



Department of the Environment

MARYLAND SOLID WASTE MANAGEMENT and DIVERSION REPORT

– 2015 –

(Calendar Year 2014 Data)

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Senate Education, Health, and Environmental Affairs Committee

House Environment and Transportation Committee

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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) 2014. Beginning in 2009, the Maryland Waste Diversion Activities Report and Solid Waste Managed in Maryland Report were combined into one report and submitted in accordance with the requirements of the Environment Article, Annotated Code of Maryland, Section 9-204(n), 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 statistical local jurisdiction recycling and source reduction (SR) data for CY 2014, and an overview of the State’s technical assistance activities from July 2014 through June 2015. 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 2014, Maryland counties and Baltimore City generated 12,098,318 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 3.58 percent from the 11,680,352 tons generated in 2013.

A total of 8,361,605 tons of waste was accepted at Maryland permitted solid waste acceptance facilities. Of the 8,361,605 tons of solid waste accepted, a total of 7,739,806 tons was managed by Maryland permitted solid waste acceptance facilities during calendar year 2014 by recycling, disposal (incineration and landfilling), or transportation out of State (see Table 3).

The Maryland Recycling Act (MRA) is Maryland’s law that outlines waste types 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 2,741,945 tons of MRA recyclables + 3,784,062 tons of MRA waste disposed (without recycled MSW ash and backend scrap metal) for a total of 6,526,007 tons of the total waste generated in Maryland.

Table 1 – Maryland Waste Generation Totals

County	Total Waste (tons)
Allegany	649,325
Anne Arundel	1,119,264
Baltimore City	1,041,800
Baltimore County	1,508,394
Calvert	172,578
Carroll	641,781
Cecil	155,164
Charles	711,062
Dorchester	62,316
Frederick	387,420
Garrett	60,528
Harford	328,104
Howard	666,390
Mid-Shore *	337,842
Montgomery	1,429,193
Prince George's	1,877,824
Somerset	35,563
St. Mary's	106,563
Washington	193,463
Wicomico	198,091
Worcester	139,369
State Highways	276,283
MARYLAND TOTAL ^	12,098,317

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

^ Due to rounding the Maryland Total differs from the actual value of 12,098,317.96.

Maryland achieved a 47.60 percent MRA waste diversion rate. This was comprised of a 43.51 percent (2,741,945 tons of MRA recycling, plus 97,587 tons resource recovery facility credit) MRA recycling rate plus a 4.10 percent (278,538 tons reduced) source reduction credit. An additional 3,944,478 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 6,784,009 tons recycled in Maryland, including the resource recovery facility credit. (See Tables 20 and 21, including footnotes, for details.)

Other highlights for CY 2014:

- Nearly 2,291,524 tons (30 percent) of the waste managed by Maryland permitted solid waste acceptance facilities was landfilled in Maryland;
- 1,313,962 tons (17 percent) were recycled/reused in Maryland;
- 1,469,464 tons (19 percent) were incinerated in Maryland;
- 2,303,402 tons (29 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 2,303,402 tons of waste was exported from Maryland, while only 284,091 tons of waste was imported to Maryland. (See Tables 13 and 14, including footnotes, for details.); and
- Maryland landfills reported a total available capacity of 73,113,548 tons in 2014. (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:
 - Municipal Solid Waste (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 2014. 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 2014 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 2014

In 2014, over 8.3 million tons of solid waste was accepted by Maryland permitted solid waste acceptance facilities. The 8.36 million tons includes waste stored on site and waste sent

from one facility to another. Of the 8.36 million tons accepted, over 7.7 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)	12,098,318
B	Total Maryland Waste Recycled (see Table 20, including “*” footer)	6,686,422
C	Total Maryland Waste Disposed (A – B)	5,411,896
D	Recycling total adjusted for amount managed through Maryland permitted solid waste acceptance facilities (6,686,422 (Table 20) – 1,616,159 (Table 3))	5,070,263
E	Total waste disposed by Maryland counties but not captured by a Maryland permitted solid waste acceptance facility ^	129,822
F	Natural Wood Waste Disposed or Stored (see Table 12)	88,476
G *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment ^^	193,474
H	Total waste imported into Maryland (see Table 13)	284,091
I **	Disposed Ash, Back-End Scrap Metal, and By-Pass ^^	275,532
Total Waste Managed by Maryland permitted solid waste acceptance facilities (A-D-E+F+G+H+I) (see Table 3)		7,739,806
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 12,098,318 waste generated tons.

^^ Reported by permitted solid waste acceptance facilities via the Solid Waste Tonnage Report. 172,300 tons of ash and bypass recycled + 21,174 tons of back-end scrap metal recycled = 193,474 tons. 266,143 tons of disposed MSW-ash, back-end scrap metal, & by-pass + 9,389 tons of disposed Non-MSW ash & bypass = 275,532 tons.

There was an increase, to 284,091 tons, in the amount of out-of-State waste that was managed in Maryland in 2014, compared to 2013 (256,070 tons). The volume of solid waste accepted, processed, and disposed at the permitted refuse disposal systems in Maryland is similar to previous years. Nearly 2.3 million tons of waste was landfilled and over 1.4 million tons was incinerated in Maryland. Over 1.6 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 in 2014 was consistent with 2013. There was an increase, to 2,303,402 tons, in the amount of waste exported compared to 2013 (2,217,459 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 2014 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 ⁴	5,217,419	376,263	3,873,452	51,559	4,301,274
Construction & Demolition Debris	2,135,702	638,755	1,378,637	158,606	2,175,998
Natural Wood Waste	500,682	412,206	12,018	151,183	575,407
Industrial Waste	20,976	3	19,954	0	19,957
Land Clearing Debris	19,392	16,435	5,787	106	22,328
Other Wastes ⁵	95,839	1,610	92,076	0	93,686
Total Waste Received	7,990,010	1,445,272	5,381,924	361,454	7,188,650
Tons of Incinerator Ash	371,595	170,887	380,269	0	551,156
TOTAL REPORTED	8,361,605	1,616,159	5,762,193	361,454	7,739,806

- 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 Permitted solid waste acceptance facilities in Maryland do not report on the types of MSW collected. However, per the EPA's Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2013 report, MSW is comprised of approximately 27% paper and paperboard, 14.6% food scraps, 13.5% yard trimmings, 12.8% plastics, 9.1% metals, 6.2% wood, 9% rubber, leather & textiles, 4.5% glass, and 3.3% other (*i.e.*, electrolytes in batteries, fluff pulp, feces, and urine in diapers).
- 5 "Other Wastes" includes special medical waste, asbestos, and sewage sludge.

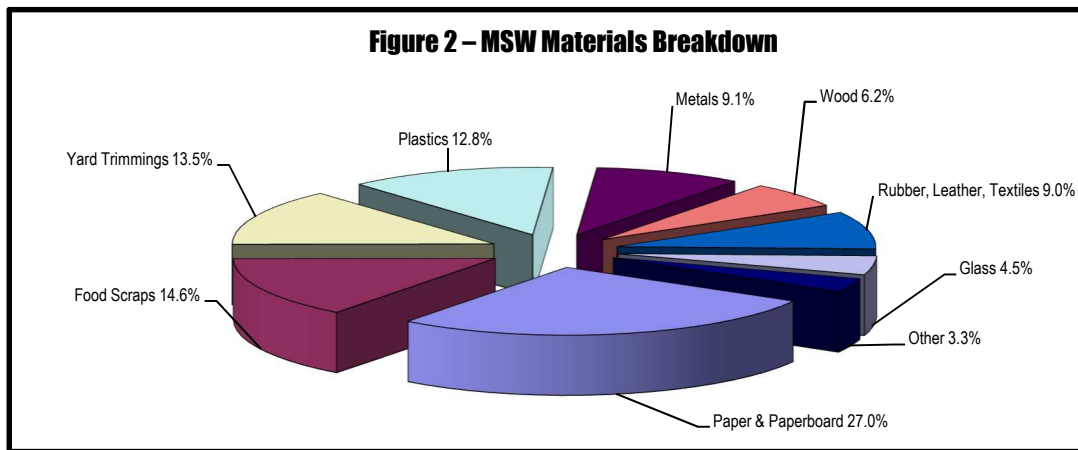
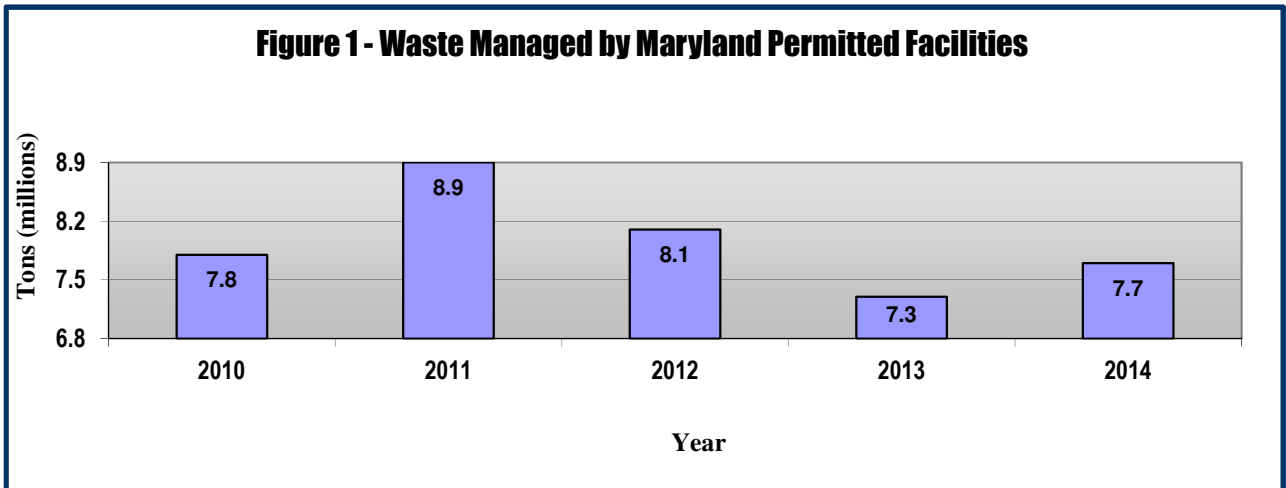
Figure 1 details the total amount of solid waste that Maryland permitted solid waste acceptance facilities stored on site or managed via export, disposal (*i.e.*, landfilling and incineration), and recycling/reuse. Permitted solid waste acceptance facilities do not report the types of MSW collected; only total MSW. According to the EPA's Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2013 report, MSW is comprised of approximately 27% paper and paperboard, 14.6% food scraps, 13.5% yard trimmings, 12.8% plastics, 9.1% metals, 6.2% wood, 9% rubber, leather and textiles, 4.5% glass, and 3.3% other (*i.e.*, electrolytes in batteries, fluff pulp, feces, and urine in diapers). See Figure 2 for a graphical representation of the composition of MSW.

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 2014, 25 valid Refuse Disposal Permits for municipal landfills were in effect. Of the 25 effective permits, 23 facilities have been developed to accept MSW. Of the 23 developed facilities, 21 facilities accepted MSW, managed/disposed MSW, and/or transferred recyclables to the market place.

A new Refuse Disposal Permit was issued to the Cecil County Central Landfill for the facility’s horizontal expansion in the future years. Montgomery County Site 2 Municipal Landfill, the County’s proposed back-up facility to handle the County’s waste capacity in the future, is currently on hold for construction. Mid-Shore Regional Solid Waste Municipal Landfill in Talbot County has ceased its landfill operations and did not accept any waste in 2014. The facility’s Refuse Disposal Permit expired in November 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.

Over 1.6 million tons of solid waste was disposed at the permitted facilities in 2014. The two facilities that disposed the most waste were Quarantine Road Landfill (323,640 tons) in Baltimore City and Brown Station Road Landfill (322,328 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	85,332	85,332	0
Anne Arundel	Millersville Resource Recovery Facility	County	109,916	76,780	10,612
Baltimore City	Quarantine Road	City	338,367	323,640	127
Baltimore	Eastern Sanitary	County	175,383	121,274	1,972
Calvert	Appeal Sanitary	County	5,284	507	1,876
Caroline	Midshore II	County	108,968	101,911	1,543
Carroll	Northern Municipal	County	16,739	15,908	832
Cecil	Cecil County Central	County	106,819	94,687	6,332
	Cecil County Central-Horizontal Expansion	County	0	0	0
Charles	Charles County Municipal	County	96,493	78,317	833
Dorchester	Beulah Municipal	County	49,667	47,974	240
Frederick	Fort Detrick Area B	Federal	4,360	4,360	0
	Reichs Ford/Site B	County	24,920	17,479	14,089
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	25,914	25,630	65
Harford	Harford Waste Disposal Center	County	0	0	0
Harford	Harford Waste Disposal Center (Expansion)	County	138,994	83,736	19,482
Howard	Alpha Ridge Municipal	County	45,800	194	10,505
Montgomery	Montgomery County Site 2	County	0	0	0
Prince George's	Brown Station Road	County	324,383	322,328	2,055
St. Mary's	St. Andrew's Municipal	County	10,203	0	10,203
Somerset	Somerset County	County	22,244	22,203	41
Talbot	Midshore Regional Solid Waste Facility	County	0	0	0
Washington	Forty West Municipal	County	85,187	78,800	2,660
Wicomico	Newland Park Municipal	County	98,728	98,728	0
Worcester	Central Sanitary	County	63,194	54,144	2,366
TOTAL			1,936,895	1,653,932	85,833

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2014, but not managed until 2015.

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 by volume of the waste. 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 by volume of the waste accepted at the rubble landfill. During 2014, of the five permitted rubble landfills, four landfills disposed 495,757 tons of waste. The two that disposed the most waste by weight were Ritchie Land Reclamation (Phase I & Phase II) – Marlboro Road (249,431 tons) in Upper Marlboro, Prince George’s County, and Honeygo Run Reclamation Landfill (116,983 tons) in Perry Hall, 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
Baltimore County	Days Cove Rubble Landfill Lateral Expansion	Private	147,390	113,219	504
	Honeygo Run Reclamation Center	Private	208,575	116,983	468
Prince George's	Ritchie Reclamation Phase I & II	Private	371,128	249,431	4,083
Queen Anne's	Baker Rubble	Private	18,539	16,124	127
Washington	Washington County Rubble	County	0	0	0
TOTAL			745,632	495,757	5,182

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2014, but not managed until 2015.

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. The definition is generally applied to materials that are not generated from homes or offices, and may include materials such as dusts, powders or sludge’s 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 2014, five valid industrial waste landfill permits were in effect. Of the five effective permits, four facilities have been developed to accept waste. Of the four permitted and developed industrial waste landfills, three accepted and disposed waste in 2014. Essroc Cement’s Industrial Landfill (permitted in 2012) is still being constructed. In 2014, Fort Armistead Road – Lot 15 Landfill in Baltimore City disposed the most industrial waste (104,775 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	104,775	104,775	0
	Hawkins Pt. Plant	Private	24,101	24,101	0
	W. R. Grace and Co. – Davison Chemical Division	Private	11,543	11,543	0
Frederick	Eastalco Aluminum Company	Private	0	0	0
	Essroc Cement Corporation	Private	0	0	0
TOTAL			140,419	140,419	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2013, but not managed until 2014.

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 2014, four of the five permitted facilities accepted 5,019 tons of waste, with the majority of the disposal occurring at the Howlin Landclearing Debris landfill (1,211 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	3,603	0	0
	Hill Landclearing Debris	Private	0	0	0
	M. T. Parran Landclearing Debris	Private	200	200	0
	Howlin Landclearing Debris	Private	1,211	1,211	0
St. Mary's	Knott Landclearing Debris	Private	5	5	0
TOTAL			5,019	1,416	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2013, but not managed until 2014.

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 2014, there were nine permitted transfer stations in operation that accepted a total of 617,439 tons of solid waste. The two busiest transfer stations in Maryland during 2014 were the Western

Acceptance Facility (288,467 tons accepted) and the Eastern Transfer Station (110,939 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	62,340	0	62,340
Baltimore County	Eastern	County	110,939	0	110,939
	Western Acceptance	County	288,467	76	288,391
Calvert	Appeal	Private	87,856	0	87,856
Cecil	Stemmers Run	County	522	0	522
	Woodlawn	County	1,537	0	1,537
Howard	Workplace Essentials	Private	158	0	158
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	33,064	0	33,064
Worcester	Ocean City	Municipal	32,556	0	32,556
TOTAL			617,439	76	617,363

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2014, but not managed until 2015.

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 2014, nine valid Refuse Disposal Permits for processing facilities were in effect. Of the nine valid permits, eight facilities accepted a total of 318,286 tons of waste. The largest of these facilities were Roll-off Express, Inc. in Carroll County, which accepted 98,893 tons of MSW and C&D waste, and Sun Services Processing and Recycling Center in Prince George’s County accepted 91,371 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	31,585	0	31,585

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0
Calvert	Southern Maryland Processing	Private	14,234	0	14,234
Carroll	Roll-Off Express, Inc.	Private	98,893	0	98,893
Montgomery	C&D Recovery Processing	Private	68,877	1,199	69,036
Prince George's	Dower House Recycling and Processing	Private	0	0	0
	Sun Services Processing & Recycling Center	Private	91,371	232	91,139
Wicomico	Peninsula Regional Medical Center **	Private	4	0	4
	Bennett Processing	Private	13,322	1	13,336
TOTAL			318,286	1,432	318,227

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2013, but not managed until 2014.

** 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 2014, a total of 17 permitted facilities were in operation. Of the 17 facilities, 16 accepted 2,629,352 tons of waste in 2014. The two facilities that accepted the most waste in 2014 were Montgomery County Solid Waste Transfer Station in Montgomery County (717,236 tons) and Annapolis Junction Recycling and Transfer Station in Anne Arundel County (557,345 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	16,855	0	16,855
Anne Arundel	Curtis Creek Recovery Systems	Private	179,169	0	179,169
	Annapolis Junction Recycling and Transfer Station	Private	557,345	0	557,345
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	1,810	0	1,810
	Stericycle, Inc.	Private	23,392	0	23,392

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
	Baltimore Recycling Center, LLC	Private	84,598	0	84,598
	Daniels Sharpsmart	Private	2,065	0	2,065
Baltimore County	Baltimore County Central Acceptance Facility	County	321,736	1,189	322,462
Carroll	Northern Municipal Landfill	County	78,914	0	78,914
Frederick	Reichs Ford Landfill	County	174,007	0	174,007
Harford	Auston Processing and Transfer Facility	Private	1,468	11	1,458
Howard	Alpha Ridge Municipal Processing & Transfer Facility	County	38,472	0	38,472
	Ameriwaste Processing and Transfer Station	Private	214,932	0	214,932
Montgomery	Montgomery County Solid Waste Transfer Station	County	717,236	0	717,236
Prince George's	Lawrence Street Solid Waste Acceptance Facility	Private	131,411	179	131,232
	Sheriff Road Processing Transfer Facility	Private	85,942	0	85,942
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0
TOTAL			2,629,352	1,379	2,629,889

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2014, but not managed until 2015.

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 2014, the eight permitted facilities in operation accepted 1,467,881 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 729,754 tons and 594,269 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	729,005	729,754	226,941
	Curtis Bay Energy	Private	21,056	21,056	8,650
	University of Maryland – Baltimore	State	119	0	119
Charles	Naval Support Facility Indian Head Incinerator	Federal	85	15	46
Frederick	Fort Detrick – Area B and Main Post	Federal	2,961	2,955	564
Harford	Harford County Resource Recovery Facility	County	120,296	121,325	50,860
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	594,269	594,269	181,816
Somerset	Smith Island Incinerator	County	90	90	20
TOTAL			1,467,881	1,469,464	469,016

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2014, but not managed until 2015.

Natural Wood Waste Recycling Facility

Natural wood wastes (NWW) are trees and other natural vegetative refuse. Owners or operators of facilities that recycle NWW must obtain a permit to operate and are regulated under Code of Maryland Regulations 26.04.09. A natural wood waste recycling (NWR) 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. NWW is considered solid waste until it is recycled and includes 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.

NWR facilities produce a variety of products that may be sold to consumers. They are valued because they prevent NWW from entering landfills, thereby extending the landfills’ useful lives, and they recycle NWW into useful products. Additionally, facilities that only accept processed wood are not required to obtain a NWR Facility Permit from the Department. During 2014, of 41 permitted operations, 37 reported 500,682 tons of NWW accepted and 412,206 tons recycled. The two highest volume facilities, Grant County Mulch in Prince George’s County and Harvest RGI, LLC in Carroll County, recycled

120,516 tons and 68,165 tons, respectively. Details on the NWW facilities are presented in Appendix C. Waste managed details are presented in Table 12.

Additional information on Maryland’s NWW program is available at www.mde.maryland.gov/programs/Land/SolidWaste/Pages/Programs/LandPrograms/SolidWaste/index.aspx on the Department’s web page, or by contacting the Department’s Solid Waste Program at 410-537-3315 or kaveh.hosseinz@mde.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.	220	220	0
Anne Arundel	A-A Recycle & Sand, Inc.	A-A Recycle & Sand, Inc.	19,094	26,100	22,235
	Bronson Contracting, Inc.	Bronson Contracting, Inc.	308	308	121
	L and W Recycling	L & W Recycling, Inc.	22,004	0	23,583
Baltimore County	King Mulch and Pallet	Albert J. Bierman	5,224	5,224	1,657
	Edrich Lumber, Inc.	Edrich Lumber, Inc.	22,145	22,145	0
	Northwest Recycling, LLC.	Northwest Recycling LLC.	16,478	16,478	16,298
	Wirtz & Daughters, Inc.	Wirtz And Daughters, Inc.	13,343	13,343	31,782
	Hollins Organic Products, Inc.	Hollins Organic Products, Inc.	12,050	12,050	12,784
Calvert	A.H. Hatcher, Inc.	Quality Built Homes, Inc.	21,957	6,284	8,748
	231 Materials & Recycling Products, LLC.	231 Materials & Recycling Products, LLC.	0	0	0
Caroline	Cahall Construction, LLC	Cahall Construction, LLC	84	0	0
Carroll	C. J. Miller, LLC.	C. J. Miller, LLC.	2,760	2,760	8,112
	Harvest RGI, LLC	Harvest RGI, LLC	61,968	68,165	68,165
Cecil	Chesapeake Wood Recycling	Chesapeake Investment, Inc.	6,300	5,025	5,025
	Grass Busters Landscaping Company, Inc.	Grass Busters Landscaping Company, Inc.	473	473	473
	Mountain Mulch Elkton, LLC	Mountain Mulch Elkton, LLC	180	0	0
Charles	Beuchert Excavating, Inc.	Beuchert Excavating, Inc.	121	3,482	0
	James E. Hill	James E. Hill	22,448	2,808	1,995

Jurisdiction	Facility Name	Permittee	Waste Accepted	Waste Handled	
				Waste Recycled*	Waste Marketed*
Frederick	Butler Wood Recycling	William Lee Butler	1,151	2,559	2,398
	Grant County Mulch	Grant County Mulch, Inc.	24,701	0	30,957
	Bussard Brothers Landscape	R. W. Bussard & Sons, Inc.	6,966	6,966	0
Harford	Arthur D. Heston	Arthur D. Heston	0	349	434
	Brian Baker, Inc.	Brian Baker, Inc.	0	0	0
	Crouse Construction Company, Inc.	Crouse Construction Co., Inc.	0	0	0
	Comer Construction, Inc.	Comer Construction, Inc.	6,373	6,779	5,075
Howard	Elkridge Recyclery	RLO Contractors, Inc.	32,246	36,247	49,338
	Level Land Lisbon Mulch Yard	Level Land, Inc.	6,764	8,633	7,335
	Oak Ridge Farm	Oak Ridge Farm, LLC	810	10,075	10,075
Kent	Sharp Lawn & Tree, Inc.	Sharp Lawn & Tree, Inc.	454	375	357
Montgomery	Allentuck Landscaping, Inc.	Allentuck Landscaping, Inc.	1,275	0	0
	Acme Biomass Reduction, Inc.	Acme Biomass Reduction, Inc.	17,000	13,605	5,166
	Country Nursery	Country Nursery	2	15	140
	Grant County Mulch Ground Covers	Grant County Mulch, Inc.	20,421	16,479	8,638
Prince George's	Grant County Mulch Facility	Grant County Mulch, Inc.	144,656	120,516	106,087
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	2,172	2,172	768
	Grange Hall Yard	Cole Ventures, Inc.	1,098	0	1,920
	Pardoe's Lawn and Tree Service, Inc.	Pardoe's Lawn and Tree Service, Inc.	4,455	0	8,163
Talbot	Dependable Sand and Gravel Company, Inc.	Dependable Sand and Gravel Company, Inc.	2,365	1,955	2,463
Washington	Hess Road Recycling Center	Universal Contractor Inc.	181	181	0
Wicomico	Dunn's Tractor Service, Inc.	Dunn's Tractor Service Inc.	435	435	435
TOTAL			500,682	412,206	440,727

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2014, but not managed until 2015.

Imported Solid Waste

Table 13 compares the tonnage of solid waste, by category, which was imported into the State for management to the total amount of solid waste managed at permitted solid waste acceptance facilities in Maryland. Figure 3 illustrates the amount of imported versus Maryland-generated solid waste managed at permitted solid waste acceptance facilities. In CY 2014, 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:

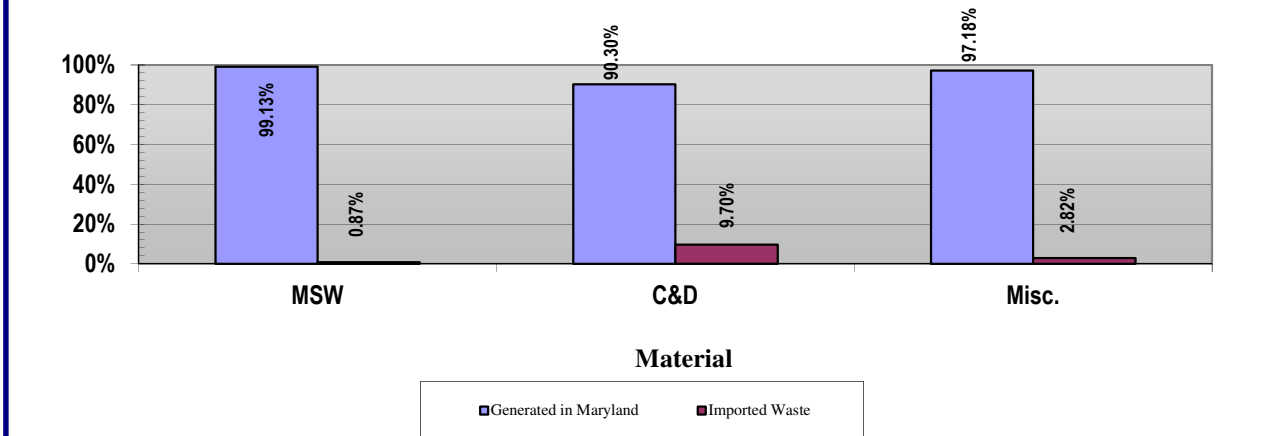
- In 2014 (284,091 tons), there was an increase of approximately 11 percent of the amount of solid waste imported into Maryland compared to calendar year 2013 (256,070 tons).
- The solid waste imported into Maryland comprises 3.7 percent of the 7.7 million tons of solid waste managed at permitted Maryland solid waste acceptance and Natural Wood Waste Recycling facilities.
- The Mountainview Sanitary Landfill in Allegany County received and disposed the bulk (28,598 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 (93,134 tons), Lawrence Street Solid Waste Acceptance Facility (52,497 tons), Sheriff Road Processing and Transfer Facility (12,610 tons), and Sun Services Processing and Recycling Center (8,091 tons) in Prince George's County; and Honeygo Run Reclamation Center (34,107 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	37,074	DE, NJ, PA, VA, WASHINGTON DC, WV	4,301,274
C&D	211,368	DE, NJ, PA, VA, WASHINGTON DC, WV	2,175,998
Miscellaneous *	35,649	AL, CA, CANADA, CT, DE, GA, KY, ME, MA, MI, NH, NJ, NY, NC, PA, RI, SC, TX, VA, WASHINGTON DC, WV, WI	1,262,534
TOTAL	284,091		7,739,806

* 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.

Figure 3 - Waste Managed Origin



Exported Solid Waste

Due to economic considerations and the desire to conserve disposal capacity in Maryland landfills, all counties and Baltimore City transport some of their solid waste out of State for recycling or disposal. There was an increase of over 3 percent in the amount of solid waste exported in 2014 from the amount of waste exported in 2013. Forty-one (41) of the 84 permitted solid waste acceptance facilities exported nominal to significant amounts of their waste to 16 states.

Virginia was the most prevalent export destination for Maryland waste and accepted approximately 77 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. Figure 4 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:

- Over 2.3 million tons of material (*i.e.*, recyclables and solid waste), consisting of MSW, C&D and miscellaneous wastes (including incinerator ash and recyclables) were transported outside Maryland for management. This represents 29 percent of the total solid waste managed at Maryland facilities.
- Approximately 179,537 tons (170,887 recycled tons) of the 2,303,402 tons of Maryland exported material was incinerator ash that was sent to Virginia.
- A total of 41 facilities exported material for disposal or recycling to out-of-State facilities.
- The Annapolis Junction Recycling and Transfer Station, which transferred 548,047 tons of material, was the largest State exporter of solid waste.
- The majority (1,780,914 tons) of material exported went to Virginia.

Figure 4 - Maryland Waste Managed per State

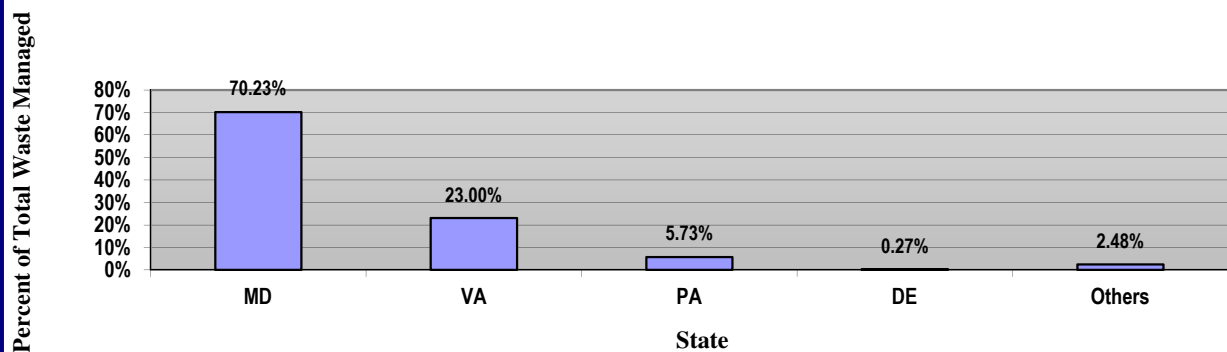


Table 14 – Maryland Exported Material Tonnage by State Destination

Solid Waste Category	Virginia	Pennsylvania	Delaware	Other	Total (Tons)
MSW	1,024,108	353,999	0	284	1,378,391
C&D	522,947	52,871	7,806	1,719	585,343
Recycling	225,195	9,467	13,248	54,287	302,197
Miscellaneous *	8,664	27,772	0	1,035	37,471
TOTAL (Tons)	1,780,914	444,109	21,054	57,325	2,303,402

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

Solid Waste Management Practices

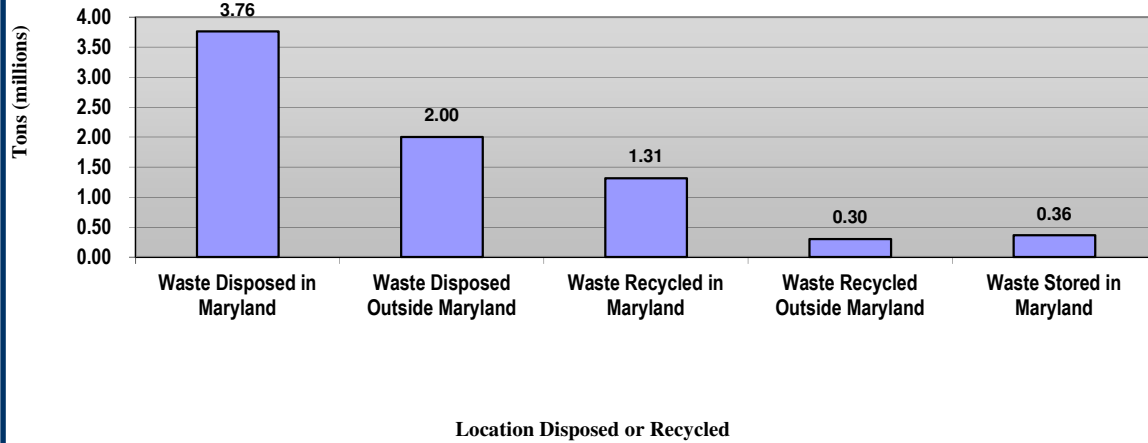
In 2014, the solid waste accepted at Maryland permitted solid waste acceptance facilities was managed by transporting the waste out of State or landfilling, incinerating, or recycling/reusing the waste in Maryland. Table 15 gives a breakdown of the management practices by the Maryland permitted solid waste acceptance facilities. Figure 5 details how Maryland solid waste was managed.

Table 15 – Maryland Solid Waste Management Practices

Solid Waste Management Method	Tons	Percentage of Total Solid Waste Managed
Landfilled in Maryland	2,291,524	30%
Exported	2,303,402	29%
Recycled/Reused in Maryland *	1,313,962	17%
Incinerated in Maryland	1,469,464	19%
Stored in Maryland Facilities	361,454	5%
TOTAL	7,739,806	100%

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

Figure 5 - Maryland Managed vs. Exported Waste



Landfill Capacity

Landfills in Maryland are required to report on their available cubic yard (CY) disposal capacity and the life expectancy of the facilities at the current disposal rates. 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 52,135,583 tons with 1,653,932 tons being disposed in 2014. Thus, at the current disposal rate, there would be over 31 years (52,135,583 tons ÷ 1,653,932 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 2014 (CY)	Landfilled in 2014 (Tons)	Used in 2014 ^
Alpha Ridge Municipal Landfill	13,521,900	5,980,378	3,289,208	7,541,522	4,147,837	2052	1,068	194	0.01%
Appeal Municipal Landfill	2,799,290	614,599	368,829	2,184,691	1,310,745	2028	728	507	0.03%
Beulah Sanitary Landfill	1,910,325	1,627,965	1,552,700	282,360	269,750	2018	66,014	47,974	3.46%
Brown Station Road Landfill	16,505,000	12,064,832	8,211,140	4,440,168	3,020,512	2024	472,211	322,328	2.86%
Cecil County Central Landfill	6,527,539	4,826,848	2,992,646	1,700,691	1,054,428	2025	182,165	94,687	2.79%
Cecil County Central Landfill – Horizontal Expansion **	0	0	0	0	0	N/A	0	0	0
Central Sanitary Landfill	4,800,000	2,188,953	1,532,267	2,611,047	1,827,733	2048	77,349	54,144	1.61%
Charles County Municipal Landfill	5,289,000	1,808,402	1,291,362	3,480,598	1,882,038	2037	118,562	78,317	2.24%
Eastern Sanitary Landfill	23,474,559	12,679,623	5,794,764	10,794,936	5,408,263	2054	251,962	121,274	1.07%
Fort Detrick – Area B & Main Post	1,000,900	117,921	94,720	882,979	698,993	2256	4,072	4,360	0.41%

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 2014 (CY)	Landfilled in 2014 (Tons)	Used in 2014 ^
Forty West Municipal Landfill	24,752,000	4,087,906	1,634,537	20,664,094	7,956,863	2119	165,182	78,800	0.67%
Garrett County Solid Waste Disposal & Recycling Facility	2,568,470	1,124,191	659,419	1,444,279	831,136	2042	48,289	25,630	1.88%
Harford Waste Disposal Center	2,980,000	2,968,000	1,096,578	12,000	10,000	2017	0	0	0.00%
Harford Waste Disposal Center (Expansion)	4,870,330	540,751	252,845	4,329,579	1,991,606	2037	141,000	83,736	2.90%
Midshore Regional Solid Waste Facility	3,924,994	3,684,695	2,032,481	240,299	126,246	2010	0	0	0.00%
Midshore II Regional Solid Waste Facility	7,800,000	865,252	458,459	6,934,748	4,221,541	2055	171,864	101,911	2.20%
Millersville Landfill & Resource Recovery Facility	14,156,000	5,138,330	3,092,941	9,017,670	5,400,659	2043	146,121	76,780	1.03%
Montgomery County Site 2**	0	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	3,971,631	3,559,625	2,509,536	412,006	290,364	2022	121,038	85,332	3.05%
Newland Park Municipal Landfill	7,200,000	3,383,281	1,826,972	3,816,719	2,061,028	2035	182,830	98,728	2.54%
Northern Municipal Landfill	3,504,187	1,199,391	599,696	2,304,796	1,152,398	2055	31,816	15,908	0.91%
Quarantine Road Landfill	18,320,622	13,423,921	15,928,627	4,896,701	5,506,555	2028	348,836	323,640	1.90%
Reichs Ford/Site B Municipal Sanitary Landfill	7,326,426	3,981,331	2,239,500	3,345,095	1,881,615	2045	31,073	17,479	0.42%
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	782,913	458,457	827,087	335,273	2026	41,750	22,203	2.59%
Totals	180,313,173	86,649,108	57,917,684	93,664,065	52,135,583		2,603,930	1,653,932	1.44%

* 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 2010-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 2014 (CY) ÷ Permitted Capacity (CY)

Construction and Demolition Debris landfills (Table 17) reported a total available capacity of 11,743,963 tons with 495,757 tons disposed in CY 2014. At the current disposal rate, there would be approximately 24 years (11,743,963 tons ÷ 495,757 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 2014 (CY)	Landfilled in 2014 (Tons)	Used in 2014 ^
Baker Rubble Landfill	820,000	631,002	363,015	188,998	71,985	2020	30,052	16,124	3.66%
Days Cove Rubble Landfill – Lateral Expansion	3,192,000	2,230,969	1,379,399	961,031	780,601	2020	146,409	113,219	4.59%
Honeygo Run Reclamation Center	11,723,461	4,537,762	3,120,761	7,185,699	4,046,088	2049	194,972	116,983	1.66%
Ritchie Land Reclamation Partnership Phase I & II	12,655,800	6,827,998	6,827,998	5,827,802	5,827,802	2042	249,431	249,431	1.97%
Washington County Rubble Landfill	2,201,664	166,690	83,345	2,034,974	1,017,487	2061	0	0	0.00%
TOTALS	30,592,925	14,394,421	11,774,518	16,198,504	11,743,963		620,864	495,757	2.03%

^ Equal to Landfilled in 2014 (CY) ÷ Permitted Capacity (CY)

Industrial landfills (Table 18) reported a total available capacity of 9,090,039 tons. At a current disposal rate of 140,419 tons, there would be approximately 65 years (9,090,039 tons ÷ 140,419 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 2014 (CY)	Landfilled in 2014 (Tons)	Used in 2014 ^
W.R. Grace and Co. – Davison Chemical Division	495,000	144,470	171,386	350,530	323,614	2027	11,663	11,543	2.36%
Eastalco Aluminum Company	380,000	112,691	134,190	267,309	318,098	2015	0	0	0.00%
Essroc Cement Corporation	273,000	0	0	273,000	273,000	2020	0	0	0.00%
Hawkins Point Plant	3,228,044	2,288,079	3,660,926	939,965	1,503,944	2077	16,867	24,101	0.52%
Fort Armistead Road – Lot 15	6,300,000	235,106	258,617	6,064,894	6,671,383	2075	95,250	104,775	1.51%
TOTALS	10,676,044	2,780,346	4,225,119	7,895,698	9,090,039		123,780	140,419	1.16%

^ Equal to Landfilled in 2014 (CY) ÷ Permitted Capacity (CY)

Landclearing Debris landfills (Table 19) reported a total available capacity of 143,963 tons with 1,416 tons disposed in CY 2014. At the current disposal rate, there would be approximately 102 years (143,963 tons ÷ 1,416 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 2014 (CY)	Landfilled in 2014 (Tons)	Used in 2014 ^
Howlin Landclearing Debris Landfill	64,120	48,690	60,862	15,430	19,288	2018	969	1,211	1.51%
Knott Landclearing Debris Landfill	94,500	75,805	6,894	18,695	1,106	2018	52	5	0.06%
Hance Landclearing Debris Landfill	267,053	126,973	63,486	140,080	70,040	2044	0	0	0.00%
Hill Landclearing Debris Landfill	25,439	22,600	33,900	2,839	4,258	2015	0	0	0.00%
M.T. Parran Landclearing Debris Landfill	55,180	22,333	33,500	32,847	49,271	2025	133	200	0.24%
TOTALS	506,292	296,401	198,642	209,891	143,963		1,154	1,416	0.23%

^ Equal to Landfilled in 2014 (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 were gathered from Maryland Recycling Act (MRA) Tonnage Reporting Surveys, submitted by Maryland Counties and Baltimore City to the Department, which capture solid waste exported directly out of State without passing through a Maryland permitted facility, **and** from Maryland permitted Solid Waste Tonnage Reports submitted to the Department.

Maryland's Legislative Mandate

In 1988, the **Maryland Recycling Act (MRA)** mandated that the Department reduce the disposal of solid waste in Maryland through management, education, and regulation. Since its original passage, the MRA has been amended to improve recycling in Maryland. Timeline of MRA requirements:

1. 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 14 for an update.)
2. 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. 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 14 for an update.)
4. Telephone directories distributed in the State to have a recycled content, by weight, of 40 percent in 2005 and all subsequent years (1988).
5. Newsprint distributed in the State to have a 3-year rolling average recycled content, by weight, of 40 percent in 2005 and all subsequent years (1988).
6. Counties to address the feasibility of composting mixed solid waste when developing solid waste management plans (1992).
7. Including composting in the calculation of the recycling rate (1992).
8. Banning separately collected yard waste from disposal at solid waste acceptance facilities (1994).
9. 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).
10. By July 1, 2010, the State Agency Recycling Plan to 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).
 11. 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).
 12. 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).
 13. 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).
 14. 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).
 15. 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.

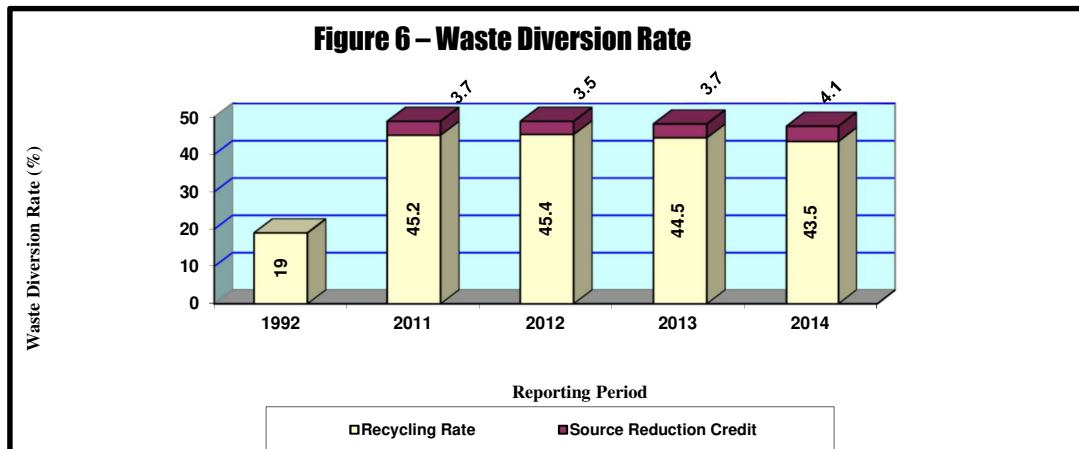
Additional legislative action impacting recycling in Maryland includes:

- Banning scrap tires from disposal in a landfill after January 1, 1994 (1991).
- Requiring permits for private natural wood waste recycling facilities (1992).
- 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).
- Establishing a program or system for the collection, recycling, or disposal of each cell, rechargeable battery or rechargeable product sold in the State (1994).
- 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).
- 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).

- 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).
- 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).
- The voluntary statewide recycling and waste diversion goals increase to 55 percent and 60 percent, respectively for 2020 (2012).

Maryland’s 47.6 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 47.6 percent in calendar year (CY) 2014. The 47.6 percent waste diversion rate was composed of a 43.5 percent MRA recycling rate and a 4.1 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. Figure 6 provides a historical breakdown of Maryland's waste diversion rate.



Maryland’s 43.5 Percent Recycling Rate

In CY 2014, Maryland residents and businesses recycled 43.5 percent ((MRA recycling tonnage + resource recovery facility credit) ÷ (MRA recycling tonnage + MRA waste disposed)) of the municipal solid waste generated. 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.” To encourage more recycling, states across the country are seeking alternative ways to ensure that recycling continues to gain in popularity as a waste management option. Many states, including Maryland, are investigating new

commodities to bring into the recycling stream, while continuing to promote the benefits of recycling.

Figure 7 summarizes the recycling tonnages since 1992 and Figure 8 categorizes the total MRA tons recycled by material in CY 2014. 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.

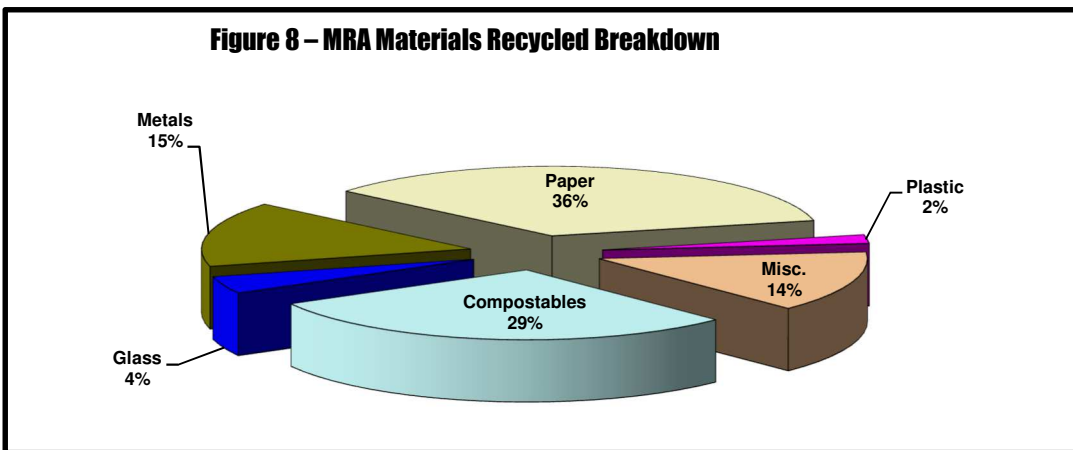
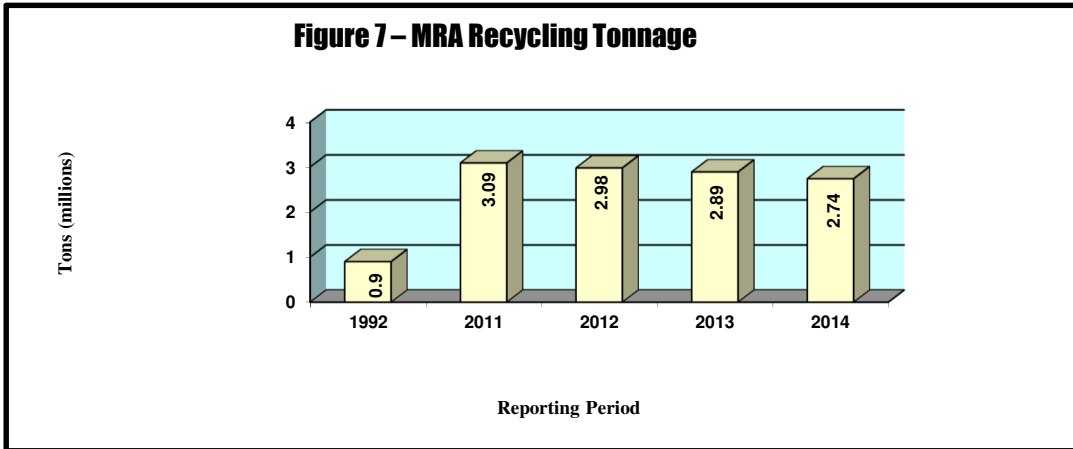


Table 20 – County Recyclables by Commodity in Tons for Calendar Year 2014

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2014

County	MRA Rate ² (%)	Waste Diversion Rate ³ (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables ⁴	Total Recycling*
			Compostables	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	40.71	42.71	5,352	416	7,487	11,527	972	8,126	33,880	553,227	587,107
Anne Arundel	37.88	41.88	115,843	14,189	12,153	83,276	7,778	13,632	246,871	274,791	521,662
Baltimore City	20.44	24.44	28,035	6,180	8,518	42,579	1,428	21,366	108,106	210,791	318,897
Baltimore County	33.63	38.63	73,353	10,280	76,410	76,570	8,653	20,903	266,169	322,622	588,791
Calvert	31.50	31.50	1,290	1,993	1,538	12,612	1,215	1,761	20,409	84,984	105,393
Carroll	37.60	42.60	28,234	9,364	6,650	9,916	4,483	3,014	61,661	451,962	513,623
Cecil	41.34	45.34	19,712	1,670	7,484	10,024	2,592	1,431	42,913	14,144	57,057
Charles	51.23	56.23	33,351	3,788	18,999	21,256	1,670	2,804	81,868	501,511	583,379
Dorchester	27.91	27.91	1,443	0	72	720	172	10,135	12,542	172	12,714
Frederick	50.40	55.40	37,462	3,121	9,576	44,765	2,363	36,784	134,071	62,241	196,312
Garrett	50.72	52.72	16,005	332	1,024	1,734	52	1,747	20,894	13,454	34,348
Harford	47.56	52.56	53,265	2,923	8,342	25,702	1,767	16,848	108,847	35,424	144,271
Howard	45.05	49.05	97,668	13,611	8,873	94,883	6,143	8,880	230,058	48,491	278,549
Mid-Shore ¹	53.92	53.92	32,299	2,024	2,105	23,040	1,192	63,259	123,919	73,462	197,381
Montgomery	55.71	60.71	188,229	22,889	84,521	138,260	9,506	168,812	612,217	104,545	716,762
Prince George's	59.03	64.03	96,874	14,102	140,014	179,796	7,941	10,283	449,010	791,762	1,240,772
Somerset	20.21	20.21	877	80	2,129	226	38	445	3,795	8,505	12,300
St. Mary's	40.20	44.20	7,618	1,150	5,698	6,395	796	1,665	23,322	22,453	45,775
Washington	60.59	60.59	1,458	3,163	1,049	75,917	1,512	1,923	85,022	29,303	114,325
Wicomico	35.92	35.92	12,150	3,590	5,770	12,385	2,754	15,424	52,073	40,107	92,180
Worcester	26.82	26.82	13,317	448	1,321	2,548	265	6,393	24,292	24,244	48,536
State Highways of Additional Asphalt and Concrete Recycled										276,283	276,283
TOTAL*	43.51	47.60	863,835	115,313	409,733	874,131	63,292	415,635	2,741,939	3,944,478	6,686,417

* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values (i.e., MRA Recyclables = 2,741,944.83, Non-MRA Recyclables = 3,944,477.53 tons, Total 6,686,422.36 tons. The MRA recycling rate includes an additional 97,587.09 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 278,537.78 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 38.4 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 amongst 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 544,368 tons to 2,350,115 tons. However, Maryland still has an EPA recycling rate of 38.4 percent that exceeds EPA's recycling rate goal of 35 percent by 2008.

Maryland's 4.1 Percent Source Reduction Credit

In 2014, 14 of Maryland's jurisdictions were able to add from 1 point to 5 points to their waste diversion rate by emphasizing SR activities as a waste reduction strategy. They accomplished this 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 2014 is available in the "State, County, and City Recycling Rates" section of the Department's web page at www.mde.maryland.gov/recycling.

Non-profit groups are partnering with state and local government (*e.g.*, Baltimore Animal Rescue and Care Shelter, Inc. and Baltimore City) to increase awareness of source reduction and reuse opportunities for materials such as linens, pet supplies, medical equipment, clothing, and computers. The partnering provides businesses with information on how to improve their bottom lines through recycling and SR.

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 4 million tons of non-MRA materials were reported as recycled in 2014. Table 21 offers a breakdown by category of the non-MRA materials reported as recycled in 2014.

Table 21 – Recycling of Non-MRA Materials in Tons

Compiled by the Maryland Department of the Environment
from Reports Submitted for Calendar Year 2014

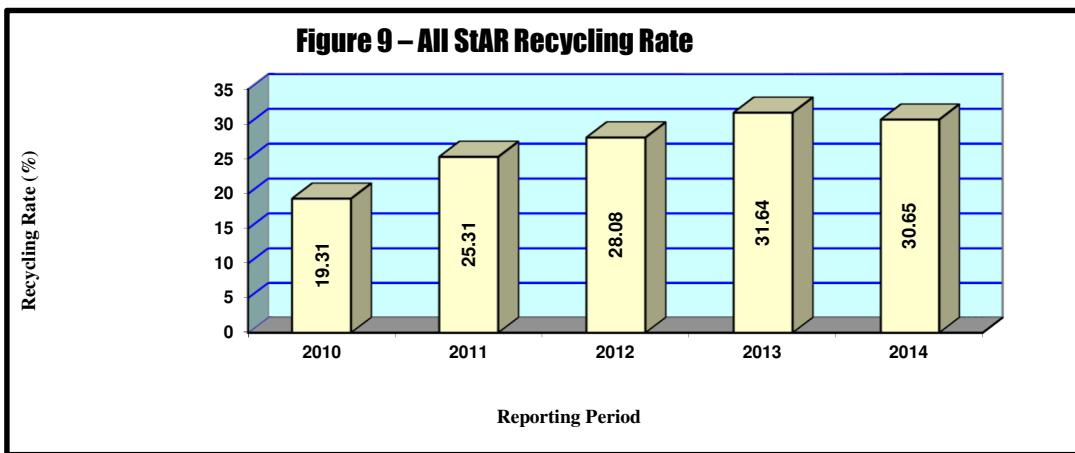
MATERIAL	TONS RECYCLED
Antifreeze	1,638
Asphalt & Concrete	875,093
Coal Ash	578,481
Construction/Demolition Debris	465,123
Landclearing Debris	167,604
Scrap Automobiles	154,120
Scrap Metal	598,157
Sewage Sludge	157,992
Soils	600,751
Waste Oil	33,104
Other Materials	36,132
TOTAL	3,668,195

Maryland's 30.65 Percent All StAR Recycling Rate

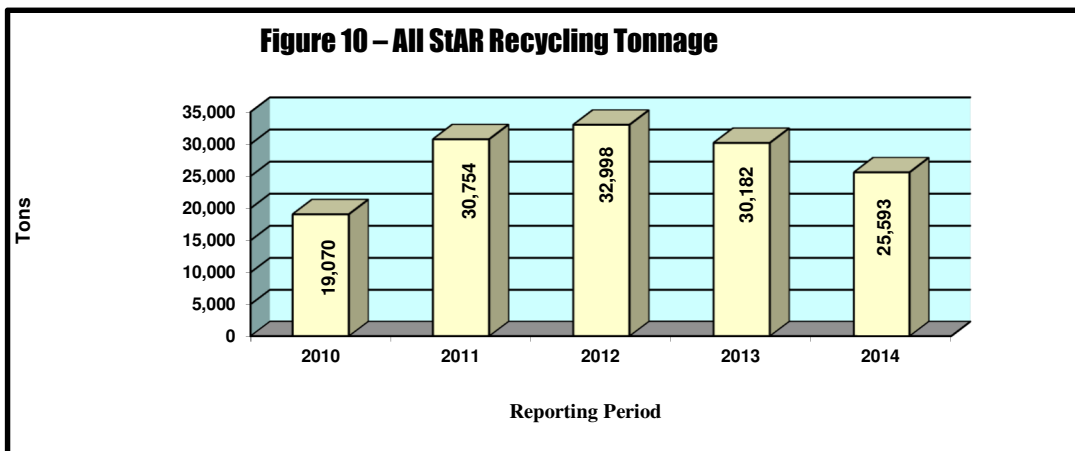
The All StAR (**All State Agencies Recycle**) Program is the name of the State government agency recycling program that is designed to help Maryland State government reach its recycling goals. Each All StAR agency designates a Recycling Coordinator to manage recycling activities at their various sites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

Maryland State government recycling is directed by the 1988 MRA (*i.e.*, Section 9-1706 of the Environment Article, Annotated Code of Maryland), which mandates that State government achieve an overall waste reduction goal of at least 20 percent, or an amount that is determined "practical and economically feasible," but in no case less than 10 percent. This increased to 30 percent in 2014, with the passage of House Bill 929: Environment – Recycling Rates and Waste Diversion –Statewide Goals, Chapter 692 Acts of 2012. In addition, Executive Order 01.01.2001.02 *Sustaining Maryland's Future with Clean Power, Green Buildings and Energy Efficiency (EO)* requires each State agency to annually divert or recycle at least 20 percent of the waste they generate. The MRA also requires State agencies to have a recycling plan, by January 1, 2012, 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. As part of House Bill 929's implementation process, the Department asked all State agencies to revise their recycling plans to include steps towards reaching the 2014 30 percent goal. The revised plans were due to the Department by December 2012. In an effort to lead by example, the Department asked each State agency to go a step further and set a recycling goal of at least 40 percent in 2015 in the plan update.

In 2014, State agencies recycled 25,593.13 tons of MRA materials for an overall MRA recycling rate of 30.65 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 in 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 9 provides a 5-year history of Maryland's All StAR recycling rate and Figure 10 summarizes the recycling tonnages since 2010. Table 22 summarizes the performance of each State agency participating in the All StAR program.



* In order to compare the recycling rate trend, the previous recycling rates were recalculated using the updated volume-to-weight conversion factors. The recycling rate reported here will not agree with the recycling rate reported in previous years. Please see text in this section for further details.



Also, State government recycled 141,068.68 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 2014 All StAR statistics is available under "State Agency Recycling" on the Department's web page at www.mde.maryland.gov/recycling. MRA tonnages reported by State agencies are included in the 2014 recycling totals reported by the counties (Table 20).

Table 22 – Maryland State Agencies' 2014 Recycling Rates


Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2014

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2014 (tons)	2014 MRA Recycling Rate (%)
Baltimore City Community College	1	1	8,796	3.90	1.23
Comptroller of the Treasury	1	1	800	125.99	81.39
Department of Agriculture	2	2	216	25.48	14.68
Department of Assessments and Taxation	15	13	1,153	17.54	24.73
Department of Budget and Management	1	1	185	31.00	73.36
Department of Education	30	30	1,411	162.23	28.43
Department of General Services	23	23	7,803	711.62	31.49
Department of Health and Mental Hygiene	18	11	4,950	428.35	7.47
Department of Human Resources	33	11	1,511	114.24	29.50
Department of Juvenile Services	15	15	2,894	498.47	16.27
Department of Labor, Licensing & Regulation	14	13	1,348	235.74	28.49
Department of Natural Resources	6	6	529	39.11	8.84
Department of the Environment	5	5	970	58.82	43.47
Department of Transportation	83	83	25,826	9,998.97	43.19
Department of Veterans Affairs	12	5	800	243.13	29.08
Dept. of Housing and Community Development	3	3	431	44.82	11.04
Dept. of Public Safety and Correctional Services	35	7	20,961	2,260.08	24.42
Gov's Office Crime Control Prevention	1	1	800	2.61	12.08
Judiciary of Maryland	1	0	0	0	0
Maryland Automobile Insurance Fund	1	1	250	55.29	38.61
Maryland Department of Disabilities	1	1	24	0.10	1.16
Maryland Department of Planning	1	1	35	33.03	22.60
Maryland Energy Administration	1	1	34	0.90	40.91
Maryland Environmental Service	4	4	253	16.98	62.77
Maryland Food Center Authority	1	1	1,325	303.24	5.09
Maryland General Assembly	1	0	0	0	0
Maryland Insurance Administration	1	1	1,235	23.98	51.22
Maryland Military Department	33	33	465	31.64	3.57
Maryland Public Broadcasting Commission	1	1	211	76.20	21.01
Maryland School for the Deaf	2	2	989	50.70	20.99
Maryland Stadium Authority	1	1	1,000	781.63	31.02
Maryland State Archives	1	1	84	9.08	30.39

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2014 (tons)	2014 MRA Recycling Rate (%)
Maryland State Police	27	27	1,715	298.76	22.21
Morgan State University	1	1	9,241	217.55	21.27
St. Mary's College of Maryland	1	1	2,558	295.60	20.94
Subsequent Injury Fund	1	1	17	3.70	60.46
University of Maryland System	17	15	81,978	8,392.65	39.04
TOTAL	395	324	182,798	25,593.13	30.65

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

Bold Type – Satisfied the 30 percent recycling rate

 No Report filed at time of publishing

State agencies achieve cost savings by boosting the amount of waste diverted to recycling and by reducing the total amount of waste generated. Even greater savings are realized by state agencies reducing the amount of waste generated. Consider the following money-saving scenarios based upon 2014 data with an average Maryland tipping fee of \$58:

- § Maryland State government potentially realized \$1,484,402 of avoided disposal costs by recycling 25,593.13 tons of MRA material.
- § If each State agency achieves a 30 percent recycling rate by increasing its MRA tonnage, \$582,629 in additional avoided disposal costs would be realized for a potential total savings of \$2,067,031.
- § If each State agency achieves a 30 percent recycling rate by decreasing the amount of waste generated, additional avoided disposal costs of \$914,869 would be realized for a potential total savings of \$2,399,271.

The Department provides technical support, on-site expertise, 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 to offer 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 and energy scenarios over the lifecycle of common recyclable materials when comparing alternative solid waste management methods vs. 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 were savings in the amount of greenhouse gases emitted or energy used. Only when combusting a material instead of landfilling it were there increases in the amount of greenhouse gases emitted or energy used.

Tables 25 and 26 detail product lifecycle GHG emissions and energy use with and without waste diversion activities in Maryland in CY 2014. In Table 25, for example, the GHG emissions associated with the lifecycle of glass is 12,865 metric tons of CO₂ equivalent without waste diversion (*i.e.*, recycling and source reduction) activities, and -30,953 metric tons of CO₂ equivalent with Maryland’s waste diversion activities, for a total savings of 43,818 (*i.e.*, 12,865 + 30,953) 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 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 **	(4.96) **	(9.15) **	0.01 **
PET Plastic Bottles	0 **	(2.25) **	(1.17) **	1.20 **
Newspaper	0 **	(4.04) **	(2.02) **	0.18 **
Glass	0 **	(0.56) **	(0.32) **	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 **	(90.19) **	(153.29) **	0.10 **
PET Plastic Bottles	0 **	(50.91) **	(32.58) **	(10.84) **
Newspaper	0 **	(36.84) **	(16.89) **	(8.06) **
Glass	0 **	(7.40) **	(2.66) **	0.00 **

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

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

Table 25 – Maryland Waste Diversion and Greenhouse Gas Emissions for Calendar Year 2014

MRA Material	MTCO ₂ E* NWD [^]	MTCO ₂ E* WD ^{^^}	MTCO ₂ E* Savings	MTCE** NWD [^]	MTCE** WD ^{^^}	MTCE** Savings
Compostables	280,332	302,183	21,852	76,454	82,414	5,960
Glass	12,865	(30,953)	(43,818)	3,509	(8,442)	(11,951)
Metals	(228,189)	(1,955,781)	(1,727,592)	(62,233)	(533,395)	(471,161)
Paper	95,358	(3,154,099)	(3,249,457)	26,007	(860,209)	(886,216)
Plastic	446,404	252,705	(182,082)	121,746	72,088	(49,659)
Miscellaneous	38,370	(1,251,219)	(1,289,589)	10,465	(341,241)	(351,706)
TOTAL	645,140	(5,837,164)	(6,470,686)	175,948	(1,588,785)	(1,764,733)

* MTCO₂E = Metric Tons of Carbon Dioxide Equivalent

** MTCE = Metric Tons of Carbon Equivalent

[^] NWD = No Waste Diversion (baseline = 60.95% landfilled and 39.05% incinerated)

^{^^} WD = Waste Diversion from Maryland CY 2014 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 2014

(in million BTUs)

MRA Material	BTUs* NWD [^]	BTUs* WD ^{^^}	BTU* Savings
Compostables	(1,481,394)	(494,877)	986,517
Glass	164,485	(235,213)	(399,698)
Metals	(2,469,477)	(29,291,535)	(26,822,059)
Paper	(4,612,041)	(18,885,002)	(14,272,961)
Plastic	(4,567,194)	(8,596,294)	(4,029,101)
Miscellaneous	(2,736,848)	(10,879,247)	(8,142,399)
TOTAL	(15,702,469)	(68,382,168)	(52,679,701)

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

[^] NWD = No Waste Diversion (baseline = 60.95% landfilled and 39.05% incinerated)

^{^^} WD = Waste Diversion from Maryland CY 2014 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 nearly 6.5 million metric tons of CO₂ equivalent emission savings produced by Maryland’s waste diversion activities in 2014 (Table 25) are the equivalent of removing over 1.36 million passenger cars from the roadway each year or conserving over 728 million gallons of gasoline, over 269 million cylinders of propane used for home barbeques, or over 34,695 railway cars of coal. The nearly 52.7 trillion british thermal unit (BTU) energy savings reported in Table 26 are the equivalent of the annual energy consumption of over 478,000 households

(i.e., 20 percent of the estimated 2,422,194 households in Maryland in 2014), or the amount of energy contained in over 9.1 million barrels of oil or over 424 million gallons of gasoline. These reductions are important to meeting our Climate Change and Greenhouse Gas 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.
- With information resources provided by the Department, recycled content items and the recycling process is being discussed in county presentations to schoolchildren in grades K-12.

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 a lesser or reduced impact on human health and the environment.
- The Department works cooperatively with the Maryland Department of General Services (DGS) to promote government purchasing of materials with recycled content.
 - In FY 2015, 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/Procurement/index.html. 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 2014 through June 2015, 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 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 2014, the newsprint recycled content percentage was 47.3 percent, exceeding the requirements of the MRA.

Table 27 contains 54 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	20.2
Afro-American Newspapers	37.8	Independent Newspapers, Inc.	19.4
American Farm Publications	21.88	Kimbel Publications	37.7
Ascend Communications	NR	Korea Daily	78.9
Asian Fortune	36.54	Landmark Community Newspapers	41.0
Baltimore Business Journal	NR	Latin American Times	NR
Baltimore Sun Media Group	76.8	Legal Times	NR
Baltimore Times Publications	NR	Maryland Coast Dispatch	NR
Bay Weekly	30.0	Morgan Messenger	18.7
Capital-Gazette Newspapers	53.6	New York Daily News	76.7
Carroll Publishing Company	12.1	New York Times Company	23.6
Catholic Review	20.4	News Journal, Wilmington	3.8
Chatsworth Enterprises	NR	Post Newsweek Media	52.1
Chesapeake Publishing Corporation	26.2	Prince George's Post	25.8
Citizen Communications, Inc.	27.0	Randall Family, LLC	19.7
City Paper	NR	Sentinel Newspapers	NR
Connection Publishing	NR	Sincell Publishing Company	NR
Courier	29.8	Southern Maryland Publishing Co.	NR
Cumberland Times News	16.1	USA Today	0.9
Daily Record	40.7	Washington Business Journal	NR
Dow Jones & Company	13.0	Washington County Pickett	NR
El Tiempo Latino	39.1	Washington Newspaper Company	NR
Express Publications Company, LLC	53.7	Washington Newspaper Publishing Co., LLC	39.7
Flag Communications	44.9	Washington Post	38.6

Publisher	Content %	Publisher	Content %
FT Publications, Inc.	30.0	Washington Times	63.3
Gannett Company, Inc.	3.4	Western Montgomery Bulletin	NR
Gay & Lesbian Community Ctr. Of Baltimore	19.6		
Greenbelt Cooperative Publishing	NR	Statewide	47.3
NR – Did not report		% based upon partial reporting period data	

Telephone Directory

The MRA requires telephone directory publishers, who 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, by weight, of at least 40 percent. Publishers of telephone directories must submit to the Department an annual report detailing the recycled directory stock content used in their directories.

There are two known publishers of telephone directories distributed in the State of Maryland. In 2014, recycled content for these directories was reported as follows:

- Dex Media – 2.0 percent recycled content; and
- Hibu – Did Not Report.

Each telephone directory publisher who distributes a telephone directory 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. Per the MRA, any publisher of telephone directories distributed in the State who fails to submit the required report is deemed to have failed to meet the percentages established. In 2014, 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. 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. Highlights of the SERP include:

- Manufacturers who sell or offer for sale a new CED in the State are required to register with, and pay a registration fee to, the Department. A covered electronic device is a computer or video display device with a screen that is greater than 4 inches measured diagonally.
- The annual registration fee is \$10,000 for a manufacturer that sold at least 1,000 CEDs in Maryland in the prior year and \$5,000 for a manufacturer that sold at least 100 but not more than 999 CEDs in Maryland in the prior year. The subsequent annual renewal registration fee can be reduced to \$500 provided the manufacturer has a Department-approved takeback program. The registration fee current structure is currently under review by a workgroup comprised of HTC America, Best Buy, Consumer Electronics Association, Maryland Recycling Network, Northeast Maryland Waste Disposal Authority, Washington County Maryland, and the Department. A report to the State legislature is due by December 31, 2015.
- A Department-approved electronic manufacturer takeback program must be free to Maryland customers; if applicable, include a free shipping container if requested by the customer; a way to contact the manufacturer free of charge; and include educational and instructional materials relating to the destruction and sanitization of data from a CED.
- A retailer is prohibited from selling or offering for sale to any person in the State a new CED manufactured by a manufacturer that has not registered and paid the required registration fee to the Department.
- Civil and administrative penalties may be assessed against manufacturers and retailers who fail to comply with the SERP.
- Grants to counties and municipalities (as funding is available) to assist with covered electronic device recycling activities may be awarded.
- Counties are required to address methods for the separate collection and recycling of covered electronic devices in their recycling plans in order to be eligible for State grants.

One-hundred thirty-eight (138) manufacturers registered with the Department and were authorized to sell their products in Maryland in 2014. Thirty-six (36) manufacturers have Department-approved free takeback programs. Dell Marketing LP, Envision Peripherals, Inc, HTC America, Inc., Hewlett Packard Company, LF Products, Microsoft Corporation, Motorola Mobility, LLC, Nintendo of America, and Philips Consumer Lifestyle reported recycling 426.7 tons of electronics through their free recycling programs in 2014.

In FY 2015, \$500,000 in grants were issued to 4 municipalities and 19 counties in support of their electronics recycling programs. No grants are planned for FY 2016.

From September 1, 2014 to June 30, 2015, the Department performed 360 inspections at 345 electronics retailers in Maryland. The inspection coverage rate was 36% (345 retailers inspected of the total 957 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 from October 2001 **to December 2014**, include:

- 275 special collection events (*i.e.*, 1 or 2-day collection events) were held in 24 jurisdictions.
- There were 17 special events in 2014, an increase of 8 over the 9 collection events in 2013.
- 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 Annapolis, Laurel, and Salisbury.
- A one-day event in Baltimore County on April 30, 2005, collected over 89 tons of electronic equipment from 1,600 participants.

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 2014. Figure 11 summarizes the electronics tonnage totals collected since collection began in 2001. An additional 7,368 tons of electronics from commercial businesses were reported by the counties in 2014 as having been recycled. These were not part of residential eCycling programs.

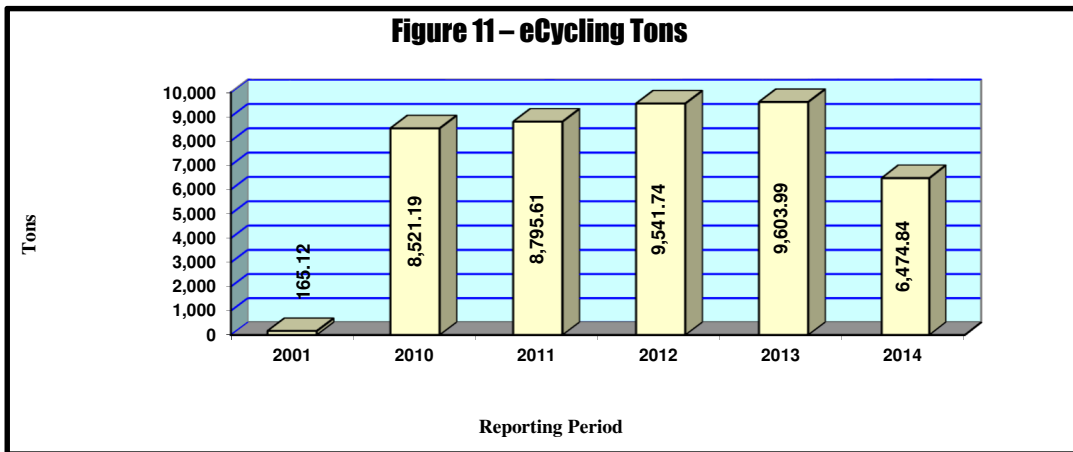
Table 28 – eCycling Collection Programs

County	Population	Type	Date(s)	No. of participants	Tons collected	Pounds collected	Pounds/participant
Subtotal Maryland	5,976,407	–	2001-2013	–	64,260.95	128,521,900	–
eCycling Special Events in 2014							
Charles (2)	154,747	1-day	Apr, Oct	350	1.67	3,333	10
Frederick	243,675	1-day	Nov	490	20.86	41,720	85
Midshore Region (2)	138,805	1-day	Apr, Nov	480	14.02	28,040	58
Prince George’s (8)*	904,430	1-day	Apr, Oct	794	24.06	48,120	61
Washington	149,573	1-day	Nov	700	22.63	45,254	65
Wicomico	101,539	1-day	Oct	193	10.07	20,140	104
Worcester (2)	51,675	1-day	Apr, Oct	279	23.82	47,640	171
Subtotal Events	1,744,444	–	2014	3,286	117.13	234,247	71
Permanent eCycling in 2014							
Allegany	72,952	–	2014	–	11.90	23,800	–
Anne Arundel **	560,133	–	2014	–	296.55	593,091	–

County	Population	Type	Date(s)	No. of participants	Tons collected	Pounds collected	Pounds/participant
Baltimore City	622,793	-	2014	-	570.50	1,141,000	-
Baltimore County	826,925	-	2014	-	421.12	842,240	-
Calvert	90,613	-	2014	-	518.07	1,036,140	-
Carroll	167,830	-	2014	-	64.61	129,220	-
Cecil	102,383	-	2014	-	254.06	508,120	-
Charles	154,747	-	2014	-	238.00	476,000	-
Frederick	243,675	-	2014	-	315.58	631,160	-
Garrett	29,679	-	2014	-	35.38	70,760	-
Harford	250,105	-	2014	-	163.59	327,180	-
Howard	309,284	-	2014	-	648.17	1,296,340	-
Midshore Region	138,805	-	2014	-	41.46	82,920	-
Montgomery	1,030,447	-	2014	-	1,828.89	3,657,780	-
Prince George's **	904,430	-	2014	-	235.20	470,400	-
Somerset	25,859	-	2014	-	2.10	4,200	-
St. Mary's	110,382	-	2014	-	293.98	587,960	-
Washington	149,573	-	2014	-	180.99	361,980	-
Wicomico **	101,539	-	2014	-	113.39	226,780	-
Worcester	51,675	-	2014	-	124.17	248,340	-
Subtotal Permanent	5,943,829	-	2014	-	6,357.71	12,715,411	-
TOTALS (2001 – 2014)				3,286 (2014)	70,736	141,471,558	71 (2014)

* 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.



Mercury Recycling

The Department is working to ensure compliance with Section 9-905.4 to 905.6 of the Environment Article, Annotated Code of Maryland, (Mercury Switch Removal from Vehicles). The law requires motor vehicle manufacturers to develop a mercury minimization plan that includes information on mercury switch removal from motor vehicles. Also, the law requires a vehicle recycler to remove mercury switches from its end-of-life vehicle inventory and vehicles processed into the vehicle recycler's inventory. In 2008, 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). In addition to being free to vehicle recyclers and scrap processing facilities, the program pays vehicle recyclers and scrap processing facilities \$4 per mercury switch and \$6 per antilock braking system switch that is returned for recycling. October 2011 marked the start of active inspections and enforcement of vehicle recyclers and scrap processing facilities processing mercury switches under Maryland's Mercury Switch Removal from Vehicles law. Two-hundred nine (209) inspections were performed in FY 2015. The 209 inspections resulted in the issuance of 2 Site Complaints, both of which have been satisfied. In 2014, 11,653 mercury containing switches containing 25.64 pounds of recovered mercury were collected for recycling. As of December 31, 2014, 153 recyclers had enrolled in the program and the total amount of mercury containing switches recovered was 66,237 (145.72 pounds of mercury) since the beginning of the program in 2007.

The NVMSRP is the result of a two-year collaborative effort involving EPA, vehicle manufacturers, the American Iron and Steel Institute, the Steel Manufacturers Association, the Institute of Scrap Recycling Industries, the Automotive Recyclers Association, Environmental Defense, the Ecology Center (Ann Arbor), and representatives of the Environmental Council of the States. Stakeholders developed a voluntary program to recover mercury switches from scrap automobiles before they are shredded for recycling. Participation in the NVMSRP became mandatory for Maryland vehicle recyclers with the passage of House Bill 1263, Chapter 713, Acts of 2009 – Mercury Switch Removal from Vehicles (Environment Article Sections 6-905.4 to 6-905.6). 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.

The Department was required to report in 2002, 2003, and 2004 to the Governor and Legislature detailing the statewide collection, reclamation, and recycling of all products containing mercury. 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 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/programs/Land/RecyclingandOperationsprogram/EducationandOutreach/Pages/programs/landprograms/recycling/education/hhw.aspx.

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 locating 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 on the Department's recycling web page at www.mde.maryland.gov/recycling or 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.

Automobile Tires – The Scrap Tire Recycling Act established a mechanism for the cleanup of scrap tire stockpiles and for the collection, transportation, and recycling or processing of all scrap tires that are generated annually in Maryland. The Act established the State Used Tire Cleanup and Recycling Fund (Fund) as the funding support for the Scrap Tire Program.

The Department uses the Fund for administration of the program, licensing activities, stockpile cleanups, enforcement/compliance, remedial actions, and for the development and distribution of public information concerning scrap tire issues.

Under the Department's authorization, the Maryland Environmental Service (MES) may use portions of the Fund to implement and oversee programs

established as part of a Scrap Tire Recycling System and other projects that reduce, recover, and/or recycle scrap tires.

A detailed report on scrap tires in Maryland is available in the *Maryland Scrap Tire Program's Annual Report* available on the Department's web page at www.mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/Publications/Pages/Programs/LandPrograms/Recycling/publications/index.aspx.

Batteries – The metals and plastics contained in batteries can be recycled and used to make other products (including new batteries). In addition, the recycling of batteries allows the collection of hazardous metals so that they can be more easily managed. 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/programs/Land/RecyclingandOperationsprogram/EducationandOutreach/Pages/programs/landprograms/recycling/education/hhw.aspx. 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 on the Department's recycling web page at www.mde.maryland.gov/recycling or directly 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
AERC Recycling	321-952-1516
Air Cycle Corporation	800-909-9709
Arundel Recycling	410-761-6595
Battery Solutions, Inc.	810-494-5010
Cambridge Iron & Metal	410-327-7867
Eco-Battery, Inc.	888-768-2004
Envirolight and Disposal	727-526-8870
Everlights, Inc.	773-734-9873
Exide Corporation	610-378-0540
Inmetco	724-758-2800
Maryland Recycle Company	410-780-3060
Rechargeable Battery Recycling Corporation	877-723-1297
Schultz & Sons Salvage	410-479-2110
Southeast Recycling Technologies Inc.	800-592-3970
Waldorf Metal Company	301-932-1220

White Goods – White goods are defined as large household appliances such as refrigerators, stoves, air conditioners, and washing machines. Once collected, white goods have environmentally detrimental materials removed (e.g., chlorofluorocarbons, etc.) for proper disposal, and the remaining materials (usually metal) 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 www.mde.maryland.gov/recycling. 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

Documents are available and regularly updated through the Department to assist recycling and composting businesses in understanding environmental permitting procedures and requirements.

Business Guide to Environmental Permits and Approval – This Business Guide to Permits and Approvals is available on the Department’s web page at www.mde.maryland.gov/programs/permits/Pages/index.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.

Local Permitting Issues for Recycling and Composting Facilities – This web page lists information that may be required of recycling and composting businesses. It also gives information on local economic development points of contact at the county level for any business considering locating or expanding in a specific jurisdiction. The web page is available on the Department’s web page at www.mde.maryland.gov/programs/land/recyclingandoperationsprogram/educationandoutreach/pages/programs/landprograms/recycling/education/permits.aspx. Additionally, specific information on composting in Maryland, is available on the Department’s composting web page at www.mde.maryland.gov/composting.

Solving the Permit Puzzle in Maryland – Information on State permit requirements, procedures, and permits that may be required of recycling and composting businesses is available on the Department’s web page at <http://mde.maryland.gov/programs/Permits/Pages/index.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 www.mde.maryland.gov/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 2014 through June 2015, 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 to a more sustainable society. The Department held the 13th Annual "Rethink Recycling" Sculpture Contest on November 14, 2014 at the Department’s headquarters.

The "Rethink Recycling" Sculpture Contest featured over 64 entries from 23 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 parrot, a garden commode and a rockin’ guitar 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 www.mde.maryland.gov/recycling.

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 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 and 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 news media and public education, new technologies, and initiatives such as pay-as-you-throw (PAYT) and 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.

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 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.

Mid-Atlantic Consortium of Recycling and Economic Development Officials (MACREDO) – The Department is a member of MACREDO, a consortium that was established through a grant from the United States Environmental Protection Agency Region III to promote regional market development efforts for recycled materials. Other members include representatives from Delaware, Pennsylvania, Virginia, West Virginia and the District of Columbia. MACREDO offers a forum for information exchange between member jurisdictions, local authorities, the private sector, and nonprofit organizations. Projects involve organic material recovery, deconstruction/building material reuse, electronic product recovery, and green building.

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

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 tree recycling). 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 2014 include:

- Seventeen (17) counties achieved waste diversion rates greater than the 2005 40 percent waste diversion goal.
- Three (3) counties achieved a recycling rate greater than the 2020 55 percent recycling goal.
- Fourteen (14) counties earned SR credits. Seven (7) of these counties, Baltimore, Carroll, Charles, Frederick, Harford, 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.
- Seventeen (17) eCycling collection events were held in 7 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 Household Hazardous Waste 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	✓	✓	✓	✓/✓	✓					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	✓	✓	✓	✓/✓		✓	✓	✓	✓	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, scrap metal, reusable building materials, carpet, vegetable oil, polystyrene, mattresses
Kent		✓	✓	✓/✓	✓		✓	✓	✓	pesticide containers, boat shrink-wrap; Mid-shore program
Montgomery ^c	✓		✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; 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			✓	✓/✓			✓		✓	pesticides, boat shrink-wrap; Mid-shore program
Washington			✓	✓/✓	✓			✓		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

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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 2014 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.	2 full time positions (\$95,000/year) 2-3 contract drivers	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 75% of its waste accepted at the site for recycling and saves costs of disposal.	\$298,000/10 employees.	The business intends to expand in future and continue to provide solid waste and recycling services for the community.
Baltimore City	Daniels Sharpmart 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 \$129,500 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.	\$875,000/30 employees.	Purchased local goods and services for \$589,000 and fuel for 225,000. Paid \$42,000 for Tags and permits. Revenues of recycled material is in excess of \$750,000.
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	\$1,247,000/20 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*	Woodlawn Transfer Station* (County Owned)	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	Residents drop MSW and single stream recyclables for no cost. Christmas trees are accepted seasonally.	\$187,000/3 Employees.	Estimated value of goods and services purchased from the locality for the facility: \$32,000. Estimated value of materials recycled for the year: \$16,000.
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.	\$3.16 Million/43 employees.	Spent \$2.8 million on various recycling contracts and programs.
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."	\$4 Million/55 full time employees.	For FY 2014: \$575,000 Contractual Services. \$135,000 Supplies and Materials. \$340,000 Capital Equipment/ Fleet Management. County manages both HWDC and HWDC Horizontal Expansion as a single budget entity.
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	\$800,000/18 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, Howard, Anne Arundel Counties and others.		
Howard	AmeriWaste Processing and Transfer Station (Privately Owned)	Payment of real estate, personal property and sales taxes to Howard County.	Facility supplements County facilities for solid waste disposal.	12 employees. Jobs include 53 equipment operators, 2 clerks, and 5 laborers.	\$200,000 in purchase from local vendors, \$19,000 in value of recycled items.
Montgomery*	Montgomery County Solid Waste Transfer Station* (Publicly Owned)	Strategically located for easy access to accommodate residential, industrial and commercial use.	No information provided.	20 full time County employees. 64 full time Covanta Montgomery, Inc., 10 full time/4 temporary MES employees.	Revenue from some materials partially offsets operating costs, allowing fees to remain relatively flat over the past several years.
Prince George's	Lawrence Street C & D Processing Facility	Benefits include taxes that support local infrastructure, jobs, and access to a facility close by for local users.	Strategically located for local customers.	Employs 10 people for estimated budget of \$650,200.	Goods and services purchased is approximately \$1.5 million, \$1.8 Million in recycled products produced.
St. Mary's	St. Andrew's Municipal Landfill (Publicly Owned)	Tipping fees waived during emergency/storm damage situations and other approved 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.	\$1.6 million /30 employees. Jobs include: director (1), assistant director (1), office staff (2), weigh clerk full time (3) and part time (6), equipment operators (6), mechanics (2), recycling coordinator (1), residential drop-off attendants (4), part time drop off attendants (2).	Approx. \$6.3 million annual operating budget spent locally for the purchase of materials, goods and services. Operates 5 residential drop-off sites.
Wicomico*	Bennett Construction Inc.	Creates a larger tax base to the local	Expanding the value of the facility	\$280,000/year – 30 employees.	Fuel and Maintenance Cost to

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
	(Privately Owned)	community and the only waste collection facility in the area. Provides employment opportunities in the area.	in the County for other opportunities.		the local economy - \$215,000/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	2011-WMF-0010	4/13/2016	40 / 396	13300 New George's Creek Road, Frostburg 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	2011-WPT-0158	3/24/2016	- / 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.
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	2009-WIF-0527A	1/4/2016	57 / 95	3901 Fort Armistead Road, Baltimore MD 21226.
	Northwest Transfer Station	WTS	MUN	855 / 550	2010-WTS-0038	1/17/2016	- / 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 BRESKO.
	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	6/29/2016	- / <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	2010-WPT-0048	11/4/2015	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	2010-WPF-0341	12/26/2015	- / 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	2010-WLC-0252	12/2/2015	10.2 / 23.6	1/4 mile west of MD Rtes 2 & 506, Prince Frederick MD 20678.
	Hill Landclearing Debris Landfill	WLC	PRI	914 / 304	2009-WLC-0551	EXPIRED CLOSED	2.9 / 17.6	MD Rte. 2 & Dalrymple Road, Sunderland MD 20689.
	Howlin Landclearing Debris Landfill	WLC	PRI	961 / 200	2013-WLC-0577	5/28/2018	3.0 / 32.7	8580 Nursery Road, Lusby MD 20657.
	M.T. Parran Landclearing Debris Landfill	WLC	PRI	945 / 227	2009-WLC-0550	EXPIRED CLOSED	4.3 / 6.6	Eastside MD Rte 765 - North of MD Rtes 2 & 4, Saint Leonard MD 20689.
	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	2010-WMF-0066	8/8/2015	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	2010-WTS-0072	2/20/2016	- / 9.7	45 Stemmer's Run Road, Earleville MD 21919.
	Woodlawn Transfer Station	WTS	CTY	1058 / 658	2010-WTS-0074	1/20/2016	- / 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.

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
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 Corporation	WIF	PRI	672/547	2010-WIF-0640	1/22/2017	25/50	4120 Buckeystown Pike, Frederick, MD 21717. Limited to Essroc Waste Only.
	Fort Detrick – Area B & Main Post Municipal Landfill	WMF	FED	672 / 583	2010-WMF-0327	8/8/2015	61 / 297	Area B - Rosemont Avenue & Shookstown Road. Fort Detrick Waste Only.
	Fort Detrick – Area B & Main Post Incinerator	WIN	FED	678 / 582	2010-WIN-0341	11/29/2015	- / 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	2011-WPT-0604	8/25/2016	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	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	2010-WMF-0110	4/4/2016	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.
	AmeriWaste 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.

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
Prince George's	Brown Station Road Municipal Landfill	WMF	CTY	865 / 365	2010-WMF-0589	10/5/2015	134 / 164	3500 Brown Station Road, Upper Marlboro MD 20772.
	Dower House Recycling and Processing Center	WPF	PRI	843 / 355	2010-WPF-0563	10/26/2015	- / 10	5900 Dower House Road, Upper Marlboro MD 20772. Facility Not Constructed.
	Ritchie Reclamation Rubble Landfill Phase I	WRF	PRI	843 / 355	2010-WRF-0590	12/28/2015	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 & Transfer Facility	WPT	PRI	826 / 391	2012-WPT-0218	2/21/2018	- / 1.5	5800 Sheriff Road, Fairmont Heights MD 20743. Accepts Only C&D Waste.
	Sun Services Processing and Recycling Center	WPF	PRI	828 / 438	2009-WPF-0639	4/6/2016	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	2011-WLC-0134	4/24/2016	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	2010-WMF-0138	11/7/2015	36.8 / 55	44825 St. Andrews Church Road., California MD 20619. Landfill Not Operating.
	St. Andrews Waste Processing & Transfer Facility	WPT	CTY	934 / 167	2006-WPT-0624	9/11/2013	1 / 55	44861 St. Andrews Church Road, California MD 20619
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	2010-WIN-0140	6/23/2016	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	2010-WPF-0579	2/15/2016	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	2011-WMF-0152	5/31/2016	230 / 725	7091 Central Site Lane, Newark MD 21841.
	Ocean City Transfer Station	WTS	MUN	1353 / 207	2010-WTS-0156	9/9/2015	- / 2.2	306 - 65th Street, Ocean City MD 21842. Accepts Only MSW.

* The status of the facilities is current as of June 30, 2015 – 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	5
WIF: Industrial Landfill	5
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	84

Type of Ownership	Number of Facilities
CTY: County Government	33
PRI: Private (Commercial)	41
MUN: Municipal Government	3
UMD: University of Maryland System	1
FED: Federal Government	3
MES: Maryland Environmental Service	3
TOTAL	84

Table B3 – Permitted Solid Waste Acceptance Facilities NOT in Operation

Jurisdiction	Site Name	Facility Type	Ownership Type	Status
Calvert	Hill Landclearing Debris	LCD Landfill	Private	Closed
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 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	2011-NWW-GP01	9.90	9/11/16	(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	2011-NWW-GP01	12.00	10/20/16	(410) 670-0860	(410) 670-0863
Baltimore	King Mulch and Pallet 1114 Hengemihle Avenue Essex, MD 21221	GP	2012-NWW-GP01	5.90	4/24/17	(410) 682-2992	(410) 574-0123
	Edrich Lumber, Inc. 9700 Old Court Road Baltimore, MD 21244	GP	2015-NWW-GP01	12.00	10/5/2020	(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 Cockeyes Mill Road Baltimore, MD 21136	GP	2010-NWW-GP01	5.00	11/7/2015	(410) 833-9369	(410) 833-3963
	Wirtz & Daughters, Inc. 6275 Days Cove Road White Marsh, MD 21162	IP	2015-NWW-0552	14.00	5/28/20	(410) 335-0400	(410) 592-6248
Calvert	A.H Hatcher, Inc. 7185 Sawmill Road Lusby MD 20657	GP	2011-NWW-GP01	11.25	5/1/16	(410) 586-3404	(410) 586-2843
	231 Materials & Recycling Products, LLC 171 Skipjack Road Prince Frederick, MD 20678	GP	2011-NWW-GP01	4.00	5/12/16	(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	2011-NWW-GP01	40.00	9/1/16	(410) 239-8006	(410) 239-4204
	Harvest RGI, LLC 7901 Kabik Court Woodbine, MD 21797	GP	2014-NWW-GP01	30.00	2/12/19	(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	4/8/15	(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	James E. Hill 6585 Ripley Road Ripley, MD 20646	GP	2010-NWW-GP01	8.50	11/2/15	(301) 518-2306	(301) 934-1536
	Beuchert Excavating, Inc. 12340 Crain Highway Newburg MD 20664	GP	2014-NWW-GP01	12.50	3/27/19	(301) 399-5088	(301) 274-2454
Frederick	Butler Wood Recycling 4039 Tuscarora Road Point of Rocks, MD 21777	GP	2014-NWW-GP01	58.00	5/18/19	(301) 607-4541	(301) 874-8348
	Bussard Brothers Landscape Supply-5307-B Green Valley Rd Monrovia, MD 21770	GP	2014-NWW-GP01	2.00	11/19/19	(301) 865-3925	(301) 865-8496
	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

County	Facility & Location	Permit Type	Permit Numbers	Site Acreage	Expiration Date	Phone Number	Fax Number
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	9/23/19	(410) 937-2164	(410) 937-2164
	Comer Construction, Inc 900 Circelli Court Aberdeen, MD 21001	GP	2013-NWW-GP01	6.00	11/25/18	(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	8/8/18	(410) 489-5206	(410) 489-4316
	Oak Ridge Farm 2700 Woodbine Road Woodbine, MD 21797	GP	2014-NWW-GP01	4.2	9/18/19	(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	2011-NWW-GP01	3	4/7/16	(410) 778-6302	(410) 778-3509
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville, MD 20833	GP	2013-NWW-GP01	107.50	12/16/19	(301) 540-2968	(301) 540-9630
	Allentuck Landscaping, Inc. 24320 Frederick Road Clarksburg, MD 20841	GP	2014-NWW-GP01	1.20	1/16/19	(301) 516-1900	(301) 516-1900
	Country Nursery 3330 Spencerville Road Burtonsville, MD 20866	GP	2013-NWW-GP01	11.5	6/16/18	(301) 421-9593	(301) 421-9593
	Grant County Mulch Inc. 24420 Frederick Road Clarksburg, MD 20841	GP	2014-NWW-GP01	6.35	4/10/19	(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	9/26/16	(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	1/8/17	(410) 827-8831	(410) 827-8831
	Pardoe's Lawn & Tree Service, Inc. 112 Deep Landing Road Chestertown, MD 21620	GP	2011-NWW-GP01	15.98	4/7/16	(410) 778-2016	(410) 778-2022
	Grange Hall Yard 437 Grange Hall Road Centreville, MD 21617	GP	2010-NWW-GP01	9.06	8/24/15	(410) 974-0397	(410) 974-0397
Talbot	Dependable Sand and Gravel Company, Inc. 13155 Ocean Gateway Queen Anne, MD 21657	GP	2010-NWW-GP01	343	10/7/15	(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	(301) 379-0112
Wicomico	Dunn's Tractor Services, Inc. 9042 Taylor Road Delmar, MD 21875	GP	2014-NWW-GP01	10.00	8/19/19	(410) 742-7429	(410) 742-7429
General Permits (GP):							39
Individual Permits (IP):							2
TOTAL							41

* The status of the facilities is current as of June 30, 2015 – the period of time covered by the report.

APPENDIX D

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Thirteen State Agencies Reach Newly Mandated 30 % Goal

– Christy Bujnovszky
MDE Staff

During the 2012 Maryland General Assembly session, legislation passed that increased the amount of waste required to be recycled by State agencies to 30 percent in 2014, with a goal of 40 percent for each State Agency by 2015.

In 2014, thirteen State Agencies recycled at least 30 percent of their waste and Maryland State Government, as a whole, exceeded the minimum rate requirement and recycled 31.12 percent of the waste it generated.

The following State agencies reached a recycling rate of at least 30 percent in 2014:

- Comptroller of Maryland;

- Department of Budget and Management;
- Department of Environment;
- Department of General Services;
- Department of Transportation;
- MD Automobile Insurance Fund;
- MD Energy Administration;
- Maryland Environmental Service;
- Maryland Insurance Administration;
- MD Stadium Authority;
- MD State Archives;
- Subsequent Injury Fund; and
- University of Maryland System.

Results (as of 08/31/15) for all State Agencies are available on the Maryland State Agencies' 2014 Recycling Rates Table (Page 2).

State Agency Recycling Plans

– Christy Bujnovszky
MDE Staff

State agencies are required to recycle 30 percent of their waste. As part of the implementation process, all State agency recycling plans must detail strategies to reach the 30 percent rate. The plans must also have a recycling goal of 40

percent for 2015. The plans were developed by each agency and are on file with the Maryland Department of the Environment. In addition, all individual facilities must have a recycling plan on file with the Agency Recycling Coordinator. The individual recycling plans do not need to be submitted to MDE. Please remember all facilities are required to recycle four materials: paper and plastic, metal, and glass containers.

If you have not submitted an updated agency recycling plan, please submit it to MDE, chrisy.bujnovszky@maryland.gov by December 1, 2015.

All STAR Training

– Christy Bujnovszky
MDE Staff

In 2014, MDE instituted a new All STAR online reporting system to capture the annual recycling data. As requested, MDE will hold an All STAR training session in January 2016 (date to be determined). The training will be a refresher course on how to complete the All STAR reports using the online reporting system.

All Agency Coordinators are encouraged to attend. If you feel that the training may be appropriate for the Facility Coordinators, they are welcome to attend as well.

RECYCLING CONTACTS

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

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Christy Bujnovszky
Recycling Unit
christy.bujnovszky@maryland.gov



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



Maryland State Agencies' 2014 Recycling Rates

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2014

Agency Name	No. of Sites	No. of Sites Reporting	No. of People	Total MRA Recycling 2014 (tons)	2014 MRA Recycling Rate (%)*
Baltimore City Community College	1	1	8,796	3.90	1.23
Comptroller of the Treasury	1	1	800	125.99	81.39
Department of Agriculture	2	2	216	25.48	14.68
Department of Assessments and Taxation	15	13	1,153	17.54	24.73
Department of Budget and Management	1	1	185	31.00	73.63
Department of Education	30	30	1,411	162.23	28.43
Department of General Services	23	23	7,803	711.62	31.49
Department of Health and Mental Hygiene	18	11	4,950	428.35	7.47
Department of Human Resources	33	11	1,511	114.24	29.50
Department of Juvenile Services	15	15	2,894	498.47	16.27
Department of Labor, Licensing & Regulation	14	13	1,348	235.74	28.49
Department of Natural Resources	6	6	529	39.11	8.84
Department of the Environment	5	5	970	58.82	43.47
Department of Transportation	83	83	25,826	9,998.97	43.19
Department of Veterans Affairs	12	5	800	243.13	29.08
Dept. of Housing and Community Development	3	3	431	44.82	11.04
Dept. of Public Safety and Correctional Services	35	7	20,961	2,260.08	24.42
Gov's Office Crime Control Prevention	1	1	800	2.61	12.08
Judiciary of Maryland	1	0	0	0	0
Maryland Automobile Insurance Fund	1	1	250	55.29	38.61
Maryland Department of Disabilities	1	1	24	0.10	1.16
Maryland Department of Planning	1	1	35	33.03	22.60
Maryland Energy Administration	1	1	34	0.90	40.91
Maryland Environmental Service	4	4	253	16.98	62.77
Maryland Food Center Authority	1	1	1,325	303.24	5.09
Maryland General Assembly	1	0	0	0	0
Maryland Insurance Administration	1	1	1,235	23.98	51.22
Maryland Military Department	33	0	0	0	0
Maryland Public Broadcasting Commission	1	1	211	76.20	21.01
Maryland School for the Deaf	2	2	989	50.70	20.99
Maryland Stadium Authority	1	1	1,000	781.63	31.02
Maryland State Archives	1	1	84	9.08	30.39
Maryland State Police	27	27	1,715	298.76	22.21
Morgan State University	1	1	9,241	217.55	21.27
St. Mary's College of Maryland	1	0	0	0	0
Subsequent Injury Fund	1	1	17	3.70	60.46
University of Maryland System	17	15	81,978	8,392.65	39.04
TOTAL	395	290	179,775	25,265.89	31.12

* $(\text{Total MRA Recycling} \div \text{Total Solid Waste Generated}) \times 100$



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*



August 2015

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:**
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Email: swigfield@alleganygov.org

Anne Arundel

Mr. Richard Bowen
Solid Waste Recycling Manager
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Email: richard.bowen@aacounty.org

Baltimore City

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Recycling Coordinator
Bureau of Solid Waste
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Baltimore County

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Recycling Coordinator
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Calvert

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Caroline

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Department of Public Works
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Carroll

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Recycling Manager
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Westminster, MD 21157-5194
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Cecil

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Charles

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Dorchester

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Garrett

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Harford

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Northeast Maryland Waste Disposal Authority

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(Anne Arundel County, Baltimore City,
Baltimore, Carroll, Frederick, Harford,
Howard, & Montgomery Counties)

Prince George's

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Queen Anne's

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Recycling Coordinator
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Centreville, MD 21617-
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Somerset

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Director of Solid Waste Management
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St. Mary's

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Engineering Services
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Talbot

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Wicomico

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