



Department of the Environment

# MARYLAND SOLID WASTE MANAGEMENT and DIVERSION REPORT

– 2012 –

(Calendar Year 2011 Data)

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Land Management Administration

Prepared for:

Senate Education, Health, and Environmental Affairs Committee

House Environmental Matters Committee

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# Overview

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## Introduction

The Maryland Department of the Environment (“MDE” or “the Department”) respectfully submits to the Governor, General Assembly, House Environmental Matters Committee, and the Senate Education, Health and Environmental Affairs Committee the Department's Annual Report describing how solid waste was managed in Maryland during calendar year 2011. 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 § 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 § 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 solid waste landfills; rubble (construction and demolition (C&D)) landfills; industrial waste landfills; landclearing debris 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 recycling facilities, must provide MDE 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 calendar year (CY) 2011, and an overview of the State’s technical assistance activities from July 2011 through June 2012. Data contained in Part II comes from annual reports submitted to MDE by Maryland’s 23 counties and Baltimore City, annual reports filed by Maryland permitted solid waste acceptance facilities, State government agencies participating in the All StAR (**All State Agencies Recycle**) Program, and newspaper and telephone directory publishers. Counties also provide MDE information on their collection programs, institutional recycling programs, public education efforts, source reduction activities, and disposal facilities.

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## Executive Summary

In 2011, Maryland counties and Baltimore City generated 14,065,568 tons of solid waste (see Table 1 – Maryland Waste Generation Totals). 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 22 percent from the 11,573,831 tons generated in 2010. Maryland Recycling Act (MRA) waste (MRA waste is equal to

Municipal Solid Waste (MSW) plus industrial waste from non-private industrial waste landfills) comprises 6,832,388 tons (3,089,817 tons of MRA recyclables + 3,742,571 tons of MRA waste disposed (without recycled MSW ash and backend scrap metal)) of the total waste generated in Maryland.

A total of 9,664,542 tons of waste was accepted at Maryland permitted solid waste acceptance facilities. Of the 9,664,542 tons of solid waste accepted, a total of 8,932,989 tons was managed by Maryland permitted solid waste acceptance facilities during calendar year 2011, by recycling, disposal (incineration and landfilling), or transportation out of State (see Table 3, page 5).

**Table 1 – Maryland Waste Generation Totals**

County	Total Waste (tons)
Allegany	258,316
Anne Arundel	1,066,020
Baltimore City	2,736,251
Baltimore County	2,396,478
Calvert	141,118
Carroll	685,324
Cecil	164,317
Charles	926,668
Dorchester	59,289
Frederick	457,757
Garrett	62,282
Harford	347,003
Howard	700,371
Mid-Shore *	342,870
Montgomery	1,414,192
Prince George's	1,428,609
Somerset	41,417
St. Mary's	118,133
Washington	247,474
Wicomico	149,375
Worcester	148,886
State Highways	173,418
<b>MARYLAND TOTALS</b>	<b>14,065,568</b>

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

Maryland achieved a 48.9 percent MRA waste diversion rate. This was comprised of a 45.2 percent (3,089,817 tons) MRA recycling rate plus a 3.7 percent (259,755 tons reduced) source reduction credit. An additional 3,878,464 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 6,968,280 tons recycled in Maryland. (See Tables 20 and 21, including footnotes, for details.)

Other highlights for CY 2011:

- Nearly 3,695,000 tons (41.4 percent) of the waste managed by Maryland permitted solid waste acceptance facilities was landfilled in Maryland, 1,195,473 tons (13.4 percent) was recycled/reused in Maryland, 1,403,523 tons (15.7 percent) was incinerated in Maryland, and 2,639,195 tons (29.5 percent) was exported to out-of-State facilities. (See Table 15.)
- Maryland remains a significant exporter of solid waste and exports more waste than it imports. A total of 2,639,195 tons of waste was exported from Maryland, while only 290,390 tons of waste was imported to Maryland, an increase of 50 percent from 2010. (See Tables 13 and 14.)
- Maryland landfills reported a total available capacity of 77,947,022 tons in 2011. (See Tables 16, 17, 18, and 19.)

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## **Part I – Permitted Solid Waste Acceptance Facility Waste Management**

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### **Introduction**

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

- ▲ The amount of solid waste managed in each of the following categories:
  - Municipal Solid Waste (MSW);
  - Construction and Demolition Debris (C&D);
  - Land Clearing Debris (LCD);
  - Industrial Waste;
  - Incinerator Ash;
  - Natural Wood Waste (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 reporting the above information, permitted solid waste acceptance facilities may submit optional information relating 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 § 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 calendar year 2011. 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 2011 calendar year, the Department reviewed and analyzed the information contained in the Annual Tonnage Reports from permitted solid waste acceptance facilities. 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 **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.

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## **Solid Waste Acceptance Facility Solid Waste Management for 2011**

In 2011, over 9.6 million tons of solid waste was accepted by Maryland permitted solid waste acceptance facilities. The 9.6 million tons includes waste stored on site and waste sent from one facility to another. Of the 9.6 million tons accepted, over 8.9 million tons were actually managed by 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)	14,065,568
B	Total Maryland Waste Recycled (see Table 20, including “*” footer)	6,968,280
C	Total Maryland Waste Disposed (A – B)	7,097,288
D	Recycling total adjusted for amount managed through Maryland permitted solid waste acceptance facilities (6,968,280 (Table 20) – 1,396,248 (Table 3))	5,572,032
E	Total waste disposed by Maryland counties but not captured by a Maryland permitted solid waste acceptance facility ^	304,681
F	Natural Wood Waste Disposed (see Table 12; all waste recycled or stored)	0
G *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment ^^	425,222
H	Total waste imported into Maryland (see Table 13)	290,390
I **	Disposed Ash, Back-End Scrap Metal, and By-Pass ^^	28,522
<b>Total Waste Managed by Maryland permitted solid waste acceptance facilities (C-D-E+F+G+H+I) (see Table 3)</b>		<b>8,932,989</b>
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 facilities.

^ Not reported separately in report. Reported by counties via the MRA Tonnage Reporting Survey and included in the 14,065,568 waste generated tons.

^^ Reported by permitted solid waste acceptance facilities via the Solid Waste Tonnage Report. 404,092 tons of MSW ash recycled + 21,130 tons of back-end scrap metal recycled = 425,222 tons. 18,096 tons of MSW ash, back-end scrap metal, & by-pass + 10,426 tons of Non-MSW ash = 28,522 tons.

There was an approximately 50 percent increase, to 290,390 tons, in the amount of out-of-State waste that was managed in Maryland in 2011, as compared to 2010. The volume of solid waste accepted, processed, and disposed at the permitted facilities in Maryland is similar to previous years. Approximately 3.7 million tons of waste was landfilled and 1.4 million tons was incinerated in Maryland. The reclaimed recyclables were collected, sorted, and transferred to recycling facilities.

The use of out-of-State facilities for the disposal of Maryland generated waste was consistent in 2011 (2,639,195 tons) compared to 2010 (2,567,027 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.

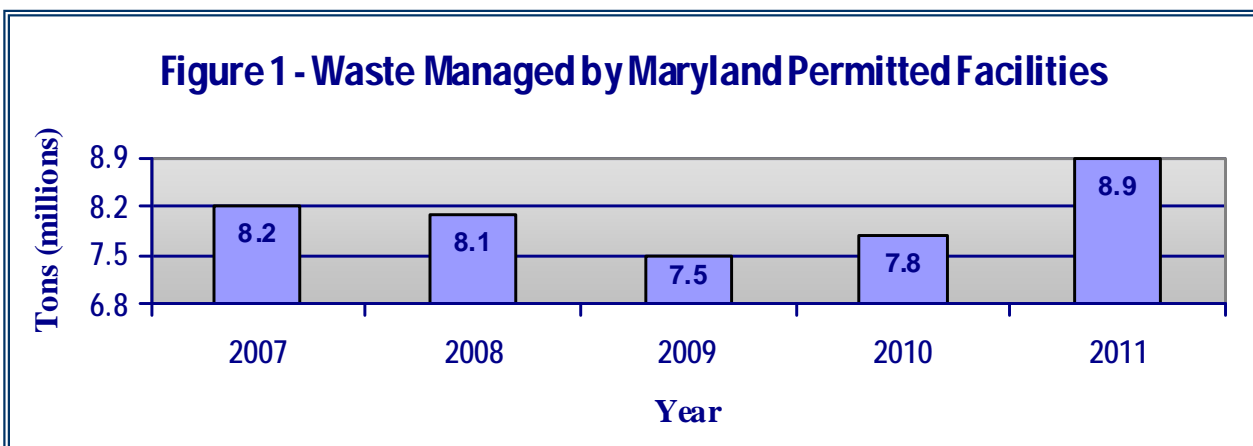
Figure 1 details the total amount of Maryland permitted solid waste acceptance facility solid waste that is managed via export, disposal (*i.e.*, landfilling and incineration), and recycling/reuse. Permitted solid waste acceptance facilities do not report the types of MSW collected; only total MSW. According to the EPA’s Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2010 report, MSW is

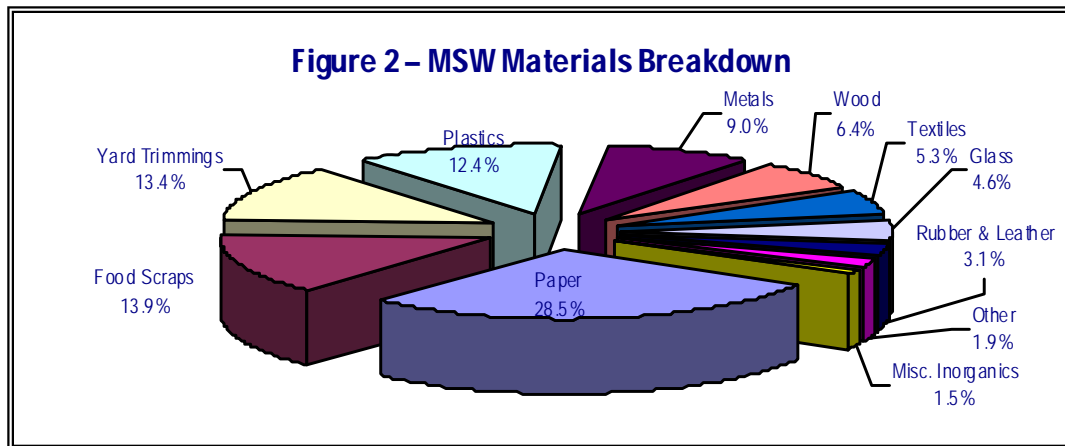
comprised of approximately 28.5% paper and paperboard, 13.9% food scraps, 13.4% yard trimmings, 12.4% plastics, 9% metals, 6.4% wood, 5.3% textiles, 4.6% glass, 3.1% rubber and leather, and 1.9% other (*i.e.*, electrolytes in batteries, fluff pulp, feces, and urine in diapers), and 1.5% miscellaneous inorganic wastes. See Figure 2 for a graphical representation of the composition of MSW.

**Table 3 – Waste Managed in 2011 by Maryland Permitted Solid Waste Acceptance Facilities**

Solid Waste Category	Tons Accepted <sup>1</sup>	Tons Recycled/ Reused <sup>2</sup>	Tons Disposed	Tons Managed <sup>3</sup>
Construction & Demolition Debris	1,649,211	188,358	1,445,140	1,633,498
Industrial Waste	32,428	0	32,428	32,428
Land Clearing Debris	26,224	7,806	7,530	15,336
Municipal Solid Waste <sup>4</sup>	4,667,888	4,772	4,157,099	4,161,871
Natural Wood Waste	411,242	411,242	0	411,242
Other Wastes <sup>5</sup>	2,455,434	379,978	1,876,521	2,256,499
<b>Total Waste Received</b>	<b>9,242,427</b>	<b>992,156</b>	<b>7,518,718</b>	<b>8,510,874</b>
Tons of MSW Incinerator Ash	422,115	404,092	18,023	422,115
<b>TOTAL MANAGED</b>	<b>9,664,542</b>	<b>1,396,248</b>	<b>7,536,741</b>	<b>8,932,989</b>

- 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" plus "Tons Disposed". "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 2010 report, MSW is comprised of approximately 28.5% paper and paperboard, 13.9% food scraps, 13.4% yard trimmings, 12.4% plastics, 9% metals, 6.4% wood, 5.3% textiles, 4.6% glass, 3.1% rubber and leather, and 1.9% other (*i.e.*, electrolytes in batteries, fluff pulp, feces, and urine in diapers), and 1.5% miscellaneous inorganic wastes.
- 5 "Other Wastes" includes special medical waste, non-MSW ash, asbestos, and sewage sludge.





## Refuse Disposal Systems

Under Maryland law, a refuse disposal system (“System”) is a system that 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 Solid Waste (MSW) Landfill

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 2011, 24 valid municipal landfill permits were in effect. Out of the 24 permitted facilities, 22 facilities accepted waste, managed/disposed waste, and/or transferred recyclables to the market place. The 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. The Midshore Solid Waste Regional Municipal Landfill in Caroline County ceased its operations during 2011. The Harford Waste Disposal Center (Expansion) Municipal Landfill began its operations in 2011. Over 1.51 million tons of solid waste was disposed at the permitted facilities in 2011. The two facilities that disposed the most waste were Brown Station Road Landfill (396,313 tons) in Upper Marlboro and Eastern Landfill (137,697 tons) in White Marsh. Ash recycled as alternative daily cover is counted against a landfill’s capacity and is included with the Waste Disposed total. 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	64,514	64,514	0
Anne Arundel	Millersville Resource Recovery Facility	County	103,263	63,051	11,545
Baltimore City	Quarantine Road	City	350,791	112,893	1,383

Jurisdiction	Facility Name(Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Baltimore	Eastern Sanitary	County	200,499	137,697	3,217
Calvert	Appeal Sanitary	County	34,147	690	7,428
Caroline	Midshore II	County	124,829	124,798	31
Carroll	Northern Municipal	County	14,291	14,057	234
Cecil	Cecil County Central	County	125,210	87,018	6,668
Charles	Charles County Municipal	County	117,325	103,234	1,150
Dorchester	Beulah Municipal	County	51,033	47,347	210
Frederick	Fort Detrick Area B	Federal	1,474	1,474	0
	Reichs Ford/Site B	County	111,371	14,788	13,599
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	29,273	29,070	94
Harford	Harford Waste Disposal Center	County	6,659	6,659 <sup>^</sup>	0
Harford	Harford Waste Disposal Center (Expansion)	County	85,755	13,476	31,638
Howard	Alpha Ridge Municipal	County	38,324	241	24,070
Montgomery	Montgomery County Site 2	County	0	0	0
Prince George's	Brown Station Road	County	397,557	396,313	1,244
St. Mary's	St. Andrew's Municipal	County	17,792	0	17,792
Somerset	Somerset County	County	23,801	23,801	0
Talbot	Midshore Regional Solid Waste Facility	County	0	0	0
Washington	Forty West Municipal	County	117,588	111,312	2,769
Wicomico	Newland Park Municipal	County	101,467	101,467	0
Worcester	Central Sanitary	County	67,973	58,714	3,030
<b>TOTAL</b>			<b>2,184,936</b>	<b>1,512,614</b>	<b>126,102</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

<sup>^</sup> Includes 4,500 tons of recycled ash used for landfill construction.

### 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 2011, of five permitted rubble landfills, four landfills disposed of 525,684 tons of waste. The two that disposed of the most waste by weight were Ritchie Land Reclamation

(Phase I & Phase II) – Marlboro Road (276,920 tons) in Upper Marlboro, Prince George’s County, and Days Cove Rubble Landfill (119,891 tons) in White Marsh, Baltimore County. Details are presented in Table 5.

**Table 5 – Permitted C&D Landfills**

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Baltimore County	Days Cove Rubble Landfill Lateral Expansion	Private	188,475	119,891	507
	Honeygo Run Reclamation Center	Private	193,778	116,111	642
Prince George's	Ritchie Reclamation Phase I & II	Private	348,472	276,920	4,008
Queen Anne's	Baker Rubble	Private	15,778	12,762	316
Washington	Washington County Rubble	County	0	0	0
<b>TOTAL</b>			<b>746,503</b>	<b>525,684</b>	<b>5,473</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

**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 sludges from pollution control devices, residuals from filters or cleaning of items or areas, and residual materials from a variety of processes (*e.g.*, sandblasting grit, paint sludge, oil/water separator grit, etc). These materials must be characterized prior to disposal to ensure that they are not hazardous wastes. Industrial wastes may also be disposed in permitted MSW landfills. During 2011, of the three permitted industrial waste landfills, two facilities accepted and disposed waste. Millennium Inorganic Chemicals in Baltimore City disposed the most industrial waste, 1,629,278 tons. This was a significant increase in the amount of waste disposed at the facility compared to previous years (4,402 tons in 2010). In 2011, Millennium sold a 65 acre portion of its 95 acre landfill to Constellation Energy for the disposal of coal combustion byproducts. Millennium agreed to accept 1,000,000 cubic yards of clay from the 65 acre site and place it in the 30 acre active Millennium landfill. The result was the addition of 1,614,460 tons of material into the Millennium landfill. Details are presented in Table 6.

**Table 6 – Permitted Industrial Landfills**

Jurisdiction	Facility Name (Landfill)	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Baltimore City	Millennium Inorganic Chemicals – HPP	Private	1,629,278	1,629,278	0
	W. R. Grace and Co. – Davison Chemical Division	Private	24,910	24,910	0
Frederick	Eastalco Aluminum Company	Private	0	0	0
<b>TOTAL</b>			<b>1,654,188</b>	<b>1,654,188</b>	<b>0</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

**Landclearing Debris (LCD) Landfill**

A landclearing debris (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 2011, four of the five permitted facilities accepted 5,767 tons of waste with three of the facilities disposing of 2,312 tons of waste. 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	3,455	0	0
	Hill Landclearing Debris	Private	0	0	0
	M. T. Parran Landclearing Debris	Private	135	135	0
	Howlin Landclearing Debris	Private	2,175	2,175	0
St. Mary's	Knott Landclearing Debris	Private	2	2	0
<b>TOTAL</b>			<b>5,767</b>	<b>2,312</b>	<b>0</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

**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 2011, there were nine permitted transfer stations in operation that accepted a total of 600,393 tons of solid waste. The two busiest transfer stations in Maryland during 2011 were the Western Acceptance Facility in Baltimore County (278,611 tons accepted) and the Appeal



Transfer Station in Calvert County (107,557 tons accepted). 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	39,884	0	39,884
Baltimore County	Eastern	County	99,344	0	99,344
	Western Acceptance	County	278,611	2	278,685
Calvert	Appeal	Private	107,557	0	107,557
Cecil	Stemmers Run	County	623	0	623
	Woodlawn	County	1,687	0	1,687
Howard	Workplace Essentials	Private	151	0	151
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	39,562	0	39,562
Worcester	Ocean City	Municipal	32,974	0	32,974
<b>TOTAL</b>			<b>600,393</b>	<b>2</b>	<b>600,467</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

**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 2011, ten valid processing facility permits were in effect. Out of ten valid permits, six facilities were operational and accepted a total of 245,943 tons of waste. The largest of these facilities was Lawrence Street C&D Processing Facility in Prince George’s County, which accepted 99,403 tons of solid waste, and Roll-Off Express, Inc. in Carroll County, which accepted 70,936 tons. 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	850	0	850
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Calvert	Southern Maryland Processing	Private	14,430	0	14,430
Carroll	Roll-Off Express, Inc.	Private	70,936	0	70,936
Montgomery	C&D Recovery Processing	Private	60,320	293	60,491
Prince George's	Lawrence Street C&D	Private	99,403	185	99,218
	Dower House Recycling and Processing	Private	0	0	0
	Sun Services Processing & Recycling Center	Private	0	0	0
Wicomico	Peninsula Regional Medical Center	Private	4	0	4
	Bennett Processing	Private	0	0	0
<b>TOTAL</b>			<b>245,943</b>	<b>478</b>	<b>245,929</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

### 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 2011, a total of sixteen facilities were permitted to operate. Of the sixteen facilities, 14 sites accepted 2,409,586 tons of waste in 2011. The two facilities that accepted the most waste in 2011 were Montgomery County Solid Waste Transfer Station in Montgomery County (715,572 tons) and Annapolis Junction Recycling and Transfer Station in Anne Arundel County (498,163 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	0	0	0
Anne Arundel	Curtis Creek Recovery Systems	Private	172,864	0	172,864
	Annapolis Junction Recycling and Transfer Station	Private	498,163	0	498,163
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	74,257	0	74,257
	Stericycle, Inc.	Private	23,427	0	23,427
	Baltimore Recycling Center, LLC	Private	50,354	0	50,354
	Daniels Sharpsmart	Private	1,519	0	1,519

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore County	Baltimore County Resource Recovery Facility	County	310,239	67	310,470
Carroll	Northern Municipal Landfill	County	89,992	0	89,992
Frederick	Reichs Ford Landfill	County	168,277	0	168,277
Harford	Auston Processing and Transfer Facility	Private	4,256	80	4,439
Howard	Alpha Ridge Municipal Landfill	Private	34,733	0	34,733
	Ameriwaste Processing and Transfer Station	Private	195,918	0	195,918
Montgomery	Montgomery County Solid Waste Transfer Station	County	715,572	0	715,572
Prince George's	Brandywine Enterprises	Private	70,015	0	70,015
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0
<b>TOTAL</b>			<b>2,409,586</b>	<b>147</b>	<b>2,410,000</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

### 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 2011, the eight permitted facilities in operation accepted 1,405,984 tons of solid waste. Wheelabrator Baltimore, LP. in Baltimore City and the Montgomery County Resource Recovery Facility accepted the bulk of the material in this category, accounting for 701,636 tons and 556,544 tons, respectively. Details are presented in Table 11.

**Table 11 – Permitted Incinerator Facilities**

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Incinerated	Waste Transported
Baltimore City	Wheelabrator Baltimore, LP.	Private	701,636	701,636	212,652
	Curtis Bay Energy	Private	25,300	25,300	9,930
	University of Maryland – Baltimore	State	166	0	166
Charles	Naval Support Facility	Federal	92	1	0

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Incinerated	Waste Transported
	Indian Head Incinerator				
Frederick	Fort Detrick – Area B and Main Post	Federal	3,529	2,444	1,580
Harford	Harford County Resource Recovery Facility	County	118,613	119,721	54,206
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	556,544	554,317	174,127
Somerset	Smith Island Incinerator	County	104	104	20
<b>TOTAL</b>			<b>1,405,984</b>	<b>1,403,523</b>	<b>452,681</b>

\* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

### 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 facility (NWR) 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 MDE. During 2011, of 33 permitted operations, 30 facilities reported 411,242 tons of NWW recycled. The two highest volume facilities, Grant County Mulch in Prince George's County and Edrich Lumber in Baltimore County, accepted 114,209 tons and 43,052 tons, respectively. Details on the NWR 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.state.md.us/programs/Land/SolidWaste/Pages/Programs/LandPrograms/Solid\\_Waste/index.aspx](http://www.mde.state.md.us/programs/Land/SolidWaste/Pages/Programs/LandPrograms/Solid_Waste/index.aspx) on MDE's web page, or by contacting MDE's Solid Waste Program at 410-537-3375 or [khosseinz@mde.state.md.us](mailto:khosseinz@mde.state.md.us)

**Table 12 – Permitted Natural Wood Waste Recycling Facilities**

Jurisdiction	Facility Name	Permittee	Waste Recycled *	Waste Handled	
				Waste Stored	Waste Marketed
Anne Arundel	A-A Recycle & Sand, Inc.	A-A Recycle & Sand, Inc.	17,337	0	27,413
	Bronson Contracting, Inc.	Bronson Contracting, Inc.	2,345	1,628	717
	L and W Recycling	L & W Recycling, Inc.	37,300	0	37,300
Baltimore County	King Mulch and Pallet	Albert J. Bierman	5,846	0	5,846
	Edrich Lumber, Inc.	Edrich Lumber, Inc.	43,052	14,395	28,657
	Northwest Recycling, LLC.	Northwest Recycling LLC.	14,308	2,130	12,178
	Wirtz & Daughters, Inc.	Wirtz And Daughters, Inc.	17,175	0	34,903
	Hollins Organic Products, Inc.	Hollins Organic Products, Inc.	14,219	0	14,784
Calvert	A.H. Hatcher, Inc.	Quality Built Homes, Inc.	11,035	8,321	2,714
	231 Materials & Recycling Products, LLC.	231 Materials & Recycling Products, LLC.	808	0	0
Carroll	C. J. Miller, LLC.	C. J. Miller, LLC.	25,344	17,784	7,560
	Recycled Green Industries, LLC	Recycled Green Industries, LLC.	21,283	0	21,283
Cecil	Chesapeake Wood Recycling	Chesapeake Investment, Inc.	1,250	0	1,250
	Grass Busters Landscaping Company, Inc.	Grass Busters Landscaping Company, Inc.	378	0	378
Charles	Beuchert Excavating, Inc.	Beuchert Excavating, Inc.	714	285	429
	James E. Hill	James E. Hill	1,686	970	715
Frederick	Butler Wood Recycling	William Lee Butler	1,153	12	1,141
	Bussard Brothers Landscape	R. W. Bussard & Sons, Inc.	4,500	300	4,200
Harford	Arthur D. Heston	Arthur D. Heston	572	0	572
	Crouse Construction Company, Inc.	Crouse Construction Co., Inc.	0	0	0
	T and M Mulch Natural Wood Waste Recycling Facility	Pope Thomas/T&M Mulch, Inc.	0	0	0
	Comer Construction, Inc.	Comer Construction, Inc.	17,453	0	17,453
Howard	Elkridge Recyclery	RLO Contractors,	33,187	0	45,481

Jurisdiction	Facility Name	Permittee	Waste Recycled *	Waste Handled	
				Waste Stored	Waste Marketed
		Inc.			
Kent	Sharp Lawn & Tree, Inc.	Sharp Lawn & Tree, Inc.	675	361	314
Montgomery	Twin Ponds Farm, LLC	Twin Ponds Farm, LLC.	63	19	44
	Acme Biomass Reduction, Inc.	Acme Biomass Reduction, Inc.	17,741	12,736	5,005
Prince George's	Grant County Mulch Facility	Grant County Mulch, Inc.	114,209	0	116,740
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	2,202	1,744	458
	Grange Hall Yard	Cole Ventures, Inc.	1,378	257	1,121
	Pardoe's Lawn and Tree Service, Inc.	Pardoe's Lawn and Tree Service, Inc.	1,235	423	812
Talbot	Dependable Sand and Gravel Company, Inc.	Dependable Sand and Gravel Company, Inc.	2,194	0	2,194
Wicomico	Dunn's Tractor Service, Inc.	Dunn's Tractor Service Inc.	0	0	0
	Eastern Shore Forest Products, Inc.	Eastern Shore Forest Products, Inc.	600	0	600
<b>TOTAL</b>			<b>411,242</b>	<b>61,365</b>	<b>392,262</b>

\* Waste Recycled will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2011, but not managed until 2012.

## 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 2011, Maryland's permitted solid waste acceptance facilities accepted waste from Delaware, Kentucky, Maine, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Virginia, Washington D.C., and West Virginia. Highlights include:

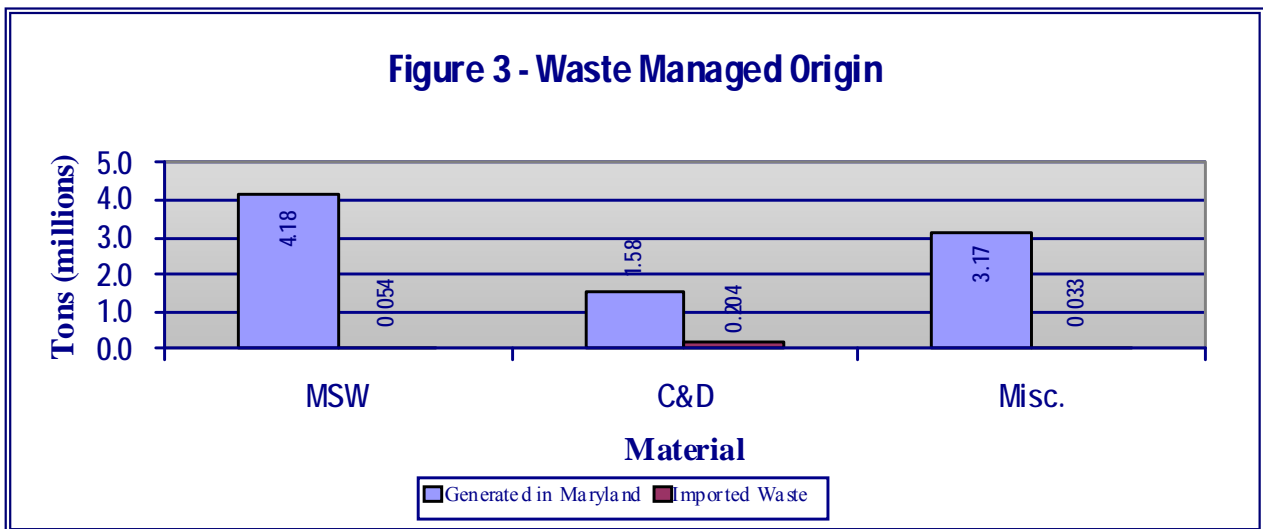
- ⊙ In 2011 (290,390 tons), there was an increase of approximately 50 percent of the amount of solid waste imported into Maryland compared to calendar year 2010 (193,210 tons).
- ⊙ The solid waste imported into Maryland comprises approximately 3.3 percent of the 8.9 million tons of solid waste managed at permitted Maryland solid waste acceptance facilities.
- ⊙ The facilities that received the most imported MSW were the Mountainview Sanitary Landfill in Allegany County, Wheelabrator Baltimore, LP in Baltimore City, and Roll-Off Express, Inc., in Carroll County.

- ⊙ C&D waste that was imported into Maryland was disposed at privately owned rubble landfills, or was processed into segregated recyclables that were then transferred to Mid-Atlantic recycling facilities. The landfill and processing facilities that received the majority of the imported C&D were Honeygo Run Reclamation Center in Baltimore County; Ritchie Reclamation Phase I & II, Brandywine Enterprises, and Lawrence Street C&D in Prince George’s County; and C&D Recovery Processing Facility in Montgomery 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	53,599	VA, PA, WV, NJ, MA District of Columbia	4,178,421
C&D	203,659	DE, NJ, PA, VA, WV, District of Columbia	1,583,498
Miscellaneous *	33,132	DE, NY, PA, VA, WV, NC NJ, ME, KY, SC, NH District of Columbia	3,171,070
<b>TOTAL</b>	<b>290,390</b>		<b>8,932,989</b>

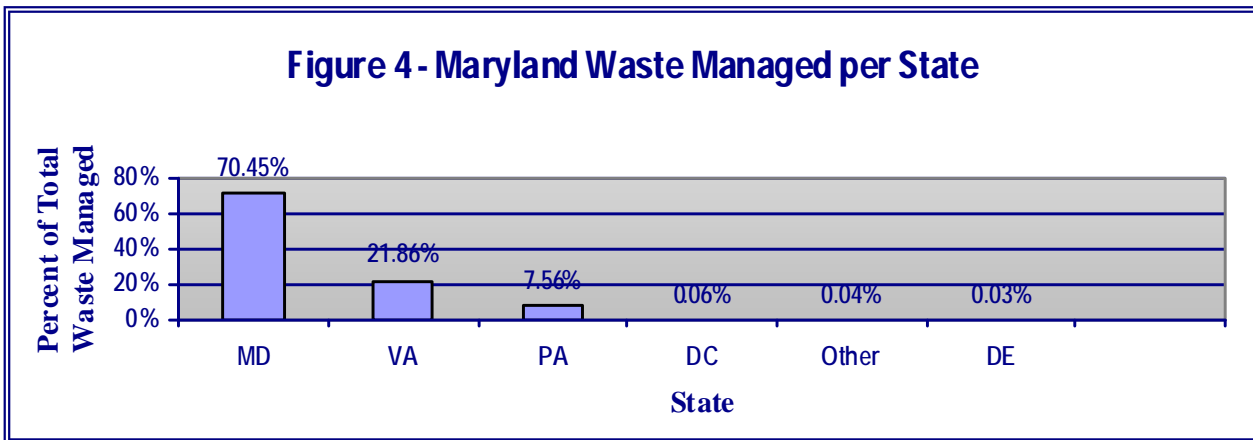
\* Includes special medical waste, incinerator ash, non-hazardous industrial waste, asbestos, wastewater treatment plant sludge, and other wastes imported into Maryland for disposal.



## Exported Solid Waste

Due to economic considerations and the desire to conserve disposal capacity in county-owned landfills, most counties in Maryland transport some of their solid waste out of State for recycling or disposal. These jurisdictions include: Anne Arundel, Baltimore, Baltimore City, Calvert, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Harford, Howard, Montgomery,

Prince George’s, Queen Anne’s, St. Mary’s, Talbot, Washington, and Worcester Counties. There was an increase of approximately 3 percent in the amount of solid waste exported in 2011 from the amount of waste exported in 2010. Almost half of the total permitted solid waste acceptance facilities exported significant amounts of their waste to eleven states and the District of Columbia. Virginia was the most prevalent export destination for Maryland waste and accepted approximately 78 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 2.6 million tons of solid waste, consisting of MSW, C&D and miscellaneous wastes (including incinerator ash and recyclables) were transported outside Maryland for management. This represents nearly 30 percent of the total solid waste managed at Maryland’s permitted solid waste acceptance facilities.
- ❖ Approximately 163,077 tons of the 2,639,195 tons of Maryland exported waste was incinerator ash.
- ❖ A total of forty (40) facilities exported solid waste for disposal or recycling to out-of-State facilities.
- ❖ The Annapolis Junction Recycling and Transfer Station, which transferred 474,752 tons of waste, was the largest State exporter of solid waste.
- ❖ The majority (1,952,702) of waste exported went to Virginia.

**Table 14 – Maryland Exported Waste Tonnage by State Destination**

Solid Waste Category	Virginia	Pennsylvania	Delaware	District of Columbia	Other	Total (Tons)
MSW	1,178,870	486,830	0	0	0	1,665,700
C&D	596,317	138,863	0	0	0	735,180
Recycling	163,833	27,853	2,278	5,302	1,509	200,775
Miscellaneous *	13,682	21,929	0	0	1,929	37,540
<b>TOTAL (Tons)</b>	<b>1,952,702</b>	<b>675,475</b>	<b>2,278</b>	<b>5,302</b>	<b>3,438</b>	<b>2,639,195</b>

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

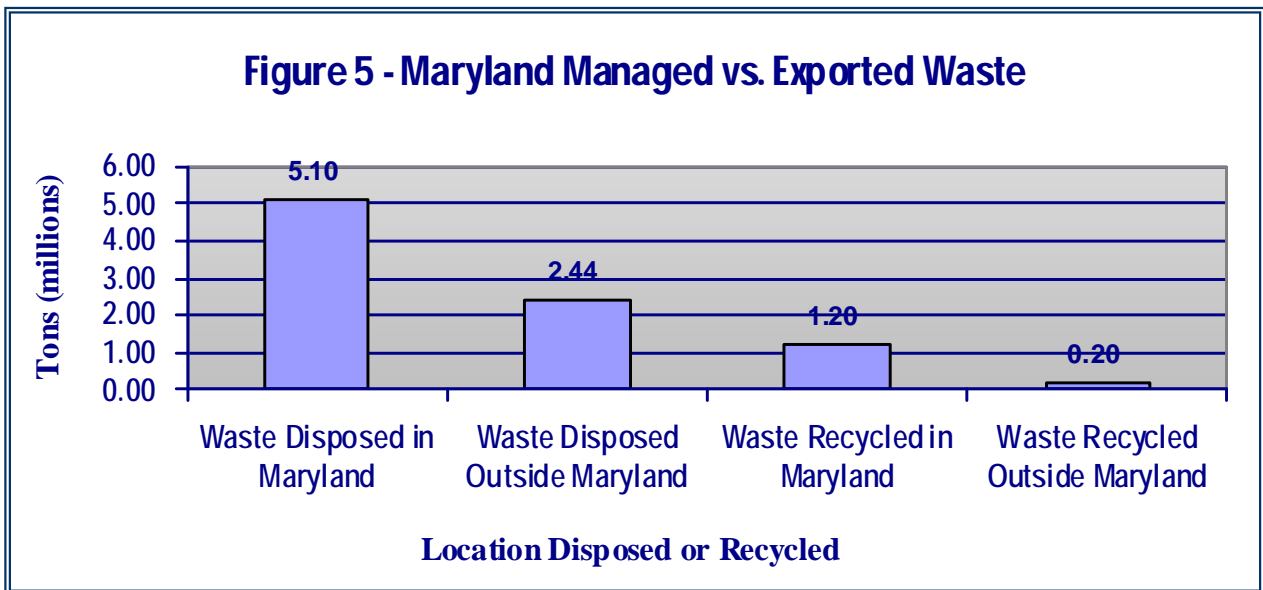


## Solid Waste Management Practices

In 2011, 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
Exported	2,639,195	30%
Landfilled in Maryland	3,694,798	41%
Incinerated in Maryland	1,403,523	16%
Recycled/Reused in Maryland	1,195,473	13%
<b>TOTAL</b>	<b>8,932,989</b>	<b>100%</b>



## Landfill Capacity

Landfills in Maryland are required to report on their available cubic yard (CY) 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 58,261,973 tons with 1,512,614 tons being disposed in 2011. Thus, at the current disposal rate, there would be approximately 39 years (58,261,973 tons ÷ 1,512,614 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. Lastly, the Department notes that due to the anticipated relocation of military personnel to Maryland under the Federal BRAC program, jurisdictions must pay close attention to capacity issues in the coming years.

**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 2011 (CY)	Landfilled in 2011 (Tons)	Used in 2011 ^
Alpha Ridge Municipal Landfill	9,978,000	4,138,553	2,276,304	5,839,447	3,211,696	2128	1,054	241	0.01%
Appeal Municipal Landfill	2,799,290	609,913	365,948	2,189,377	1,313,626	2036	1,145	690	0.04%
Beulah Sanitary Landfill	1,910,325	1,398,872	1,413,674	511,453	516,996	2017	77,931	47,347	4.08%
Brown Station Road Landfill	16,505,000	10,138,662	7,228,866	6,366,338	4,002,786	2021	332,206	396,313	2.01%
Cecil County Central Landfill	6,527,539	4,347,619	2,695,524	2,179,920	1,351,550	2024	169,276	87,018	2.59%
Central Sanitary Landfill	4,800,000	1,959,345	1,364,517	2,840,655	1,995,483	2037	83,912	58,714	1.75%
Charles County Municipal Landfill	4,374,700	1,473,869	1,068,468	2,900,831	2,102,932	2032	142,314	103,234	3.25%
Eastern Sanitary Landfill	23,479,000	12,005,000	5,479,000	11,474,000	5,237,000	2042	161,597	137,697	0.69%
Fort Detrick – Area B & Main Post	1,000,900	105,471	81,857	895,429	711,856	2429	2,611	1,474	0.26%
Forty West Municipal Landfill	24,752,000	3,529,214	1,442,864	21,222,786	8,148,536	2085	272,714	111,312	1.10%
Garrett County Solid Waste Disposal & Recycling Facility	2,042,927	979,711	568,136	1,063,216	528,573	2029	54,151	29,070	2.65%
Harford Waste Disposal Center	2,980,000	2,878,803	1,558,903	101,197	8,245	2013	5,500	6,659	0.18%
Harford Waste Disposal Center (Expansion)	4,870,330	45,600	13,476	4,824,730	2,117,824	2028	45,600	13,476	0.94%
Midshore Regional Solid Waste Facility	3,924,994	3,684,695	2,032,481	240,299	126,246	2015	0	0	0.00%
Midshore II Regional Solid Waste Facility	7,800,000	316,380	136,584	7,483,620	4,543,416	2031	216,127	124,798	2.77%
Millersville Landfill & Resource Recovery Facility	14,156,000	4,838,315	3,022,174	9,317,685	5,471,426	2040	121,829	63,051	0.86%
Montgomery County Site 2**	0	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	4,260,000	3,295,347	2,258,447	964,653	541,553	2019	92,936	64,514	2.18%
Newland Park Municipal Landfill	7,200,000	2,671,086	1,442,386	4,528,914	2,445,614	2036	187,902	101,467	2.61%
Northern Municipal Landfill	3,504,187	1,113,581	556,791	2,390,606	1,195,303	2061	28,087	14,057	0.80%
Quarantine Road Landfill	18,320,622	9,612,156	11,246,251	8,708,466	10,188,931	2026	298,639	112,893	1.63%
Reichs Ford/Site B Municipal Sanitary Landfill	7,326,426	3,599,325	2,027,344	3,727,101	2,093,771	2045	53,000	14,788	0.72%
St. Andrews Municipal Landfill*	0	0	0	0	0	2001	0	0	0
Somerset County Landfill – Fairmount Site	1,610,000	662,857	385,120	947,143	408,610	2024	40,954	23,801	2.54%
<b>Totals</b>	<b>174,122,240</b>	<b>73,404,374</b>	<b>48,665,115</b>	<b>100,717,866</b>	<b>58,261,973</b>		<b>2,389,485</b>	<b>1,512,614</b>	<b>1.37%</b>

\* St. Andrews 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 2005-WMF-0138 to operate the closed St. Andrews 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 2011 (CY) ÷ Permitted Capacity (CY)

Construction and Demolition Debris landfills (Table 17) reported a total available capacity of 13,132,862 tons with 525,684 tons disposed in CY 2011. At the current disposal rate, there would be approximately 25 years (13,132,862 tons ÷ 525,684 tons) of available C&D landfill capacity in Maryland.

**Table 17 – C&D 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 2011 (CY)	Landfilled in 2011 (Tons)	Used in 2011 ^
Baker Rubble Landfill	820,000	542,754	317,999	277,246	117,001	2022	18,314	12,762	2.23%
Days Cove Rubble Landfill – Lateral Expansion	3,200,000	1,671,904	1,020,440	1,528,096	1,139,560	2018	199,357	119,891	6.23%
Honeygo Run Reclamation Center	11,723,461	3,998,393	2,785,249	7,725,068	4,381,600	2048	172,117	116,111	1.47%
Ritchie Land Reclamation Partnership Phase I & II	7,255,800	697,799	697,799	6,558,001	6,477,214	2052	276,921	276,920	3.82%
Washington County Rubble Landfill	2,201,664	166,690	83,345	2,034,974	1,017,487	2061	0	0	0.00%
<b>TOTALS</b>	<b>25,200,925</b>	<b>7,077,540</b>	<b>4,904,832</b>	<b>18,123,385</b>	<b>13,132,862</b>		<b>666,709</b>	<b>525,684</b>	<b>2.65%</b>

^ Equal to Landfilled in 2011 (CY) ÷ Permitted Capacity (CY)

Industrial landfills (Table 18) reported a total available capacity of 6,399,571 tons. At a current disposal rate of 39,728 tons/year (1,614,460 tons not included in the tons/year disposal rate calculation. See Industrial Waste Landfill section on Page 8, for details), there would be approximately 161 years (6,399,571 tons ÷ 39,728 tons) of available industrial landfill capacity in Maryland.

**Table 18 – Industrial 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 2011 (CY)	Landfilled in 2011 (Tons)	Used in 2011 ^
W.R. Grace and Co. – Davison Chemical Division	495,000	102,503	106,892	392,497	409,304	2027	23,887	24,910	4.83%
Eastalco Aluminum Company	380,000	79,517	109,256	300,483	412,864	2050	0	0	0.00%
Millennium Inorganic Chemicals – HPP Landfill	7,293,378	2,279,841	3,813,323	5,013,537	5,577,403	2019	1,013,299	1,629,278	13.89%
<b>TOTALS</b>	<b>8,168,378</b>	<b>2,461,861</b>	<b>4,029,471</b>	<b>5,706,517</b>	<b>6,399,571</b>		<b>1,037,186</b>	<b>1,654,188</b>	<b>12.70%</b>

^ Equal to Landfilled in 2011 (CY) ÷ Permitted Capacity (CY)

Landclearing Debris landfills (Table 19) reported a total available capacity of 152,616 tons with 2,312 tons disposed in CY 2011. At the current disposal rate, there would be approximately 66 years (152,616 tons ÷ 2,312 tons) of available landclearing debris landfill capacity in Maryland.

**Table 19 – Landclearing Debris 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 2011 (CY)	Landfilled in 2011 (Tons)	Used in 2011 ^
Howlin Landclearing Debris Landfill	64,120	44,184	55,230	19,936	24,920	2016	1,740	2,175	2.71%

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 2011 (CY)	Landfilled in 2011 (Tons)	Used in 2011 ^
Knott Landclearing Debris Landfill	94,500	75,623	6,877	18,877	1,123	2015	2	2	0.00%
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	20,330	30,495	34,850	52,275	2025	90	135	0.16%
<b>TOTALS</b>	<b>506,292</b>	<b>289,710</b>	<b>189,988</b>	<b>216,582</b>	<b>152,616</b>		<b>1,832</b>	<b>2,312</b>	<b>0.36%</b>

^ Equal to Landfilled in 2011 (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.). MDE promotes and encourages waste diversion across Maryland by partnering with Maryland's jurisdictions and the public and private sectors to develop markets for recyclable materials. MDE 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, filed by Maryland Counties and Baltimore City with MDE, that capture solid waste exported directly out of State without passing through a Maryland permitted facility, and from Maryland permitted Solid Waste Tonnage Reports filed with MDE.

### Maryland's Legislative Mandate

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

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. (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.

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. (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.
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.
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 MDE 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 MDE 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 revised 30 percent recycling rate mandate. Voluntary recycling and waste diversion rates of 55 percent and 60 percent, respectively were established for 2020 (2012).

The MRA excludes from its scope scrap metal, landclearing 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.

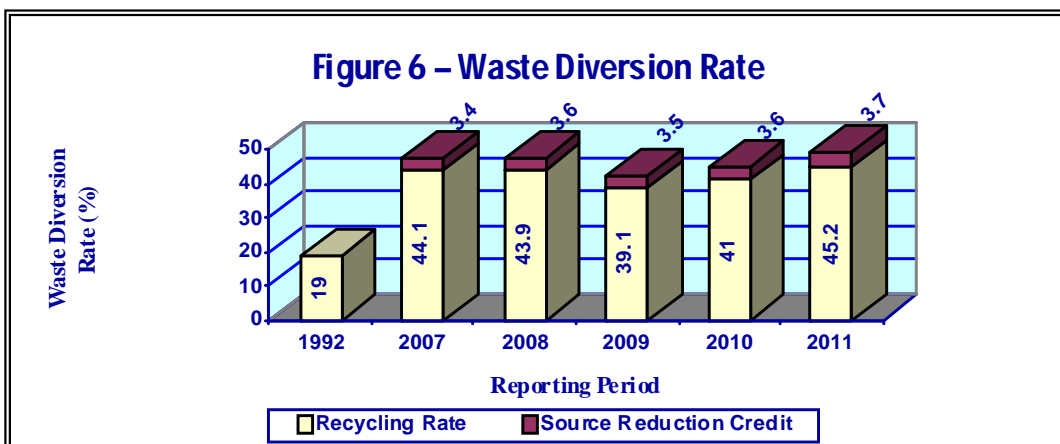
Additional legislative action impacting recycling in Maryland includes:

- ▶ 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, Statewide 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 MDE 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 MDE to report to the Governor and Legislature detailing the Statewide collection, reclamation, and recycling of all products containing mercury (2006).
- ▶ Requiring motor vehicle manufacturers to develop and submit to MDE a mercury minimization plan that includes information on mercury switch removal from motor vehicles (2009).

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## Maryland's 48.9 Percent Waste Diversion Rate

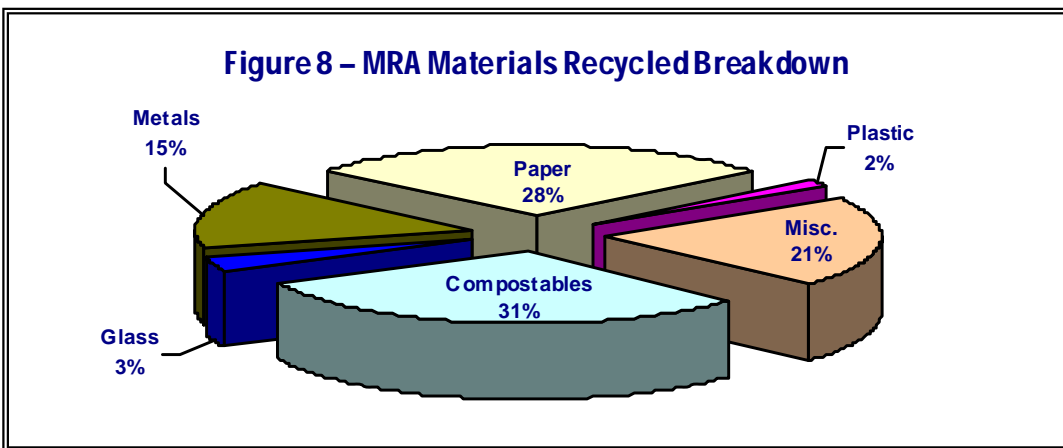
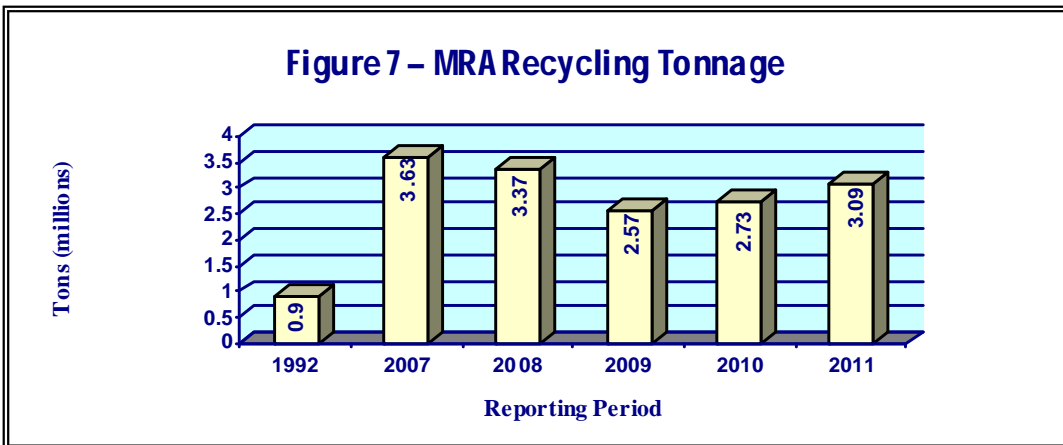
The recycling rate plus the source reduction (SR) credit make up the waste diversion rate. Through the efforts of its citizens, businesses, and government agencies, Maryland achieved a Statewide waste diversion rate of 48.9 percent in calendar year (CY) 2011. The 48.9 percent waste diversion rate was composed of a 45.2 percent MRA recycling rate and a 3.7 percent SR credit. This exceeds the requirements of the MRA and the 40 percent waste diversion goal targeted for 2005. Figure 6 provides a historical breakdown of Maryland's waste diversion rate.



## Maryland's 45 Percent Recycling Rate

In CY 2011, Maryland residents and businesses recycled 45.2 percent (MRA recycling tonnage ÷ (MRA recycling tonnage + MRA waste disposed)) of the municipal solid waste generated. To encourage more recycling, states across the country are seeking alternative ways (*e.g.*, single stream recycling, Pay-As-You-Throw Programs, etc.) 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 2011. Compostables and paper materials constituted the largest portion of materials recycled (miscellaneous materials are comprised of multiple materials, the largest being municipal incinerator ash at over 62 percent of the total miscellaneous materials). 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 2011***Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2011*

County	MRA Rate <sup>2</sup> (%)	Waste Diversion Rate <sup>3</sup> (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables* <sup>4</sup>	Total Recycling*
			Compostables	Glass	Metals	Paper	Plastic	Misc.	Subtotal*		
<b>Allegany</b>	31.83	<b>33.83</b>	5,546	247	6,549	7,334	798	8,561	29,035	155,317	184,352
<b>Anne Arundel</b>	47.17	<b>51.17</b>	135,227	12,955	46,865	87,009	9,822	23,492	315,370	191,484	506,854
<b>Baltimore City</b>	27.89	27.89	18,932.61	4,129	8,599	38,506	2,077	131,565	203,809	252,696	456,505
<b>Baltimore County</b>	43.53	<b>48.53</b>	112,873	8,549	83,986	105,033	8,136	125,819	444,396	982,243	1,426,639
<b>Calvert</b>	52.42	<b>53.42</b>	31,282	1,271	4,913	9,585	623	1,932	49,606	20,568	70,174
<b>Carroll</b>	47.40	<b>52.40</b>	62,635	8,875	6,296	11,843	3,624	3,852	97,125	456,930	554,055
<b>Cecil</b>	39.07	<b>43.07</b>	23,745	534	7,705	10,047	1,881	1,627	45,539	29,528	75,067
<b>Charles</b>	53.57	<b>58.57</b>	13,031	2,703	40,125	18,088	1,959	1,631	77,537	738,986	816,523
<b>Dorchester</b>	22.18	22.18	3,075	100	186	1,748	71	3,700	8,880	3,023	11,903
<b>Frederick</b>	44.78	<b>49.78</b>	31,647	2,996	4,645	43,434	2,967	30,241	115,930	64,585	180,515
<b>Garrett</b>	50.93	<b>51.93</b>	17,002	237	724	2,177	120	2,151	22,411	10,800	33,211
<b>Harford</b>	55.46	<b>59.46</b>	51,392	2,312	9,300	62,027	747	36,095	161,873	9,343	171,216
<b>Howard</b>	48.5	<b>52.50</b>	100,205	16,457	6,792	81,600	4,963	8,642	218,659	136,940	355,599
<b>Mid-Shore<sup>1</sup></b>	50.83	50.83	13,566	1,617	19,095	30,416	776	52,432	117,902	86,468	204,370
<b>Montgomery</b>	57.68	<b>62.68</b>	194,697	20,977	79,153	144,969	6,622	180,258	626,676	84,780	711,456
<b>Prince George's</b>	44.11	<b>49.11</b>	84,984	9,660	133,354	123,782	7,586	15,680	375,046	363,606	738,652
<b>Somerset</b>	18.02	18.02	36	51	3,071	116	40	558	3,872	13,612	17,484
<b>St. Mary's</b>	30.63	<b>34.63</b>	10,615	746	5,546	5,973	602	1,326	24,808	18,279	43,087
<b>Washington</b>	46.81	<b>47.81</b>	1,676	1,241	1,120	72,547	3,141	2,381	82,106	48,028	130,134
<b>Wicomico</b>	26.94	26.94	11,936	832	4,916	13,414	2,648	1,153	34,899	12,053	46,952
<b>Worcester</b>	34.86	34.86	17,158	325	1,704	3,887	202	11,065	34,341	25,777	60,118
<b>State Highways of Additional Asphalt and Concrete Recycled</b>										173,418	173,418
<b>TOTAL*</b>	45.22	48.89	941,261	96,814	474,644	873,535	59,405	644,161	3,089,820	3,878,464	6,968,284

\* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values (*i.e.*, MRA = 3,089,816.73 tons, Non-MRA = 3,878,463.75 tons, Total = 6,968,280.48 tons).

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

<sup>2</sup> MRA Recycling Rate = MRA recycling tonnage ÷ (MRA recycling tonnage + MRA waste) x 100.

<sup>3</sup> Waste Diversion Rate = Recycling Rate + Source Reduction (SR) Credit (based on voluntary reporting of SR activities). **Bolded** rates include both recycling and SR activities.

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



Maryland's 39 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 towards 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 towards the MRA recycling rate. Based upon the information currently available to MDE, adjusting Maryland's recycling rate to EPA protocol reduces the amount of material allowed to count towards the recycling rate by 676,225 tons to 2,413,592 tons, for an EPA recycling rate of 39 percent. EPA's recycling rate goal is 35 percent by 2008.

### **Maryland's 3.7 Percent Source Reduction Credit**

In 2011, fifteen 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 2011 is available in the "State, County, and City Recycling Rates" section of MDE's web page at [www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling).

Non-profit groups are partnering with 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. As counties learn from their successful colleagues, even more SR programs are expected.

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## **Beyond the Maryland Recycling Act**

MDE encourages the recycling of all materials because of the environmental and economic benefits provided. Local governments continue to seek recycling opportunities beyond those that apply toward the MRA rate while businesses are constantly looking for recycling opportunities to reduce the money spent on waste disposal. However, since these "Non-MRA recyclables" do not count towards 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. Over 3.8 million tons of non-MRA materials were reported as recycled in 2011. Table 21 offers a breakdown by category of the non-MRA materials reported as recycled in 2011.

**Table 21 – Recycling of Non-MRA Materials in Tons**

*Compiled by the Maryland Department of the Environment  
from Reports Submitted for Calendar Year 2011*

<b>MATERIAL</b>	<b>TONS RECYCLED</b>
Antifreeze	3,129
Asphalt & Concrete	779,909
Coal Ash	392,832
Construction/Demolition Debris	769,869
Landclearing Debris	90,534
Scrap Automobiles	103,862
Scrap Metal	913,320
Sewage Sludge	80,355
Slag	442,624
Soils	254,685
Waste Oil	22,505
Other Materials	24,840
<b>TOTAL</b>	<b>3,878,464</b>

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## **Maryland’s 32.9 Percent All StAR Recycling Rate**

Maryland State government recycling is directed by the 1988 MRA (*i.e.*, § 9-1706 of the Environment Article, Annotated Code of Maryland), which mandates 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 increases 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 agency’s recycling plan is on file with MDE. Individual facility recycling plans are maintained at each location. As part of House Bill 929’s implementation process, MDE is asking all State agencies to revise their recycling plans to include steps towards reaching the goal by December 2012. In an effort to lead by example, MDE is asking each Agency to go a step further and set a recycling goal of at least 40 percent in 2015 in the plan update.

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. All StAR agencies each designate 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.

In 2011, State agencies recycled approximately 30,755 tons of MRA materials for an overall MRA recycling rate of 32.9 percent. Table 22 summarizes the performance of each State agency participating in the All StAR program.

Additionally, State government recycled over 228,387 tons of non-MRA materials, including construction and demolition debris, antifreeze, motor oil, scrap metal, landclearing debris, concrete, and asphalt, that do not count toward the MRA Recycling Rate. A complete breakdown of the 2011 All StAR statistics is available under "State Agency Recycling" on MDE's web page at [www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling). MRA tonnages reported by State agencies are included in the 2011 recycling totals reported by the counties (Table 20).

**Table 22 – Maryland State Agencies' 2011 Recycling Rates**

*Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2011*

Agency Name	No. of Sites	No. of Sites Reporting	No. of People*	Total MRA Recycling 2011 (tons)	2011 MRA Recycling Rate (%)^
<b>Department of General Services</b>	22	22	9,836	837.88	30.88
Department of Labor, Licensing & Regulation	12	12	1,291	152.15	19.41
Department of Agriculture	3	0	NR	NR	NR
<b>Maryland Public Broadcasting Commission</b>	1	1	175	45	29.68
<b>Comptroller of the Treasury</b>	1	1	825	203.24	79.63
<b>Maryland School for the Deaf</b>	2	2	991	113.72	35.35
<b>Department of Natural Resources</b>	2	2	625	30.46	39.42
Department of Juvenile Services	15	15	2,340	140.32	10.11
<b>Maryland State Archives</b>	1	1	93	7.94	23.71
<b>Department of the Environment</b>	1	1	880	43.29	38.31
<b>Department of Transportation</b>	78	78	25,832	12,686.00	53.27
<b>Department of Health and Mental Hygiene</b>	12	11	5,953	1,571.48	22.43
Maryland General Assembly	1	1	992	47.45	13.29
Dept. of Public Safety and Correctional Services	27	27	35,569	2,998.95	18.71
<b>Department of Human Resources</b>	14	14	4,936	473.37	24.15
<b>Department of Assessments and Taxation</b>	1	1	11	0.84	21.14
<b>University of Maryland System</b>	17	17	141,185	8,751.34	36.80
<b>St. Mary's College of Maryland</b>	1	1	2,491	984.30	46.27
Morgan State University	1	1	9,241	167.87	17.83
<b>Department of Education</b>	4	4	1,206	98.18	20.90
<b>Maryland Automobile Insurance Fund</b>	1	1	375	55.07	46.88
Maryland Stadium Authority	1	1	1,100	388.77	19.72
Baltimore City Community College	1	1	8,796	9.99	3.17
<b>Maryland Environmental Service</b>	1	1	230	21.07	70.09
Maryland Food Center Authority	1	1	1,327	343.40	4.77
Judiciary of Maryland	1	0	NR	NR	NR
<b>Subsequent Injury Fund</b>	1	1	18	1.62	25.00
Department of Veterans Affairs	1	0	NR	NR	NR

Agency Name	No. of Sites	No. of Sites Reporting	No. of People*	Total MRA Recycling 2011 (tons)	2011 MRA Recycling Rate (%)^
Department of Budget and Management	1	1	185	8.86	29.87
Maryland State Police	27	27	1,659	347.95	29.85
Dept. of Housing and Community Development	3	3	427	195.92	80.67
Maryland Insurance Administration	1	1	780	28.30	50.28
<b>TOTALS</b>	<b>256</b>	<b>250</b>	<b>259,369</b>	<b>30,754.73</b>	<b>32.91</b>

\* State employees comprise approximately 77,777 of the total number of people at State Agency Locations.

^ The 1988 Maryland Recycling Act mandates a State Government recycling rate of at least 20 percent.

**Bold Type** – Satisfied the 20 percent recycling rate  
 NR = No Report filed at time of publishing

Recycling Rate greater than previous year  
 Not all offices reported

State agencies achieve cost savings by boosting the amount of waste diverted to recycling and by reducing the total amount of waste generated. Greater savings are realized by reducing the amount of waste generated. Consider the following money-saving scenarios based upon 2011 data with an average Maryland tipping fee of \$58:

- s Maryland State government potentially realized \$1,783,775 of avoided disposal costs by recycling 30,755 tons of MRA material.
- s If each State agency (per the EO) achieves a 20 percent recycling rate by increasing its MRA tonnage, \$94,262.76 in additional avoided disposal costs would be realized for a potential total savings of \$1,878,037.76.
- s If each State agency (per the EO) achieves a 20 percent recycling rate by decreasing the amount of waste generated, additional savings of \$449,054.56 would be realized for a potential total savings of \$2,232,829.56.

MDE is working with State agencies to implement § 9-1706(b) of the Environment Article, Annotated Code of Maryland and continues to encourage State agencies to expand their recycling programs. MDE provides technical support, on-site expertise, and publishes the *All StAR News*, a newsletter devoted to recycling in State government, which made its return in mid 2012 – see Appendix D for an example. Finally, MDE acts as an information clearinghouse by forwarding any relevant recycling information to the appropriate State offices.

The ability to get 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, not enough 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. Requiring recycling to be integrated into State office space leases and janitorial contracts, similar to the way waste collection contracts are currently handled, would overcome this obstacle and make improvements in the recycling programs for Maryland State government. According to the Lease Management and Procurement Division of the Department of General Services (DGS), this requirement is now a part of all future DGS leases and should begin rollout in 2013.

In addition, State agency recycling rates could be improved by designating a recycling coordinator for each State office that has the responsibility for ensuring recycling goals are met. Finally, State offices must have the means necessary to support successful recycling programs such as material staging areas and proper recycling bin locations.

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## Climate Change

Atmospheric concentrations of greenhouse gases (GHG) such as carbon dioxide, methane, and nitrous oxide, which trap the sun's energy from radiating back into space, have dramatically increased since the industrial revolution of the mid 19<sup>th</sup> century. Largely as a result of this increase in GHGs, average global temperature and sea level began to increase rapidly during the 20th century. As a result of this change in climate, Maryland can expect to see changes to its: water resources and aquatic environments; farms and forests; coastline; Chesapeake Bay and coastal ecosystems; and human health.

According to the U.S. Environmental Protection Agency (EPA), energy-related activities account for three-quarters of human-generated GHG emissions in the U.S. More than half of the energy-related emissions come from large stationary sources such as power plants, while about a third comes from transportation. Industrial processes (such as the production of cement, steel, and aluminum), agriculture, forestry, other land use, and waste management are also important sources of greenhouse gas emissions in the United States.

In April 2007, in response to the mounting evidence of the adverse impacts that climate change has on the environment, Governor Martin O'Malley established the Maryland Commission on Climate Change (Commission). The Commission was charged with developing a plan for Maryland that discusses the drivers and consequences of climate change, identifies the necessary preparations for its ensuing impacts on the State, and establishes firm benchmarks and timetables for policy implementation. Additional information on climate change and the Maryland Commission on Climate Change are available on MDE's web page at [www.mde.state.md.us/programs/Air/ClimateChange/Pages/Air/climatechange/index.aspx](http://www.mde.state.md.us/programs/Air/ClimateChange/Pages/Air/climatechange/index.aspx) and the EPA's web page at [www.epa.gov/climatechange/index.html](http://www.epa.gov/climatechange/index.html).

Using the EPA WARM (**W**aste **R**eduction **M**odel), Tables 23 and 24 detail greenhouse gas and energy scenarios over the lifecycle (*i.e.*, from production of a glass bottle → use of a glass bottle → disposal/recycling of glass bottle → production of a new glass bottle) of common recyclable materials when comparing alternative solid waste management methods vs. the landfilling of a product. In all cases where either recycling or source reduction is used instead of landfilling, there were savings in the amount of greenhouse gasses emitted or energy used. Only when combusting a material instead of landfilling it were there increases in the amount of greenhouse gasses emitted or energy used.

**Table 23 – Per Ton Greenhouse Gas (MTCO<sub>2</sub>E\*) Emissions**

Material	MTCO <sub>2</sub> E – Landfilled	MTCO <sub>2</sub> E – Source Reduced	MTCO <sub>2</sub> E – Recycled	MTCO <sub>2</sub> E – Combusted
Aluminum Cans	0 **	(4.98) **	(8.93) **	0.01 **
PET Plastic Bottles	0 **	(2.26) **	(1.15) **	1.20 **
Newspaper	0 **	(3.84) **	(1.77) **	0.49 **
Glass	0 **	(0.57) **	(0.32) **	0.01 **

\* MTCO<sub>2</sub>E = 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 MTCO<sub>2</sub>E – 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 (BTU<sup>^</sup>)**

Material	BTU (million) – Landfilled	BTU (million) – Source Reduced	BTU (million) – Recycled	BTU (million) – Combusted
Aluminum Cans	0 **	(90.21) **	(153.29) **	0.10 **
PET Plastic Bottles	0 **	(50.92) **	(32.60) **	(10.77) **
Newspaper	0 **	(36.84) **	(16.88) **	(8.00) **
Glass	0 **	(7.46) **	(2.66) **	0.00 **

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

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

Tables 25 and 26 detail product lifecycle GHG emissions and energy use with and without waste diversion activities in Maryland in CY 2011. In Table 25, for example, the GHG emissions associated with the lifecycle of glass is 14,947 metric tons of carbon dioxide (CO<sub>2</sub>) equivalent without waste diversion (*i.e.*, recycling and source reduction) activities, and -34,916 metric tons of CO<sub>2</sub> equivalent with Maryland’s waste diversion activities, for a total savings of 49,863 (*i.e.*, 14,947 - -34,916) metric tons of CO<sub>2</sub> equivalent. Additional information on EPA’s WARM is available at [www.epa.gov/climatechange/wycd/waste/calculators/Warm\\_home.html](http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html).

GHG savings produced by Maryland’s waste diversion activities in 2011 (Table 25) are the equivalent of removing over 1.36 million passenger cars from the roadway each year, conserving over 779 million gallons of gasoline, conserving over 289 million cylinders of propane used for home barbeques, or conserving over 37,000 railway cars of coal. The energy savings reported in Table 26 are the equivalent of the annual energy consumption of over 510,000 households (*i.e.*, 21 percent of the estimated 2,391,350 households in Maryland in 2011), or the amount of energy contained in over 9.8 million barrels of oil or over 458 million gallons of gasoline. The 7+ million metric tons of carbon dioxide equivalent emission savings is 6.9 percent better than the nearly 6.6 million tons savings reported in 2010. Similarly, the 59+ trillion british thermal unit savings is a 17.4 percent increase over the nearly 50.6 trillion savings reported in 2010.

**Table 25 – Maryland Waste Diversion and GHG Emissions  
for Calendar Year 2011**

MRA Material	MTCO <sub>2</sub> NWD	MTCO <sub>2</sub> WD	MTCO <sub>2</sub> Savings	MTCE NWD	MTCE WD	MTCE Savings
<b>Compostables</b>	379,031	267,680	(111,351)	103,373	73,004	(30,369)
<b>Glass</b>	14,947	(34,916)	(49,863)	4,077	(9,523)	(13,600)
<b>Metals</b>	(158,154)	(2,315,234)	(2,157,080)	(43,133)	(631,427)	(588,294)
<b>Paper</b>	(625,358)	(4,932,883)	(4,307,525)	(170,552)	(1,345,332)	(1,174,780)
<b>Plastic</b>	336,522	158,230	(178,292)	91,779	43,153	(48,626)
<b>Miscellaneous</b>	32,884	(220,113)	(252,997)	8,966	(60,030)	(68,987)
<b>TOTAL</b>	(20,128)	(7,077,236)	(7,057,108)	(5,490)	(1,930,155)	(1,924,656)

MTCO<sub>2</sub> = Metric Tons of Carbon Dioxide Equivalent

MTCE = Metric Tons of Carbon Equivalent

NWD = No Waste Diversion (baseline = 72.47% landfilled and 27.53% incinerated)

WD = Waste Diversion from Maryland CY 2011 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 2011**

*(in million BTUs)*

MRA Material	BTUs NWD	BTUs WD	BTU Savings
<b>Compostables</b>	(820,413)	101,526	921,939
<b>Glass</b>	194,264	(257,283)	(451,547)
<b>Metals</b>	(1,700,064)	(35,754,813)	(34,054,749)
<b>Paper</b>	(4,427,606)	(23,740,116)	(19,312,510)
<b>Plastic</b>	(3,404,697)	(7,955,210)	(4,550,513)
<b>Miscellaneous</b>	(2,801,391)	(4,739,588)	(1,938,197)
<b>TOTAL</b>	(12,959,907)	(72,345,484)	(59,385,577)

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

NWD = No Waste Diversion (baseline = 72.47% landfilled and 27.53% incinerated)

WD = Waste Diversion from Maryland CY 2011 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.

## Promoting Recycled Products

The collection, sorting, and use of recycled materials in the manufacturing of new products are just part of the recycling process. Once manufacturers turn recyclables into products, it becomes every citizen's responsibility to "close the loop" and buy products made of recycled material. MDE works to create demand for these products by:

- ⦿ Promoting a Buy Recycled training manual and program developed by the Maryland Environmental Service (MES) for government purchasing agents.

The training manual provides information on increasing purchases of products made with recycled materials.

- ⊙ With information resources provided by MDE, recycled content items and the recycling process is being discussed in county presentations to schoolchildren in grades K-12.

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

- ❖ State government is required to purchase products with recycled content whenever practicable. A 5 percent pricing preference over similar items not made from recycled material is allowed.
- ❖ MDE works cooperatively with the Maryland Department of General Services (DGS) to promote government purchasing of materials with recycled content.
  - In FY 2012, buying paper products made with recycled content paper was the rule, not the exception, with over 97 percent 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](http://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.

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## Special Programs

From July 2010 through June 2011, MDE continued implementing special programs designed to expand recycling and protect public health and the environment.

### Newsprint

Maryland law mandates that, on a Statewide basis, newspapers distributed in Maryland shall contain at least 40 percent recycled content newsprint. To determine compliance with the law, publishers are required to file quarterly and annual reports with MDE. In the year following a reporting period (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 shall 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 2011, the newsprint recycled content percentage was 53.8 percent, exceeding the requirements of the MRA.



Table 27 contains 55 known publishers that distribute 152 different newspapers in Maryland. MDE continues to seek increased compliance from publishers who did not fulfill reporting requirements.

**Table 27 – Maryland Newspaper Publishers**

<b>Publisher</b>	<b>Content %</b>	<b>Publisher</b>	<b>Content %</b>
A&C Business News	NR	Greenbelt Cooperative Publishing	NR
Afro-American Newspapers	40.0	Herald-Mail	55.0
Alter Communications	41.2	Independent Newspapers, Inc.	40.8
American Farm Publications	44.3	Kimbel Publications	40.1
Ascend Communications	50.6	Korea Daily	81.3
Baltimore Business Journal	23.9	Landmark Community Newspapers	40.4
Baltimore Sun Community Newspapers	100	Latin American Times	NR
Baltimore Sun Media Group	90.4	Legal Times	NR
Baltimore Times Publications	NR	Maryland Coast Dispatch	NR
Bay Weekly	41.9	Morgan Messenger	27.9
Capital-Gazette Newspapers	51.2	New York Daily News	86.4
Carroll Publishing Company	28.3	New York Times Company	29.7
Catholic Review	32.2	News Journal, Wilmington	17.8
Chatsworth Enterprises	40.1	Post Newsweek Media	54.6
Chesapeake Publishing Corporation	32.4	Prince George's Post	30.3
Citizen Communications, Inc.	100	Randall Family, LLC	34.7
City Paper	21.0	Sentinel Newspapers	NR
Connection Publishing	100	Sincell Publishing Company	NR
Courier	38.6	Southern Maryland Publishing Co.	NR
Cumberland Times News	27.9	USA Today	24.6
Daily Record	40.7	Washington Business Journal	NR
Dow Jones & Company	18.6	Washington County Pickett	NR
El Tiempo Latino	40.6	Washington Newspaper Company	NR
Express Publications Company, LLC	47.4	Washington Newspaper Publishing Co., LLC	36.5
Flag Communications	44.6	Washington Post	41.2
FT Publications, Inc.	31.7	Washington Times	85.6
Gannett Company, Inc.	28.3	Western Montgomery Bulletin	48.7
Gay & Lesbian Community Ctr. Of Baltimore	36.0	<b>Statewide</b>	53.8
<b>NR – Did not report</b>		% 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 the State of Maryland, to use directory stock with a recycled content, by weight, of at least 40 percent. Publishers of telephone directories must file an annual report with MDE detailing the recycled directory stock content used in their directories.

There are four known publishers of telephone directories distributed in the State of Maryland. In 2011, recycled content for these directories was reported as follows:

- ✗ BSMG Directories – Did Not Report;
- ✗ Super Media - 40 percent recycled content;
- ✗ Yellow Book – 11.4 percent recycled content; and
- ✗ Yellow Pages Group Directories – Did Not Report.

Per the MRA, any publisher of telephone directories distributed in the State who fails to submit the required report shall be deemed to have failed to meet the percentages established. Per § 9-1709(f) or the Annotated Code of Maryland, Yellow Book requested and was granted a 1-year exemption from the recycled content requirement for 2011.

### **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, MDE in order to sell their products in Maryland. In 2012, the Maryland General Assembly passed House Bill 879 Environment, Chapter 400 – Statewide Electronics Recycling Program, modifying the SERP. Effective October 1, 2012, the modified SERP now bases the annual registration fee on the number of CEDs sold in Maryland the previous year. Other changes include additional requirements for an approved electronic takeback program, the date the registration is due to MDE, and enforcement provisions. 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, MDE. 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 1,000 CEDs in Maryland in the prior year. The subsequent annual renewal registration fee can be reduced to \$500 provided the manufacturer has a MDE-approved takeback program.
- ★ An MDE-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 covered electronic device manufactured by a manufacturer that has not registered and paid the required registration fee to MDE.
- ★ Civil and administrative penalties may be assessed against manufacturers and retailers who fail to comply with the SERP.
- ★ Grants to counties and municipalities 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.

Through June 30, 2012, 73 manufacturers registered with MDE and were authorized to sell their products in Maryland in 2011. No eCycling grants were issued to the counties in Fiscal Year (FY) 2012 (July 1, 2010 through June 30, 2012).

Cumulative highlights of eCycling in Maryland from October 2001 **to December 2011**, include:

- ✓ 238 special collection events (*i.e.*, 1 or 2-day collection events) were held in 24 jurisdictions.
- ✓ There were 18 special events in 2010, a decrease of 18 over the 36 collection events in 2009.
- ✓ Permanent collection programs have been established in Anne Arundel, Baltimore, Calvert, Caroline, Carroll, Cecil, Charles, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Prince George's, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, and Worcester Counties, and Baltimore City.
- ✓ Regularly scheduled eCycling collection events are held in the cities of Annapolis, College Park, Greenbelt, Laurel, Salisbury, and Takoma Park.
- ✓ A one-day event in Baltimore County on April 30, 2005, collected over 89 tons of electronic equipment from 1,600 participants.
- ✓ Over 45,000 tons of electronic equipment has been collected for recycling throughout Maryland since the start of the eCycling program.

Information on Maryland's eCycling program is available on MDE's web page at [www.mde.state.md.us/eCycling](http://www.mde.state.md.us/eCycling). Table 28 gives a breakdown of the electronics equipment collected. An additional 5,151 tons of electronics from commercial businesses were reported by the counties in 2011 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	5,828,289	-	thru 12-31-10	-	36,319.59	72,639,187	-
<b>eCycling Special Events in 2011 ^</b>							
Allegany (3)	74,692	1-day	Apr, Jun, Oct	369	31.64	63,297	172
Howard (1)	293,142	1-day	Oct	338	3.09	6,180	18
Midshore Region * (2)	139,568	1-day	Apr, Nov	664	36.04	72,080	109
Montgomery (4)	989,794	1-day	Apr, May, Jun, Nov	1,578	68.05	136,100	86
Prince George's (6) **	871,233	1-day	Jan, Apr, Jul, Oct	1,260	51.82	103,714	82
Worcester (2)	51,514	1-day	Apr, Nov	493	25.66	51,320	125
Subtotal Events	2,419,943	-	2011	4,702.00	216.30	432,691	92
<b>Permanent eCycling in 2011</b>							
Anne Arundel ***	544,403	-	2011	-	1,329.42	2,658,865	-
Baltimore City	619,493	-	2011	-	650.22	1,300,441	-
Baltimore County	809,941	-	2011	-	1,760.88	3,521,766	-
Calvert	89,256	-	2011	-	455.53	909,060	-
Caroline	32,985	-	2011	-	15.23	30,460	-
Carroll	167,288	-	2011	-	411.72	823,440	-
Cecil	101,694	-	2011	-	105.61	211,220	-
Charles	149,130	-	2011	-	231.37	462,749	-
Frederick	236,745	-	2011	-	325.66	651,320	-
Garrett	30,051	-	2011	-	38.70	77,400	-
Harford	246,489	-	2011	-	182.11	364,220	-
Howard	293,142	-	2011	-	622.30	1,244,600	-
Kent	20,204	-	2011	-	10.30	20,600	-
Montgomery ***	989,794	-	2011	-	1,860.63	3,721,269	-
Prince George's ***	871,233	-	2011	-	30.83	61,660	-
Queen Anne's	48,354	-	2011	-	11.89	23,780	-
Somerset	26,339	-	2011	-	16.01	32,200	-
St. Mary's	107,484	-	2011	-	179.66	359,320	-
Talbot	38,025	-	2011	-	4.09	8,180	-
Washington	148,203	-	2011	-	189.10	378,200	-
Wicomico ***	99,190	-	2011	-	31.71	63,420	-
Worcester	51,514	-	2011	-	117.18	234,360	-
Subtotal Permanent	5,720,957	-	2011	-	8,580.15	17,158,530	-
<b>TOTALS (2001 – 2011)</b>				<b>4,702 (2011)</b>	<b>45,116.04</b>	<b>90,230,408</b>	<b>92 (2011)</b>

\* Midshore Region is composed of Kent, Queen Anne's, Talbot, and Caroline Counties.

\*\* The totals for special events in the cities of Greenbelt and Laurel 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 Takoma Park's permanent eCycling drop-off were included in Montgomery County's permanent total. Totals from the City of College Park's permanent eCycling drop-off and Laurel's eCycling curbside program were included in Prince George's County's permanent total. Totals from the City of Salisbury's eCycling curbside program were included in Wicomico County's permanent total.

## **Mercury Recycling**

MDE is working to ensure compliance with HB 1263, Chapter 713, Acts of 2009 – Mercury Switch Removal from Vehicles (Environment Article Section 6-905.4 to 6-905.6). The law requires motor vehicle manufacturers to develop a mercury minimization plan that includes information on mercury switch removal from motor vehicles. Additionally, 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 2011 and 2012, MDE visited scrap recyclers in Maryland reminding them of their 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 scrap recyclers, the program pays scrap recyclers \$4 per switch that is returned for recycling. In 2011, 11,011 mercury containing switches containing 24.47 pounds of recovered mercury were collected for recycling. As of December 31, 2011, 138 recyclers of a possible 168 had enrolled in the program bringing the total amount of mercury containing switches recovered to 32,057 and 71.24 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 Section 6-905.4 to 6-905.6).

Mercury legislation enacted in 2006, Environment Article Section 6-905.2, prohibits the sale of mercury-containing thermostats by October 1, 2007. It also required that MDE report to the Governor and Legislature detailing the statewide collection, reclamation, and recycling of all products containing mercury.

## **Household Hazardous Waste (HHW)**

Environment Article § 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, MDE recommends the proper recycling/disposal of HHW materials at local HHW collection programs. Information on HHW programs in Maryland is available at [www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/EducationandOutreach/Pages/Programs/LandPrograms/Recycling/education/hhw.aspx](http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/EducationandOutreach/Pages/Programs/LandPrograms/Recycling/education/hhw.aspx).

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## **Business Resources**

MDE provides assistance to businesses that are interested in participating in Maryland's recycling program by guiding them through the State regulatory framework, consulting on recycling program implementation, and 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 MDE's recycling web page at [www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling) or directly at [www.mdrecycles.org](http://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. Businesses can also check the homepage of the Mid-Atlantic Consortium of Recycling and Economic Development Officials (MACREDO) at <http://macredo.org/> for facilities in the region. The MACREDO database is searchable by business name, commodity group, facility type, member state, and metropolitan area and/or zip code. Additional links to other companies are available on MDE's recycling web pages for the specific commodity in question. For companies without access to the Internet, MDE can mail or fax a list of markets by material.

Automobile Tires – The Scrap Tire Recycling Act 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 MDE’s web page at [www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/Publications/Pages/Programs/LandPrograms/Recycling/publications/index.aspx](http://www.mde.state.md.us/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 MDE’s household hazardous waste web page at [www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/EducationandOutreach/Pages/Programs/LandPrograms/Recycling/education/hhw.aspx](http://www.mde.state.md.us/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 MDE’s recycling web page at [www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling) or directly at [www.mdrecycles.org](http://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**

<b>Company Name</b>	<b>Telephone Number</b>
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 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 MDE’s web page at [www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling). Additionally, resources for residents and businesses are available under “Metals” in the “Recycling Market Directory” available on MDE’s recycling web page.

### **Permitting Guidance**

Documents are available and regularly updated through MDE 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 MDE’s web page at [www.mde.maryland.gov/programs/permits/pages/busguide.aspx](http://www.mde.maryland.gov/programs/permits/pages/busguide.aspx). It contains important information about the different types of permits, licenses and approvals issued by the Maryland Department of the Environment (MDE). These permits affect businesses and individuals ranging from well drillers, dry cleaners, and gas stations, to power plants and other large industrial facilities. MDE developed this guide as part of its continued commitment to provide excellent service to its permitting customers. The information in this guide can help businesses determine their permitting needs.

*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 MDE's web page at [www.mde.maryland.gov/programs/land/recyclingandoperationsprogram/educationandoutreach/pages/programs/landprograms/recycling/education/permits.aspx](http://www.mde.maryland.gov/programs/land/recyclingandoperationsprogram/educationandoutreach/pages/programs/landprograms/recycling/education/permits.aspx). Additionally, specific information on composting in Maryland, including a “Composting Operation Permitting Fact Sheet” is available on MDE’s composting web page at [www.mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/SpecialProjects/Pages/Programs/LandPrograms/Recycling/specialprojects/composting.aspx](http://www.mde.maryland.gov/programs/Land/RecyclingandOperationsprogram/SpecialProjects/Pages/Programs/LandPrograms/Recycling/specialprojects/composting.aspx).

*Solving the Permit Puzzle in Maryland* – This document outlines common State permit procedures and permits that may be required of recycling and composting businesses. It is available on MDE's web page at



[www.mde.maryland.gov/programs/land/recyclingandoperationsprogram/publications/documents/www.mde.state.md.us/assets/document/recycling/solvingpuz.pdf](http://www.mde.maryland.gov/programs/land/recyclingandoperationsprogram/publications/documents/www.mde.state.md.us/assets/document/recycling/solvingpuz.pdf). Information on permit requirements is available on MDE's web page at [www.mde.state.md.us/programs/permits/Pages/index.aspx](http://www.mde.state.md.us/programs/permits/Pages/index.aspx).

### **Waste Diversion Guide**

*Commercial Waste Diversion Implementation Guide* – This document assists local recycling coordinators who are 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 MDE web page at [www.mde.maryland.gov/assets/document/recycling/commercialwasteguide.pdf](http://www.mde.maryland.gov/assets/document/recycling/commercialwasteguide.pdf).

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## **Public Resources**

As waste diversion programs continue to mature, it is important for MDE to keep the public informed of waste diversion programs in the State. From July 2010 through June 2011, MDE provided assistance and public education through efforts such as America Recycles Day, web resources, and county solid waste and recycling managers meetings.

### **America Recycles Day (ARD)**

America Recycles Day (ARD) is a national event that promotes recycling, source reduction, and buying products made from recycled materials as objectives to a more sustainable society. MDE held the tenth Annual "Rethink Recycling" Sculpture Contest on November 18, 2011 at MDE headquarters.

The "Rethink Recycling" Sculpture Contest featured over 65 entries from 29 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 larger-than-life portrait of Lady Gaga and depictions of a fish, a great blue heron, and a giraffe were among the winning pieces of artwork.

### **MDE Web Site**

Information on Maryland's waste diversion activities can be found on MDE's waste diversion web page at [www.mde.state.md.us/recycling](http://www.mde.state.md.us/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. MDE's website also offers Maryland's citizens and businesses the opportunity to e-mail MDE with questions or comments on recycling.

### **County Recycling & Solid Waste Managers Meetings**

MDE organizes regular joint County Solid Waste and Recycling Managers meetings in Maryland throughout the year. These meetings offer managers the opportunity to network and share ideas and gain insight to promote efficient solid waste management and recycling programs. MDE reports on the latest recycling activities, trends, and legislative and regulatory changes. Speakers from industry and government are invited to educate local governments on issues including news media and public education, new technologies, and initiatives such as pharmaceuticals disposal and recycling of compact fluorescent lightbulbs. In an effort to keep these forums focused and relevant, county managers are periodically surveyed regarding the meeting format and their technical support needs.

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## **Partnerships**

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

Maryland Recycling Network (MRN) – The MRN is a non-profit, volunteer organization ([www.marylandrecyclingnetwork.org](http://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. MDE supports the mission of the MRN through staff participation, funding, and projects. MDE attends MRN meetings and reports MDE's activities and accomplishments to MRN Board members and attendees.

Maryland Environmental Service (MES) – MES ([www.menv.com/](http://www.menv.com/)) recognizes that recycling is an element of effective waste management. MES assists the MDE-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 MDE. Additional information is available at 1-800-4RECYCLE.

Northeast Maryland Waste Disposal Authority (NMWDA) – The NMWDA ([www.nmwda.org/](http://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.

Mid-Atlantic Consortium of Recycling and Economic Development Officials (MACREDO) – MDE 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. Information about ongoing MACREDO projects is available on the MACREDO home page at <http://macredo.org/>. These projects involve organic material recovery, deconstruction/building material reuse, electronic product recovery, and green building.

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## County Waste Diversion Programs

County waste diversion programs are the key to the success of waste diversion in Maryland. MDE works cooperatively with each county to ensure that valuable market and program information is shared, analyzed, and discussed. Table 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, MDE's waste diversion web page contains detailed information on the county recycling programs and source reduction activities. Highlights of county programs in 2010 include:

- Seventeen (17) counties achieved waste diversion rates greater than the 40 percent waste diversion goal.
- Fourteen (15) counties earned SR credits. Six (6) of these counties, Baltimore, Carroll, Charles, Frederick, Montgomery, and Prince George's earned the maximum 5 percent SR credit.
- Seventeen (17) counties accept fluorescent lights for recycling.
- Nine (9) Counties accept expired medication for proper disposal.
- Twenty-Two (22) Counties had permanent electronic drop-off locations.
- Eighteen (18) eCycling collection events were held in nine (9) counties.
- Fourteen (14) counties operated textile collection programs.
- Fifteen (15) 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 MDE's waste diversion web page at [www.mde.state.md.us/was/recycling](http://www.mde.state.md.us/was/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 <sup>p</sup>	✓	✓	✓	✓/✓						eCycle event, batteries, hard cover books, tire events
Anne Arundel <sup>cs</sup>	✓		✓	✓/✓	✓	✓			✓	cooking oil, wood pallets, scrap metal, tires, shingles
Baltimore City <sup>cs</sup>	✓		✓	✓/✓	✓	✓				polystyrene, bagged leaves and Christmas tree only
Baltimore County <sup>cs</sup>	✓	✓	✓	✓/✓	✓	✓		✓	✓	cooking oil, gasoline, propane tanks, usable building material, residential rechargeable batteries
Calvert <sup>s</sup>	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	cooking oil, printer cartridges, oil filters, auto tires
Caroline			✓	✓/✓	✓		✓		✓	eCycle event; Mid-shore program
Carroll	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; scrap metal, vinyl siding, plastic bags, grease/oil, usable building material
Cecil <sup>cs</sup>	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	batteries, corks, latex paint, oil filters, propane tanks, refrigerant units, tires, wood pallets, vegetable oil
Charles <sup>cps</sup>	✓	✓	✓	✓/✓	✓	✓	✓		✓	cooking oil, household batteries, oil filters, propane tanks, tires; <b>No</b> books, paperboard
Dorchester				✓/✓				✓		<b>No</b> books
Frederick <sup>cs</sup>	✓	✓	✓	✓/✓	✓				✓	pesticide bottles, wood pallets, tires; <b>No</b> books
Garrett	✓			✓/✓	✓					#1 & 2 plastic only, inkjet & toner cartridges; <b>No</b> books
Harford <sup>cps</sup>	✓		✓	✓/✓	✓	✓	✓	✓		gasoline, pesticide containers, oil filters, propane tanks, inkjet cartridges
Howard <sup>cs</sup>	✓		✓	✓/✓	✓	✓	✓	✓	✓	propane tanks, asphalt roof shingles, scrap metal, reusable building materials, carpet, vegetable oil
Kent			✓	✓/✓	✓		✓	✓	✓	eCycle event; pesticide containers, boat shrink-wrap; Mid-shore program
Montgomery <sup>c</sup>	✓		✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; bicycles, cooking oil, propane tanks, tires, reusable building materials, scrap metal, rechargeable batteries, separated books
Prince George's <sup>cs</sup>	✓	✓	✓	✓/✓	✓	✓		✓	✓	eCycle event; cooking oil, mattress foam
Queen Anne's	✓		✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; boat shrink-wrap, passenger tires; Mid-shore program
St. Mary's <sup>s</sup>	✓	✓	✓	✓/✓	✓	✓	✓		✓	pesticide containers, oil filters, ink jet cartridges, cooking oil, rechargeable batteries, propane cylinders, scrap tires, scrap metal
Somerset <sup>s</sup>	✓		✓	✓/✓	✓			✓		propane tanks, rechargeable batteries; <b>No</b> books
Talbot			✓	✓/✓	✓		✓		✓	eCycle event; pesticides, boat shrink-wrap; Mid-shore program
Washington			✓	✓/✓	✓			✓	✓	propane tanks, cooking oil, tires, yard waste, polystyrene, rechargeable batteries
Wicomico				✓/✓	✓		✓	✓	✓	pesticides, wood pallets
Worcester			✓	✓/✓	✓		✓	✓	✓	eCycle event

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

# **APPENDIX**

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# **APPENDIX A**

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## Economic Benefits of Permitted Solid Waste Acceptance Facilities

This table provides information that was voluntarily reported by permitted solid waste acceptance facilities in 14 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 benefit to Maryland's communities that are provided by all permitted solid waste acceptance facilities. The facilities that updated their information in 2011 are highlighted by (\*).

**Table A1 – Economic Benefits**

<b>Jurisdiction</b>	<b>Site Name</b>	<b>Economic Benefits To Community</b>	<b>Value of Facilities Provided</b>	<b>Direct Employment Benefits (Salaries/No. of Employees)</b>	<b>Other Economic Benefits</b>
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.
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.
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.

<b>Jurisdiction</b>	<b>Site Name</b>	<b>Economic Benefits To Community</b>	<b>Value of Facilities Provided</b>	<b>Direct Employment Benefits (Salaries/No. of Employees)</b>	<b>Other Economic Benefits</b>
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.	\$78,000/10 employees.	The business intends to expand in future and continue to provide solid waste and recycling services for the community.
Baltimore City	Daniels Sharpsmart Inc. (Privately Owned)	Local employment, rent and other direct local purchases to support business.	Not provided.	14 employees. Salary and benefit valued at \$500,000.	Goods & services purchased locally for \$393,000. Other operational costs \$5,363.
Baltimore City	Baltimore Recycling Center, LLC* (Privately Owned)	The facility pays in excess of \$30,000 in property taxes per year.	The business has invested over four 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.	\$705,125/30 employees.	Purchased local goods and services for \$368,561, and fuel for 116,000. Paid \$13,249 for Tags and permits. Revenues of recycled material is in excess of \$390,000.
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	Revenues are collected from users of the landfill via user fees and excise taxes. County residents may use the convenience centers free of	The landfill operations and convenience centers are supported by a group of 38 staff with \$2,057,145 in salaries. The employees	The landfill capital and operational projects have utilized various contractors and vendors within Calvert County.

<b>Jurisdiction</b>	<b>Site Name</b>	<b>Economic Benefits To Community</b>	<b>Value of Facilities Provided</b>	<b>Direct Employment Benefits (Salaries/No. of Employees)</b>	<b>Other Economic Benefits</b>
		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.	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.	associated with the transfer station are neither hired, managed, evaluated, or 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]).	
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 events. Mulch for minimum fees.	Provides waste disposal and recycling opportunities for approximately 30% of Cecil County's population. These facilities provide outstanding recycling services. In 2006, Single Stream Recycling and recycling for ink cartridges was introduced. Solid waste staff provides recycling information and disposal guidelines.	\$400,000/23 Employees.	Special no cost or reduced cost program for recycling. Approximately \$7,000,000 generated by solid waste customers to operate this facility.
Frederick	Reichs Ford/Site B Municipal Sanitary Landfill/Transfer Station* (County Owned)	Free curbside recycling, 12 recycling drop-off centers, HHW collection, free mulch, yard waste	Disposal of C&D and MSW.	\$2.4 Million/43 employees.	Spent \$3.5 million on various recycling contracts and programs.

<b>Jurisdiction</b>	<b>Site Name</b>	<b>Economic Benefits To Community</b>	<b>Value of Facilities Provided</b>	<b>Direct Employment Benefits (Salaries/No. of Employees)</b>	<b>Other Economic Benefits</b>
		grinding & sampling and analysis of 29 off-site residential water wells adjoining landfill property.			
Harford	Harford Waste Disposal Center* (Publicly Owned)	Provides County residents with mulch and compost products free (up to 3 bags) or at a reduced cost for amounts up to two cubic yards.	Provides County residents with solid waste disposal services at a competitive cost. Provides recycling services at “no cost.”	\$2.2 Million/55 full time employees. Jobs include management, clerical, equipment operators, mechanics, chauffeurs, laborers, and weigh-master/attendants involved in both landfill and recycling activities.	\$0.92 Million Contractual Services. \$0.19 Million Supplies and Materials. \$0.35 Million Capital Equipment/ Fleet Management.
Howard	Work Place Essentials Transfer Station (Privately Owned)	Paid taxes and provides waste collection services to locality.	Assists County in providing collection of sanitary waste products originating from commercial restrooms in Baltimore, Howard, Anne Arundel Counties and others.	\$800,000/18 employees.	No information provided.
Howard	Ameriwaste Processing and Transfer Station (Privately Owned)	Payment of real estate, personal property and sales taxes to Howard County.	Facility supplements County facilities for solid waste disposal.	12 employees. Jobs include 53 equipment operators, 2 clerks, and 5 laborers.	\$200,000 in purchase from local vendors, \$19,000 in value of recycled items.
Montgomery	Montgomery County Solid Waste Transfer Station* (Publicly Owned)	Strategically located for easy access to accommodate residential, industrial and commercial use.	No information provided.	21 full time County employees. 59 full time Covanta Montgomery, Inc. and 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 Georges	Lawrence Street C & D Processing Facility*	Benefits include Taxes that support local infrastructure, jobs, and access to a	Strategically located for local customers.	Employs 10 people for estimated budget of \$640,000.	Goods and services purchased is approximately \$2 million, \$1.1Million

<b>Jurisdiction</b>	<b>Site Name</b>	<b>Economic Benefits To Community</b>	<b>Value of Facilities Provided</b>	<b>Direct Employment Benefits (Salaries/No. of Employees)</b>	<b>Other Economic Benefits</b>
		facility close by for local users.			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.	\$1.5 million /30 employees. Jobs include: director (1), assistant director (1), office staff (2), operations supervisor (1), weigh clerk full time (4) and part time (2), equipment operators (7), mechanics (2), recycling coordinator (1), residential drop-off attendants (4), part time drop off attendants (2), and part time guards for 4 inmate crew (2).	\$6 million annual operating budget spent locally for the purchase of materials, goods and services.
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.

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# **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	4/26/2014	- /5.85	13810 Hazmat Drive Cumberland, MD 21502
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	2008-WPT-0539	12/21/2013	- / 12.8	23 Stahl Road, Baltimore MD 21226. Accepts C&D Waste.
	Millersville Landfill and Resource Recovery Facility	WMF	CTY	895 / 460	2007-WMF-0240	11/1/2012	330 / 567	389 Burns Crossing Road, Severn MD 21144.
Baltimore City	BFI Baltimore Processing and Transfer Center	WPT	PRI	921 / 499	2007-WPT-0627	7/2/2013	- / 15.6	5800 Chemical Road, Baltimore MD 21226.
	Daniel's SharpSmart Special Medical Waste Processing Facility	WPT	PRI	950 / 525	2008-WPT-0633	2/9/2015	- / <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 Pheonix Services.
	Millennium Inorganic Chemicals – HPP 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	2008-WPT-0631	11/19/2014	- / 12.5	1030 Edison Highway, Baltimore MD 21213. Accepts Only C&D Waste.
	Quarantine Road Landfill	WMF	MUN	922 / 502	2010-WMF-0325	6/3/2015	126 / 153	6100 Quarantine Road, Baltimore MD 21226.
	Stericycle Medical Waste Processing Facility and Transfer Station	WPT	PRI	921 / 501	2009-WPT-0591	7/9/2014	- / 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
	Baltimore	Baltimore County Resource Recovery Facility	WPT	CTY	900 / 507	2010-WPT-0048	11/4/2015	6.0 / 7.3
Days Cove Rubble Landfill – Lateral Expansion		WRF	PRI	975 / 570	2009-WRF-0592	10/1/2014	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 Landfill		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	10/1/2014	77/117	10710 Philadelphia Road, Perry Hall MD

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
								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	2009-WTS-0599	5/11/2015	6.0 / 6.0	3310 Transway Road, Halethorpe MD 21227.
Calvert	Appeal Municipal Landfill	WMF	CTY	961 / 200	2007-WMF-0531	12/26/2012	30 / 350	401 Sweetwater Road, Lusby MD 20678.
	Appeal Transfer Station	WTS	PRI	961 / 200	2007-WTS-0519	5/30/2012	- / 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	12/12/2014	2.9 / 17.6	MD Rte. 2 & Dalrymple Road, Sunderland MD 20689.
	Howlin Landclearing Debris Landfill	WLC	PRI	961 / 200	2008-WLC-0577	5/22/2013	3.0 / 32.7	8580 Nursery Road, Lusby MD 20657.
	M.T. Parran Landclearing Debris Landfill	WLC	PRI	945 / 227	2009-WLC-0550	12/12/2014	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	2009-WPF-0597	7/9/2014	- / 0.2	7659 Binnacle Lane, Owings MD 20736
Caroline	Midshore II Solid Waste Regional Municipal Landfill	WMF	MES	405/113	2005-WMF-0608	2/2/2014	- / 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	8/3/2013	3 / 220	1400 Baltimore Boulevard, Westminster MD 21157.
	Roll-Off Express, Inc.	WPF	PRI	832 / 605	2007-WPF-0159	12/16/2012	- / 6.8	2900 Dede Road, Finksburg MD 21048.
Cecil	Cecil County Central Landfill	WMF	CTY	1107 / 644	2007-WMF-0532	10/21/2012	40 / 418	758 East Old Philadelphia Road, Elkton MD 21921.
	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	2007-WMF-0076A	2/3/2015	73 / 114	12305 Billingsley Road, Waldorf MD 20602.
	Naval Support Facility Indian Head Incinerator	WIN	FED	750 / 275	2009-WIN-0529	5/21/2014	- / 1	101 Strauss Avenue, Indian Head MD 20640.
Dorchester	Beulah Municipal Landfill	WMF	CTY	1115 / 307	2009-WMF-0554	5/26/2014	27 / 40	6812 East New Market-Ellwood Road, Hurlock MD 21643.
Frederick	Eastalco Aluminum Company Industrial Landfill	WIF	PRI	650 / 535	2009-WIF-0537	10/1/2014	10.2 / 20	5601 Manor Wood Road, Frederick MD 21703.
	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	2003-WMF-0582	5/8/2013	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.

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
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	2006-WPT-0616	9/12/2012	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	2000-WMF-0570	10/4/2012	77.4 / 286	3241 Scarboro Road, Street MD 21154.
	Harford County Resource Recovery Facility	WTE	PRI	994 / 573	2008-WTE-0576	3/20/2013	- / 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	2007-WPT-0578	11/20/2012	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	2009-WTS-0594	6/6/2015	- / 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	2009-WPF-0581	3/31/2014	- / 10.8	24120 Frederick Road, Clarksburg MD 20871.
	Montgomery County Resource Recovery Facility	WTE	CTY	671 / 501	2008-WTE-0538	5/5/2013	- / 35	21204 Martinsburg Road, Dickerson MD 20842.
	Montgomery Co. Site 2 Municipal Landfill	WMF	CTY	680 / 490	2009-WMF-0237	5/12/2014	125 / 650	3 miles southwest of Dickerson, MD 20842. Landfill Not Constructed.
	Montgomery County Solid Waste Transfer Station	WPT	CTY	845 / 465	2011-WPT-0617	1/10/2017	- / 43	16101 Frederick Road, Derwood MD 20850.
Prince George's	Brown Station Road Municipal Landfill	WMF	CTY	865 / 365	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.
	Ritchie Reclamation Rubble Landfill Phase I & II Marlboro Road	WRF	PRI	849 / 372	2010-WRF-0590 2010-WRF-0126	12/28/2015 4/29/2015	78 / 258	2001 Ritchie Marlboro Road, Upper Marlboro MD 20772.
	Brandywine Enterprises	WPT	PRI	826 / 391	2007-WPT-0218	9/12/2012	- / 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	2006-WPF-0626	10/9/2012	1.8/2.85	4700-A Lawrence Street. Hyattsville MD 20781
Queen Anne's	Baker Rubble Landfill	WRF	PRI	1046 / 429	2006-WRF-0622	4/20/2013	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.

County	Facility Name	Type	Owner Type	MD Grid * E / N	Permit Number	Expiration Date	Fill/Site Acreage	Site Location /Comments
	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	2009-WMF-0268	10/11/2014	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	2010-WMF-0144	4/1/2015	67 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties.
	Midshore Transfer Station	WTS	MES	1080 / 356	2010-WTS-0549	5/11/2015	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	10/13/2014	189 / 425	12630 Earth Care Road, Hagerstown MD 21740.
	Washington County Rubble Landfill	WRF	CTY	568 / 652	2009-WRF-0270	10/1/2014	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	2010-WMF-0283	4/5/2015	60 / 125	7161 Brick Kiln Road, Salisbury MD 21801.
	Peninsula Regional Medical Center	WPM	PRI	1201 / 186	2006-WPM-0505	12/21/2011	- / 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.

**Table B2 – Summary of Permitted Solid Waste Acceptance Facilities**

Type Of Facility	Number of Facilities
WMF: Municipal Solid Waste Landfill	24
WRF: Construction & Demolition Landfill	5
WLC: Landclearing Debris Landfill	5
WIF: Industrial Landfill	3
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	16
WTE: Waste to Energy/MSW Incinerator	3
<b>TOTAL</b>	<b>80</b>

<b>Type of Ownership</b>	<b>Number of Facilities</b>
CTY: County Government	32
PRI: Private (Commercial)	38
MUN: Municipal Government	3
UMD: University of Maryland System	1
FED: Federal Government	3
MES: Maryland Environmental Service	3
<b>TOTAL</b>	<b>80</b>

**Table B3 – Permitted Solid Waste Acceptance Facilities NOT in Operation**

<b>Jurisdiction</b>	<b>Site Name</b>	<b>Facility Type</b>	<b>Ownership Type</b>	<b>Status</b>
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
Washington	Washington County Rubble Landfill	C&D Landfill	County	Inactive
Wicomico	Bennett Processing Facility	Processing Facility	Private	Not Built

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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	Issued Date	Expiration Date	Phone Number	Fax Number
Anne Arundel	A-A Recycling, Inc. 8217 Baltimore-Annapolis Blvd., Pasadena MD 21122	GP	2011-NWW-GP01	9.90	9/12/11	9/11/16	(410) 437-7718	(410) 437-7718
	Bronson Contracting, Inc. 1000 Kembo Road Baltimore MD 21126	GP	2009-NWW-GP01	8.00	4/10/2009	4/9/2014	(410) 360-8587	(410) 360-1243
	L and W Recycling, Inc. 8316 Lokus Road Odenton MD 21113	GP	2006-NWW-GP01	12.00	10/20/06	10/19/11	(410) 670-0860	(410) 670-0863
Baltimore	King Mulch and Pallet 1114 Hengemihle Avenue Essex MD 21221	GP	2007-NWW-GP01	5.90	7/13/07	7/12/12	(410) 682-2992	(410) 574-0123
	Edrich Lumber, Inc. 9700 Old Court Road Baltimore MD 21244	GP	2010-NWW-GP01	12.00	6/25/10	6/24/15	(410) 922-5959	(410) 521-2778
	Hollins Organic Products, Inc. 6247 Falls Road Baltimore MD 21209	GP	2010-NWW-GP01	2.00	4/30/10	4/29/15	(410) 828-0210	(410) 823-7645
	Northwest Recycling, LLC 212 Cockeyes Mill Road Baltimore MD 21136	GP	2010-NWW-GP01	5.00	11/8/10	11/7/15	(410) 833-9369	(410) 833-3963
	Wirtz & Daughters, Inc. 6275 Days Cove Road White Marsh, MD 21162	IP	2010-NWW-0552	14.00	3/25/10	3/24/2015	(410) 335-0400	(410) 592-6248
Calvert	A.H Hatcher, Inc. 7185 Sawmill Road Lusby MD 20657	GP	2011-NWW-GP01	11.25	5/2/11	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	5/13/11	5/12/16	(410) 535-7666	(410) 968-2391
Carroll	C.J. Miller, LLC 390 Vision Way Westminster MD 21158	GP	2011-NWW-GP01	40.00	9/2/11	9/1/16	(410) 239-8006	(410) 239-4204
	Recycled Green Industries, LLC 7901 Kabik Court Woodbine MD 21797	GP	2008-NWW-GP01	30.00	3/5/08	3/4/13	(301) 674-6689	(301) 942-6734
Cecil	Chesapeake Wood Recycling 1726 East Old Philadelphia Road Elkton MD 21421	GP	2010-NWW-GP01	25.00	6/3/10	6/2/15	(410) 392-0770	(410) 392-2317
	Grass Busters Landscaping Company, Inc. Shop 383 Hotton Road Elkton MD 21921	GP	2010-NWW-GP01	48.80	4/9/10	4/8/15	(301) 292-1166	(301) 292-1197
Charles	James E. Hill 6585 Ripley Road Ripley MD 20646	GP	2010-NWW-GP01	8.50	11/3/10	11/2/15	(301) 518-2306	(301) 934-1536
	Beuchert Excavating, Inc. 12340 Crain Highway Newburg MD 20664	GP	2009-NWW-GP01	12.50	6/15/09	6/14/14	(301) 399-5088	(301) 274-2454
Frederick	Butler Wood Recycling 4039 Tuscarora Road Point of Rocks MD 21777	GP	2009-NWW-GP01	58.00	7/10/09	7/9/14	(301) 607-4541	(301) 874-8348
	Bussard Brothers Landscape Supply-5307-B Green Valley Rd Monrovia MD 21770	GP	2009-NWW-GP01	2.00	6/19/2009	6/18/2014	(301) 865-3925	(301) 865-8496
Harford	Arthur D. Heston 2304 Whiteford Road Whiteford MD 21169	GP	2007-NWW-GP01	3.67	11/2/07	11/1/12	(410) 692-2673	(410) 692-2253
	T&M Mulch, Inc. 1808 N. Fountain Green Road Bel Air MD 21015	GP	2007-NWW-GP01	7.30	4/13/07	4/12/12	(410) 838-2266	(410) 838-2266
	Comer Construction, Inc 900 Circelli Court Aberdeen, MD 21001	GP	2008-NWW-GP01	6.00	10/08/08	10/07/13	(410) 879-6094	(410) 638-0289

County	Facility & Location	Permit Type	Permit Numbers	Site Acreage	Issued Date	Expiration Date	Phone Number	Fax Number
	Crouse Construction Co. 1001 Philadelphia Road Aberdeen MD 21001	GP	2010-NWWW-GP01	25.00	6/9/10	6/8/15	(410) 879-1822	(410) 893-0045
Howard	Elkridge Recyclery 7531 Cemetery Lane Elkridge MD 21075	GP	2010-NWWW-GP01	15.00	3/31/10	3/30/15	(410) 471-4450	(410) 471-4450
Kent	Sharp Lawn & Tree Inc. 10010 Lakeside Lane Chestertown, MD 21620	GP	2011-NWWW-GP01	3	4/8/11	4/7/16	(410) 778-6302	(410) 778-3509
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville MD 20833	GP	2009-NWWW-GP01	107.50	8/14/09	8/13/14	(301) 540-2968	(301) 540-9630
	Twin Ponds Farm, LLC 15315 Mt. Nebo Road Poolesville MD 20837	GP	2008-NWWW-GP01	4.00	5/23/08	5/22/13	(301) 942-6700	(301) 942-6734
Prince George's	Grant County Mulch Facility 5402 Van Dusen Road Laurel, MD 20707	GP	2011-NWWW-GP01	25	9/27/11	9/26/16	(800) 749-7451	(800) 749-7451
Queen Anne's	Baker Rubble Landfill 501 4-H Park Road Queenstown MD 21658	IP	2006-NWWW-0620	3.00	12/13/06	12/12/11	(410) 827-8831	(410) 827-8831
	Pardoe's Lawn & Tree Service, Inc. 112 Deep Landing Road Chestertown, MD 21620	GP	2011-NWWW-GP01	15.98	4/8/11	4/7/16	(410) 778-2016	(410) 778-2022
	Grange Hall Yard 437 Grange Hall Road Centreville, MD 21617	GP	2010-NWWW-GP01	9.06	8/25/10	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-NWWW-GP01	343	10/8/10	10/7/15	(410) 822-6363	(410) 820-7789
Wicomico	Dunn's Tractor Services, Inc. 9042 Taylor Road Delmar MD 21875	GP	2009-NWWW-GP01	10.00	7/15/09	7/14/14	(410) 742-7429	(410) 742-7429
	Eastern Shore Forest Product, Inc. 3667 St. Lukes Road Salisbury MD 21804	IP	2005-NWWW-0615	2.00	12/13/06	12/12/11	(410) 548-7136	(410) 742-5540
<b>General Permits (GP):</b>								<b>30</b>
<b>Individual Permits (IP):</b>								<b>3</b>
<b>TOTAL</b>								<b>33</b>

# **APPENDIX D**

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# All STAR News

Summer 2012



## Maryland Legislature Revises State Agency Recycling Law

During Maryland's 2012 Legislative Session, the Maryland General Assembly passed House Bill 929: Environment – Recycling Rates and Waste Diversion – Statewide Goals, Chapter 692 Acts of 2012, which increases the amount of waste required to be recycled by State agencies to 30 percent in 2014.

As part of the implementation process, the Maryland Department of the Environment (MDE) is asking that all State agencies revise their recycling plans to include a recycling goal and steps towards reaching the goal. MDE would like to have all revised plans on file by December 2012. It is hoped that your recycling goal will be at least 40 percent in 2015. If your 2011 recycling rate is currently greater than 40 percent, then a goal that provides a reasonable increase is desired.

MDE's Recycling Unit is available to assist State agencies in developing

recycling programs. Contact Christy Bujnovszky for help with your All STAR program.

### Department of General Services' Recycling Competition

April through May 2012, the Maryland Department of General Services (DGS) held a recycling competition among DGS-managed buildings to improve recycling rates.

During the competition, the waste and recycling rates for DGS-managed buildings in central Maryland was monitored and reported on the DGS website.

Currently, State agencies are required to recycle at least 20 percent of the waste generated. However, DGS encouraged its facilities to exceed the current requirement.

For a list of participating buildings and their recycling weight totals and rates, see:

[www.dgs.maryland.gov/Recycling/](http://www.dgs.maryland.gov/Recycling/).

The winner of the competition was the Attman-Glazer building which is mainly occupied by the Department of Budget and Management (DBM). This location recycled 14.76 tons of waste and had a recycling rate of 39.0%!

John Pirro, DBM's Recycling

Have a story idea or specific questions on a topic? Send to Christy Bujnovszky at [cbujnovszky@mde.state.md.us](mailto:cbujnovszky@mde.state.md.us).

Coordinator, explained their success. The most important thing he could stress was to get your Agency's Secretary involved! The Secretary provided the impetus for cleaning out the files. He instructed that employees look through their files and recycle what was not needed anymore. This simple exercise proved to be a winner.

Congratulations to John Pirro and DBM for a job well done! For additional information on the competition, contact Anne Jackson of DGS at

[anne.jackson@dgs.state.md.us](mailto:anne.jackson@dgs.state.md.us)

### 21 State Agencies Reach 20% Goal

The 1988 Maryland Recycling Act (MRA) requires the development of a recycling plan that reduces the amount of solid waste disposed by State government by at least 20 percent or to an amount that is practical and economically feasible. In no case may the amount to be recycled be less than 10 percent. In 2011, twenty one State Agencies reached the 20% recycling goal and Maryland State Government, as a whole, exceeded the minimum rate and recycled 32.91 percent of the waste generated, this is an increase of 8.57 percentage points from 2010! Details are available on the Maryland State Agencies' 2011 Recycling Rates Table. (over)

The next All STAR News is scheduled for the Winter of 2012.

#### RECYCLING CONTACTS

MD Department of the Environment  
Land Management Administration  
[www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling)

Hilary Miller, Program Manager  
Waste Diversion and  
Utilization Program  
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1800 Washington Boulevard | Baltimore, MD 21230-1719 | [www.mde.state.md.us/recycling](http://www.mde.state.md.us/recycling)  
410-537-3314 | 800-633-6101 x3314 | TTY Users: 800-735-2258

Martin O'Malley, Governor | Anthony G. Brown, Lt. Governor | Robert M. Summers, Ph.D., Secretary

July 2012



## Maryland State Agencies' 2011 Recycling Rates

*Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2011*

Agency Name	No. of Sites	No. of Sites Reporting	No. of People*	Total MRA Recycling 2011 (tons)	2011 MRA Recycling Rate (%)^
Department of General Services	22	22	9,836	837.88	30.88
Department of Labor, Licensing & Regulation	12	12	1,291	152.15	19.41
Department of Agriculture	3	0	NR	NR	NR
Maryland Public Broadcasting Commission	1	1	175	45	29.68
Comptroller of the Treasury	1	1	825	203.24	79.63
Maryland School for the Deaf	2	2	991	113.72	35.35
Department of Natural Resources	2	2	625	30.46	39.42
Department of Juvenile Services	15	15	2,340	140.32	10.11
Maryland State Archives	1	1	93	7.94	23.71
Department of the Environment	1	1	880	43.29	38.31
Department of Transportation	78	78	25,832	12,686.00	53.27
Department of Health and Mental Hygiene	12	11	5,953	1,571.48	22.43
Maryland General Assembly	1	1	992	47.45	13.29
Dept. of Public Safety and Correctional Services	27	27	35,569	2,998.95	18.71
Department of Human Resources	14	14	4,936	473.37	24.15
Department of Assessments and Taxation	1	1	11	0.84	21.14
University of Maryland System	17	17	141,185	8,751.34	36.80
St. Mary's College of Maryland	1	1	2,491	984.30	46.27
Morgan State University	1	1	9,241	167.87	17.83
Department of Education	4	4	1,206	98.18	20.90
Maryland Automobile Insurance Fund	1	1	375	55.07	46.88
Maryland Stadium Authority	1	1	1,100	388.77	19.72
Baltimore City Community College	1	1	8,796	9.99	3.17
Maryland Environmental Service	1	1	230	21.07	70.09
Maryland Food Center Authority	1	1	1,327	343.40	4.77
Judiciary of Maryland	1	0	NR	NR	NR
Subsequent Injury Fund	1	1	18	1.62	25.00
Department of Veterans Affairs	1	0	NR	NR	NR
Department of Budget and Management	1	1	185	8.86	29.87
Maryland State Police	27	27	1,659	347.95	29.85
Dept. of Housing and Community Development	3	3	427	195.92	80.67
Maryland Insurance Administration	1	1	780	28.30	50.28
<b>TOTALS</b>	<b>256</b>	<b>250</b>	<b>260,435</b>	<b>30,754.74</b>	<b>32.91</b>

\* State employees comprise approximately 77,777 of the total number of people working at State Agency Locations.

^ The 1988 Maryland Recycling Act mandates a State Government recycling rate of at least 20%.

**Bold Type** – Satisfied the 20% recycling rate

NR – Did not report

Not all offices reported

Recycling rate greater than previous year

Agencies with top 3 recycling rates



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Martin O'Malley, *Governor* | Anthony G. Brown, *Lt. Governor* | Robert M. Summers, Ph.D., *Secretary*



# **APPENDIX E**

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# County Recycling Coordinators

## Allegheny

Ms. Terry Bennett  
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Mr. Robb Fish, Program Specialist

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Mr. Tom Kusterer  
Mr. Bill Davidson

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