscaping Company, Inc. Shop 383 Hotton Road Elkton, MD 21921	GP	2010-NWW-GP01	48.80	4/8/2015 Expired	(301) 292-1166	(301) 292-1197
	Mountain Mulch Elkton, LLC 505 Blue Ball Road, Lot 9 Elkton, MD 21921	GP	2014-NWW-GP01	4.80	2/6/2019	(610) 652-2485	(610) 652-2485
Charles	Calvert Wood Recycling 6585 Ripley Road Ripley, MD 20646	GP	2016-NWW-GP01	8.50	4/3/2021	(301) 518-2306	(301) 934-1536
	Beuchert Excavating, Inc. 12340 Crain Highway Newburg MD 20664	GP	2014-NWW-GP01	12.50	3/27/2019	(301) 399-5088	(301) 274-2454
	Mona Recycling 6970 Our Place Port Tobacco, MD 20677	IP	2014-NWW-0002	7.00	11/19/2019	(301) 440-1145	(301) 440-1145
Frederick	Butler Wood Recycling 4039 Tuscarora Road Point of Rocks, MD 21777	GP	2014-NWW-GP01	58.00	5/18/2019	(301) 607-4541	(301) 874-8348
	Bussard Brothers Landscape Supply-5307-B Green Valley Rd Monrovia, MD 21770	GP	2014-NWW-GP01	2.00	11/19/2019	(301) 865-3925	(301) 865-8496

County	Facility & Location	Permit Type	Permit Numbers	Site Acreage	Expiration Date	Phone Number	Fax Number
	Grant County Mulch Inc. 6720 Manor Road Frederick, MD 21703	GP	2012-NWW-GP01	3.00	11/1/2017	(301) 732-5194	(301) 732-5195
Harford	Arthur D. Heston 2304 Whiteford Road Whiteford, MD 21169	GP	2012-NWW-GP01	3.67	10/11/17	(410) 692-2673	(410) 692-2253
	Brian Baker, Inc. 2001 Conowingo Road Bel Air, MD 21014	GP	2014-NWW-GP01	2.89	9/23/2019	(410) 937-2164	(410) 937-2164
	Comer Construction, Inc 900 Circelli Court Aberdeen, MD 21001	GP	2013-NWW-GP01	6.00	11/25/2018	(410) 879-6094	(410) 638-0289
	Crouse Construction Co. 1001 Philadelphia Road Aberdeen, MD 21001	GP	2015-NWW-GP01	25.00	6/8/2020	(410) 879-1822	(410) 893-0045
Howard	Level Land Lisbon Mulch Yard 1100-1281 Madison Street Lisbon, MD 21765	GP	2013-NWW-GP01	5.00	8/8/2018	(410) 489-5206	(410) 489-4316
	Oak Ridge Farm 2700 Woodbine Road Woodbine, MD 21797	GP	2014-NWW-GP01	4.2	9/18/2019	(410) 287-5758	(410) 287-5758
	R.L.O Contractors Inc. 7531 Cemetery Lane Elkridge, MD 21075	GP	2015-NWW-GP01	15.00	12/10/2019	(410) 471-4450	(410) 471-4450
Kent	Sharp Lawn & Tree Inc. 10010 Lakeside Lane Chestertown, MD 21620	GP	2016-NWW-GP01	3	4/7/2021	(410) 778-6302	(410) 778-3509
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville, MD 20833	GP	2013-NWW-GP01	107.50	12/16/2019	(301) 540-2968	(301) 540-9630
	Allentuck Landscaping, Inc. 24320 Frederick Road Clarksburg, MD 20841	GP	2014-NWW-GP01	1.20	1/16/2019	(301) 516-1900	(301) 516-1900
	Country Nursery 3330 Spencerville Road Burtonsville, MD 20866	GP	2013-NWW-GP01	11.5	6/16/2018	(301) 421-9593	(301) 421-9593
	Grant County Mulch Inc. 24420 Frederick Road Clarksburg, MD 20841	GP	2014-NWW-GP01	6.35	4/10/2019	(304) 749-7451	(304) 749-7451
Prince George's	Grant County Mulch Inc. 5402 Van Dusen Road Laurel, MD 20707	GP	2011-NWW-GP01	25	9/26/2016	(800) 749-7451	(800) 749-7451
Queen Anne's	Baker Rubble Landfill 501 4-H Park Road Queenstown, MD 21658	IP	2011-NWW-0620	3.00	1/8/2017	(410) 827-8831	(410) 827-8831
	Pardoe's Lawn & Tree Service, Inc. 112 Deep Landing Road Chestertown, MD 21620	GP	2016-NWW-GP01	15.98	4/7/2021	(410) 778-2016	(410) 778-2022
	Grange Hall Yard 437 Grange Hall Road Centreville, MD 21617	GP	2015-NWW-GP01	9.06	9/7/2020	(410) 974-0397	(410) 974-0397
St. Mary's	Charlotte Hall Lumber Yard	GP	2015-NWW-GP01	3.51	8/11/2020	(301) 481-7304	(301) 481-7304
Talbot	Dependable Sand and Gravel Company, Inc. 13155 Ocean Gateway Queen Anne, MD 21657	GP	2015-NWW-GP01	343	10/8/2020	(410) 822-6363	(410) 820-7789
Washington	Hess Road Recycling Center 6502 Hess Road Hancock, MD 21750	GP	2010-NWW-GP01	4.00	4/8/2017	(410) 796-7676	(3010) 379-0112
Wicomico	Dunn's Tractor Services, Inc. 9042 Taylor Road Delmar, MD 21875	GP	2014-NWW-GP01	10.00	8/19/2019	(410) 742-7429	(410) 742-7429
General Permits (GP):							39
Individual Permits (IP):							4
TOTAL							43

* The status of the facilities is current as of June 30, 2016 – the period of time covered by the report.

APPENDIX D

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Winter 2017

ALL STAR



All State Agencies Recycle

ALL STAR News

Winter 2017

ALL STAR



All State Agencies Recycle

Maryland Green Purchasing- Buy Recycled Products!

- Christy Bujnovszky
MDE STAFF

Successful recycling is a full circle, three-step process. Step one is the collecting and separating, and returning the recyclable materials to the marketplace as raw materials. Step two involves manufacturers converting these raw materials into new products. Finally, step three returns the recycled products to the marketplace as a new product ready to be purchased and used again. In the past, there were misconceptions about the quality and performance of recycled products; however, this is no longer an issue. In addition to providing high quality products, the use of recycled products:



- Conserves natural resources by decreasing the need for virgin materials
- Saves energy. For example, recycling 1 ton of aluminum cans saves 153 million British Thermal Units (BTUs)
- Reduces the amount of waste that would be land-filled or incinerated
- Creates new markets by establishing stable markets for recyclable materials
- Are cost competitive compared to the purchase

[See Buy Recycled, Page 2]

RECYCLING CONTACTS

MD Department of the Environment
Land Management Administration
www.mde.maryland.gov/recycling

C. John Sullivan
Program Manager
Resource Management Program
john.sullivan1@maryland.gov

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

Christy Bujnovszky
Recycling Unit
christy.bujnovszky@maryland.gov

Donate Your Used Office Supplies

- Christy Bujnovszky
MDE STAFF

The Baltimore Teacher Supply Swap gives away classroom supplies to teachers, parents, youth programs, homeschooling families, daycare providers and anyone else who needs them. They are looking for donations of supplies that people no longer need, such as office supplies, arts and crafts materials, etc.

Donations can be delivered to 1224 Wicomico Street, Baltimore, MD 21230 on Thursdays from 3:00 - 5:30 p.m. or Saturdays from 11:00 a.m. - 2:00 p.m., or email melissa@teachersupplyswap.org to schedule a time for the donations to be picked up. Details can be found on the website: www.teachersupplyswap.org



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



February 2017

[Buy Recycled, from Page 1]

of new non-recycled products

- Reduces greenhouse gas emissions. For example, recycling one ton of aluminum cans saves 9.13 MTCO₂E (Metric tons of carbon dioxide equivalent)

In 2015 in Maryland, nearly 6.1 million MTCO₂E was avoided by waste diversion activities. This is the equivalent of removing over 1.27 million passenger cars from the roadway each year or conserving over 677 million gallons of gasoline, over 250 million cylinders of propane used for home barbecues, or over 32,294 railway cars of coal. Additionally, nearly 53.6 trillion BTUs were saved. This equates to the annual energy consumption of over 466,000 households or the amount of energy contained in over 9.2 million barrels of oil or over 431 million gallons of gasoline.

The Green Maryland Act of 2010 created the Maryland Green Purchasing Committee. The Committee, chaired by the Department of General Services (DGS), is tasked with providing the State with education and training promoting environmentally preferable purchasing.

In addition, in 2014, additional legislation was put into place to promote green purchasing. The Environmentally Preferable Procurement law requires the Green Purchasing Committee to develop

and publish specifications for adoption by State units and requires State units to adopt certain environmentally preferable purchasing specifications.

DGS promotes purchasing office supplies that are made with recycled materials. Some items include:

- Ink & toner cartridges
- Paper
- Envelopes
- File folders
- Binders

The following companies are listed by DGS as offering recycled office supplies under a Statewide contract:

- www.cartridgeplusmd.com
- www.ajstationers.com
- www.rudolphsupply.com
- <https://rghe.ediversitynetwork.com> (Staples)

For additional information, visit DGS' green purchasing webpage at: <http://dgs.maryland.gov/Pages/GreenOperations/GreenPurchasing/index.aspx> or email DGS.BuyGreen@maryland.gov

Buy Recycled!



2016 All StAR Reports

– Christy Bujnovszky
MDE Staff

Calendar Year 2016 All StAR reporting is open. As requested, on February 22, 2017 the Department held a refresher course on how to complete the All StAR reports using the online reporting system. Key issues discussed at the training were what counts towards the Maryland Recycling Act (MRA) recycling rate and what options are available to best determine the amount of solid waste disposed from your facility.

The 2016 reports are due to the Department by March 17, 2017. Please contact christy.bujnovszky@maryland.gov if you need assistance completing your recycling report.



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



February 2017

APPENDIX E

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County Recycling Coordinators

Allegany

Ms. Siera Wigfield
Recycling Coordinator
Allegany County Transit
1000 Lafayette Avenue
Cumberland, MD 21502-
Phone: (301) 722-6360 **Ex:**
Fax: (301) 722-0326
Email: swigfield@alleganygov.org

Anne Arundel

Mr. Richard Bowen
Solid Waste Recycling Manager
Waste Management Services
2662 Riva Road
MS-7406
Annapolis, MD 21401-
Phone: (410) 222-7951 **Ex:**
Fax: (410) 222-4484
Email: richard.bowen@aacounty.org

Baltimore City

Mr. Robert Murrow
Recycling Coordinator
Bureau of Solid Waste
200 Holiday Street
Baltimore, MD 21202-
Phone: (410) 396-4511 **Ex:**
Fax: (410) 545-6117
Email: robert.murrow@baltimorecity.gov

Baltimore County

Mr. Charles Reighart
Recycling Coordinator
County Office Building
111 West Chesapeake Avenue, Rm 225
Towson, MD 21204-
Phone: (410) 887-2000 **Ex:**
Fax: (410) 887-2931
Email: creighart@baltimorecountymd.gov

Calvert

Mr. Bill Teter
Office of Recycling
P.O. Box 1330
401 Sweetwater Road
Lusby, MD 20657-
Phone: (410) 326-0210 **Ex:**
Fax: (410) 586-9461
Email: teterwj@co.cal.md.us

Caroline

Mr. Jake Jacobs
Recycling Coordinator
Department of Public Works
520 Wilmuth Street
Denton, MD 21629-
Phone: (410) 479-4040 **Ex:**
Fax: (410) 479-0409
Email: jjacobs@carolinemd.org

Carroll

Ms. Maria Myers
Recycling Manager
Dept. of Public Works
225 North Center Street
Room 221
Westminster, MD 21157-5194
Phone: (410) 386-2035 **Ex:**
Fax: (410) 840-8279
Email: mtmyers@ccg.carr.org

Cecil

Ms. Tanya Adams
Recycling Coordinator
758 East Old Philadelphia Road
Elkton, MD 21921-
Phone: (410) 996-6275 **Ex:**
Fax: (410) 287-4608
Email: tadams@ccgov.org

Charles

Ms. Frances Sherman
Department of Public Facilities
1001 Radio Station Road
La Plata, MD 20646-
Phone: (301) 932-3569 **Ex:**
Fax: (301) 932-3449
Email: shermanf@charlescountymd.gov

Dorchester

Mr. John Cooney
Dorchester County Landfill
6815 E. New Market Ellwood Rd.
Hurlock, MD 21643
Phone: (410) 943-1700 **Ex:**
Fax:
Email: jcooney@docogonet.com

Frederick

Ms. Cindy Johnson
Recycling Program Manager
Department of Solid Waste
9031 Reichs Ford Road
Frederick, MD 21704-
Phone: (301) 600-7403 **Ex:**
Fax: (301) 600-3044
Email: cjohnson1@frederickcountymd.gov

Garrett

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