



Department of the Environment

MARYLAND SOLID WASTE MANAGEMENT and DIVERSION REPORT

– 2010 –

(Calendar Year 2009 Data)

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Overview

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 2009. Beginning in 2009, the Maryland Waste Diversion Activities Report and Solid Waste Management 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), that requires the Department to prepare an annual report identifying the amount of solid waste by weight or volume, disposed of in the State during the previous year and § 9-1702(e), that 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 or 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) 2009, and an overview of the State's technical assistance activities from July 2009 thru June 2010. 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.

Executive Summary

In 2009, Maryland counties and Baltimore City generated 12,422,018 tons of solid waste. 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 a decrease of 5.2 percent over the 13,108,839 tons generated in 2008. Maryland Recycling Act

(MRA) waste (MRA waste is equal to MSW waste plus industrial waste from non-private industrial waste landfills) comprises 6,513,445 tons (2,568,310 tons of MRA recyclables + 3,945,135 tons of MRA waste disposed (without recycled MSW ash)) of the total waste generated in Maryland.

A total of 8,096,104 tons of waste was accepted at Maryland permitted solid waste acceptance facilities. Of the 8,096,104 tons of solid waste accepted, a total of 7,507,014 tons was managed by Maryland permitted solid waste acceptance facilities during calendar year 2009, by either recycling, disposal (incineration and landfilling), or transportation out of State (see Table 3, page 5). Table 1 gives a breakdown, by Maryland County, of the 12,422,018 tons of waste that was generated. Table 2 details the difference between the amount of waste generated in Maryland, highlighted in green, and the waste managed by Maryland permitted solid waste acceptance facilities, highlighted in yellow.

Table 1 – Maryland Waste Generation Totals

County	Total Waste
Allegany	232,210
Anne Arundel	1,091,783
Baltimore City	1,287,942
Baltimore County	3,539,135
Calvert	130,210
Carroll	379,987
Cecil	203,567
Charles	291,553
Dorchester	71,302
Frederick	365,964
Garrett	54,810
Harford	357,104
Howard	559,534
Mid-Shore *	444,074
Montgomery	1,356,600
Prince George's	1,239,628
Somerset	36,135
St. Mary's	111,568
Washington	191,308
Wicomico	124,500
Worcester	167,219
State Highways	185,885
MARYLAND TOTALS	12,422,018

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

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

Waste Detail		Tons
A	Total Maryland Waste Recycled	6,780,108
B	Total Maryland Waste Disposed	5,641,910
C	Total Waste Generated in Maryland (A + B)	12,422,018
D	Recycling total adjusted for amount managed through Maryland permitted solid waste acceptance facilities (6,780,108 – 1,579,926)	5,200,182
E	Total waste disposed by Maryland counties but not captured by a Maryland permitted solid waste acceptance facility	359,020
F	Natural Wood Waste Disposed	0
G *	Recycled Ash, Back-End Scrap Metal, and By-Pass Adjustment	257,763
H	Total waste imported into Maryland	206,698
I **	Maryland Ash, Back-End Scrap Metal, and By-Pass Disposed	179,737
Total Waste Managed by Maryland permitted solid waste acceptance facilities (C-D-E+F+G+H+I)		7,507,014
Waste generated in Maryland		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.

Maryland achieved a 42.6 percent MRA waste diversion rate. This was comprised of a 39.1 percent (2,568,310 tons) MRA recycling rate plus a 3.5 percent (233,103 tons reduced) source reduction credit. An additional 4,211,792 tons of materials (e.g., scrap metal, asphalt and concrete, etc.) that do not count towards the MRA recycling rate were also recycled for a grand total of 6,780,108 tons.

Other highlights for CY 2009:

- Approximately 2,043,901 tons (27.2 percent) of the waste managed by Maryland permitted solid waste acceptance facilities was landfilled, 1,466,457 tons (19.5 percent) was recycled/reused, 1,301,501 tons (17.3 percent) was incinerated, and 2,695,155 tons (36 percent) was exported to out of State facilities.
- Maryland remains a significant exporter of solid waste and exports more waste than it imports. A total of 2,695,155 tons of waste was exported from Maryland while only 206,698 tons of waste was imported to Maryland, a decrease of 24 percent from 2008.
- Maryland landfills reported a total available capacity of 87,209,865 tons in 2009.

Part I – Permitted Solid Waste Acceptance Facility Waste Management

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, permit holders for solid waste acceptance facilities may submit optional information relating to the economic benefits provided by those permit holders to the community where that facility is located. 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 2009. 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 2009 calendar year, the Department reviewed and analyzed the information contained in the Annual Tonnage Reports from permitted solid waste acceptance facilities. The recycling data reported in Part I of this report represents **ONLY** the recycling activities conducted by the permitted solid waste acceptance facilities. Statewide recycling information is available in Part II, "Waste Diversion," of this report.

Solid Waste Acceptance Facility Solid Waste Management for 2009

In 2009, approximately 8.1 million tons of solid waste was accepted by Maryland permitted solid waste acceptance facilities. The 8.1 million tons includes waste stored on site and waste sent from one facility to another. Of the 8.1 million tons accepted, over 7.5 million tons were actually managed by recycling/disposal in Maryland, or transportation out of State. Table 3 details the waste managed by Maryland permitted solid waste acceptance facilities.

**Table 3 – Waste Managed in 2009 by
Maryland Permitted Solid Waste Acceptance Facilities***

Solid Waste Category	Tons Accepted ¹	Tons Recycled/ Reused ²	Tons Disposed	Tons Managed ³
Construction & Demolition Debris	1,471,306	355,238	1,006,827	1,362,065
Industrial Waste	43,622	112	43,178	43,290
Land Clearing Debris	29,730	14,661	14,843	29,504
Municipal Solid Waste	4,719,065	7,542	4,328,736	4,336,278
Natural Wood Waste	293,181	293,181	0	293,181
Other Wastes ⁴	1,135,427	675,183	363,740	1,038,923
Total Waste Received	7,692,331	1,345,917	5,757,324	7,103,241
Tons of MSW Incinerator Ash	403,773	234,009	169,764	403,773
TOTAL MANAGED	8,096,104	1,579,926	5,927,088	7,507,014

* Includes waste generated inside and outside of Maryland.

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.

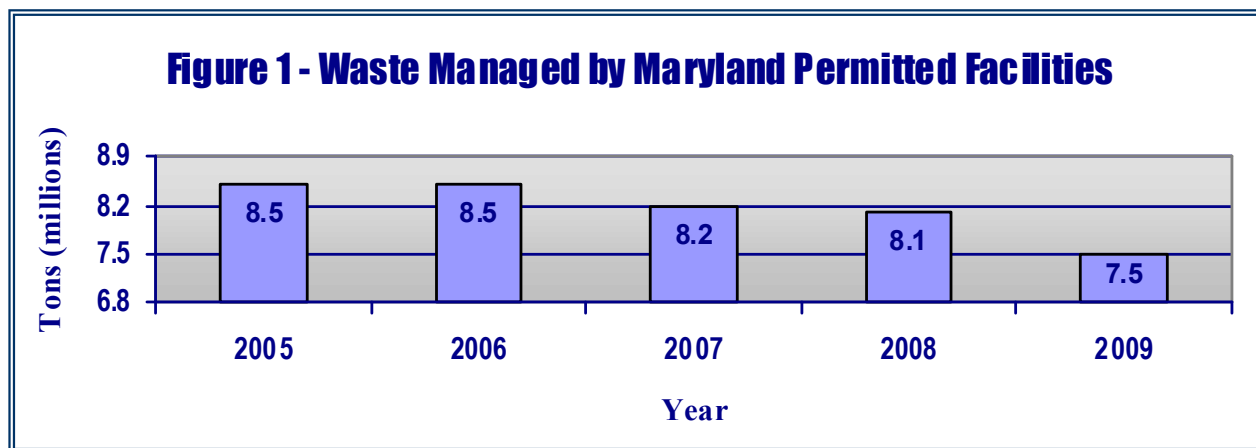
3 "Tons Managed" is equal to "Tons Recycled/Reused" plus "Tons Disposed". "Tons Managed" is waste that was managed both in Maryland and outside of Maryland (see Figures 3 and 4 and Tables 14 and 15).

4 Volume of materials reported as "Other Wastes" includes special medical waste, non-MSW ash, asbestos, and sewage sludge.

There was an approximately 24 percent decrease, to 206,698 tons, in the amount of out of State waste that was managed in Maryland in 2009, as compared to 2008. The volume of solid waste accepted, processed, and disposed of at the permitted facilities in Maryland is similar to previous years. Approximately 1.77 million tons of MSW and 0.46 million tons of C&D were landfilled in Maryland. The reclaimed recyclables were collected, sorted, and transferred to recycling facilities.

The use of out of State facilities for disposal of municipal waste generated in Maryland is likely to maintain current levels (33.7 percent of waste was exported in 2008 and 35.9 percent was exported in 2009). Very large out of State commercial landfills can achieve higher efficiencies than that achievable by 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.



Refuse Disposal Systems

Under Maryland law, a refuse disposal system (“System”) is a system that includes the services, facilities, or properties used in connection with the intermediate or final disposal of any solid waste unless these activities are limited to waste generated by an individual, a single corporation or business, or are disposed of as authorized by a permit issued by the Department under Environment Article, § 7-232, § 9-224, or § 9-323, Annotated Code of Maryland. 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 2009, of 24 permitted facilities, 21 facilities accepted waste, managed/disposed waste, and/or transferred recyclables to the market place. The Midshore II Solid Waste Regional Municipal Landfill in Caroline County and Harford Waste Disposal Center (Expansion) Municipal Landfill are being constructed. 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. Nearly 1.77 million tons of solid waste was disposed at the permitted facilities in 2009. The two facilities that disposed of the most waste tonnage were Brown Station Road Landfill (433,075 tons) in Upper Marlboro and Quarantine Road Landfill (336,605 tons) in Baltimore City. Ash recycled as alternative daily cover contributes towards a MSW landfill's capacity since the ash is recycled at the landfill. Ash recycled is reported with the "Waste Disposed" totals. Details are presented in Table 4.

Table 4 – MSW Landfills

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Allegany	Mountainview Sanitary Landfill	Private	97,761	97,755	6
Anne Arundel	Millersville Landfill & Resource Recovery Facility	County	104,639	61,073	10,226
Baltimore City	Quarantine Road Landfill	City	336,854	336,605 ^	249
Baltimore County	Eastern Sanitary Landfill	County	187,006	136,584	3,858
Calvert	Appeal Sanitary Landfill	County	12,042	1,519	9,200
Caroline	Midshore II Landfill	County	0	0	0
Carroll	Northern Municipal Landfill	County	9,610	9,145	465
Cecil	Cecil County Central Landfill	County	164,628	100,659	4,140
Charles	Charles County Municipal Landfill	County	90,189	61,631	1,400
Dorchester	Beulah Municipal Landfill	County	53,598	51,624	300
Frederick	Fort Detrick – Area B & Main Post	Federal	693	693	0
	Reichs Ford/Site B Municipal Sanitary Landfill	County	28,780	11,988	12,079
Garrett	Garrett County Solid Waste Disposal & Recycling Facility	County	54,782	29,209	956
Harford	Harford Waste Disposal Center	County	83,974	19,574 ^	27,436
Harford	Harford Waste Disposal Center (Expansion)	County	0	0	0
Howard	Alpha Ridge Municipal	County	37,407	324	19,563

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
	Landfill				
Montgomery	Montgomery County Site 2 Landfill	County	0	0	0
Prince George's	Brown Station Road Landfill	County	435,848	433,075	2,773
St. Mary's	St. Andrew's Municipal Landfill	County	10,998	0	10,998
Somerset	Somerset County Landfill – Fairmount Site	County	24,554	24,452	77
Talbot	Midshore Regional Solid Waste Facility	County	214,415	108,557	2,206
Washington	Forty West Municipal Landfill	County	116,070	110,071	3,320
Wicomico	Newland Park Municipal Landfill	County	99,125	99,125	0
Worcester	Central Sanitary Landfill	County	81,496	76,273	3,444
TOTAL			2,244,469	1,769,936	112,696

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

^ Includes 234,009 tons of recycled ash used as alternative daily cover.

Rubble (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; 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, empty caulk or glaze containers are accepted provided any remaining residual material is dried before being accepted and the waste category does not exceed one percent by volume of the waste accepted at the rubble landfill. During 2009, of six permitted rubble landfills, four landfills disposed of 463,987 tons of waste. The two that disposed of the most waste by weight were Honeygo Run Reclamation Center in White Marsh, Baltimore County, (163,186 tons) and Ritchie Reclamation – Marlboro Road in Upper Marlboro, Prince George's County, (183,444 tons). Details are presented in Table 5.

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)

Table 5 – Rubble (C&D) Landfills

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Baltimore County	Days Cove Rubble Landfill – Lateral Expansion	Private	131,181	101,833	533
	Honeygo Run Reclamation Center	Private	386,723	163,186	925
Harford	Oak Avenue Rubble Fill	Private	0	0	0
Prince George's	Ritchie Reclamation – Marlboro Road	Private	269,891	183,444	5,175
Queen Anne's	Baker Rubble Landfill	Private	16,342	15,524	267
Washington	Washington County Rubble Landfill	County	0	0	
TOTAL			804,137	463,987	6,900

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

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 of in permitted MSW landfills. During 2009, there were two permitted industrial waste landfills that accepted waste. The Grace Division Landfill in Baltimore City accepted the most industrial waste, 22,992 tons, for disposal. Details are presented in Table 6.

Table 6 – Industrial Waste Landfills

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Baltimore City	Millennium Inorganic Chemicals – HPP Landfill	Private	17,732	17,732	0
	W. R. Grace and Co. – Davison Chemical Division	Private	22,992	22,992	0
Frederick	Eastalco Aluminum Company	Private	0	0	0
TOTAL			40,724	40,724	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

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 2009, only three of the five permitted facilities were operational and disposed of 3,263 tons of waste. Details are presented in Table 7.

Table 7 – Landclearing Debris Landfills

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Disposed	Waste Transported
Calvert	Hance Land Clearing Debris Landfill	Private	3,630	0	0
	Hill Land Clearing Debris Landfill	Private	0	0	0
	M. T. Parran Landclearing Debris Landfill	Private	180	180	0
	Howlin Land Clearing Debris Landfill	Private	3,083	3,083	0
St. Mary's	Knott Land Clearing Debris Landfill	Private	0	0	0
TOTAL			6,893	3,263	0

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

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 the transfer station. A typical transfer station may accept: MSW, C&D, metals, wood waste, yard waste, recyclables, etc. During 2009, there were ten permitted transfer stations in operation that accepted a total of 548,935 tons of solid waste. The two busiest transfer stations in Maryland during 2009 were the Western Acceptance Facility in Baltimore County (245,965 tons accepted) and the Appeal Sanitary Landfill in Calvert County (119,518 tons accepted). Details are presented in Table 8.

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, 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, for example by shredding, so the waste takes up less volume during transport or at final disposal. A wide variety of solid

Table 8 – Solid Waste Transfer Stations

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore City	Northwest Transfer Station	Municipal	41,632	0	41,632
	Cannon Hygiene (USA), Inc.	Private	3	0	3
Baltimore County	Eastern Sanitary Landfill	County	83,260	0	83,260
	Western Acceptance Facility	County	245,965	0	245,965
Calvert	Appeal Sanitary Landfill	Private	119,518	0	119,518
Cecil	Stemmers Run Transfer Station	County	1,224	0	1,224
	Woodlawn Transfer Station	County	2,426	0	2,426
Howard	Workplace Essentials Transfer Station	Private	150	150	0
Talbot	Midshore Regional Solid Waste Facility	Maryland Environmental Service/State	22,107	0	22,107
Worcester	Ocean City Transfer Station	Municipal	32,650	0	32,650
TOTAL			548,935	150	548,785

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

waste can be processed at these facilities. A typical solid waste processing facility accepts MSW, C&D, metals, wood waste, etc. During 2009, a total of nine permitted processing facilities were in operation in Maryland. A total of approximately 234,845 tons of waste was accepted at these facilities. During 2009 the largest of these facilities was Roll-Off Express, Inc. in Carroll County, which accepted 87,136 tons, and the Lawrence Street C&D Processing facility in Prince George's County which accepted 63,976 tons of solid waste. Details are presented in Table 9.

Solid Waste Processing Facility & Transfer Station

Solid waste processing facilities and transfer stations are facilities which perform the functions of both a transfer station and a processing facility. During 2009, a total of fifteen facilities were in operation. Of the fifteen facilities, thirteen sites accepted approximately 2,407,372 tons of waste. The two facilities that accepted the most waste tonnage in 2009 were Montgomery County Solid Waste Transfer Station in Montgomery County (687,310 tons) and Annapolis

Table 9 – Solid and Medical Waste Processing Facilities

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
Baltimore County	Recovermat Mid-Atlantic	Private	0	0	0
Calvert	Southern Maryland Processing Facility	Private	26,588	0	26,588
Carroll	Roll-Off Express, Inc.	Private	87,136	0	87,136
Montgomery	C&D Recovery Processing Facility	Private	57,140	519	57,246
Prince George's	Lawrence Street C&D Facility	Private	63,976	0	63,976
Prince George's	Dower House Recycling and Processing Facility	Private	0	0	0
Prince George's	Kenilworth Recycling and Processing Facility	Private	0	0	0
Wicomico	Peninsula Regional Medical Center	Private	5	0	5
	Bennett Processing Facility	Private	0	0	0
TOTAL			234,845	519	234,951

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

Junction Recycling and Transfer Station in Anne Arundel County (499,640 tons).
The details are presented in Table 10.

Table 10 – 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	136,821	0	136,821
	Annapolis Junction Recycling and Transfer Station	Private	499,640	0	499,640
Baltimore City	BFI Baltimore Processing and Transfer Center	Private	92,021	0	92,021
	Stericycle, Inc.	Private	25,519	0	25,519
	Baltimore Recycling Center, LLC	Private	50,268	6,249	44,019
Baltimore County	Baltimore County Resource Recovery	County	380,562	235	380,573

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Stored	Waste Transported
	Facility				
Carroll	Northern Municipal Landfill	County	65,983	0	65,983
Frederick	Reichs Ford Landfill	County	175,907	0	175,907
Harford	Auston Processing and Transfer Facility	Private	4,005	104	3,901
Howard	Alpha Ridge Municipal Landfill	Private	29,000	0	29,000
	Ameriwaaste Processing and Transfer Station	Private	192,415	0	192,415
Montgomery	Montgomery County Solid Waste Transfer Station	County	687,310	0	687,310
Prince George's	Brandywine Enterprises	Private	67,921	0	68,253
St. Mary's	St. Andrew's Waste Processing and Transfer Station	County	0	0	0
TOTAL			2,407,372	6,588	2,401,362

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

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 municipal solid waste, industrial waste, or special medical waste. Incinerators which are "waste-to-energy" facilities use the heat generated by combustion to create steam that is either used directly for heat, or is used to drive electrical powered generators. During 2009, a total of nine facilities were in operation, which accepted approximately 1.36 million 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 688,537 tons and 526,868 tons, respectively. Details are presented in Table 11.

Table 11 – Incinerator Facilities

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Incinerated	Waste Transported
Baltimore City	Wheelabrator Baltimore, LP.	Private	688,537	687,713	210,716
	Curtis Bay Energy	Private	25,502	25,502	9,199
	University of Maryland – Baltimore	State	175	0	175
Charles	Naval Support Facility Indian Head Incinerator	Federal	140	140	0

Jurisdiction	Facility Name	Ownership	Waste Accepted *	Waste Handled	
				Waste Incinerated	Waste Transported
Frederick	Fort Detrick – Area B and Main Post	Federal	2,834	2,834	2,506
Harford	Harford County Resource Recovery Facility	County	117,090	113,401	52,234
Montgomery	Montgomery County Resource Recovery Facility	County / Northeast MD Waste Disposal Authority	526,868	471,618	164,080
Somerset	Smith Island Incinerator	County	178	100	103
Washington	Washington County Hospital	Private	193	193	46
TOTAL			1,361,517	1,301,501	439,059

* Waste Accepted will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

Natural Wood Waste Recycling Facility

MDE views natural wood waste (NWW) as vegetation, in its natural state, that has been discarded or designated for disposal and requires owners or operators of facilities that receive or process natural wood waste to obtain a permit to operate. A natural wood waste recycling (NWWR) facility manages and recycles NWW and is regulated under Code of Maryland Regulations 26.04.09. 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.

NWWR facilities produce a variety of products that may be sold to consumers. They are valued because they prevent NWW from entering landfills, thereby extending their useful lives, and useful products can be made from such waste. A NWWR facility does not include a collection or processing facility operated by a nonprofit or governmental organization located in the State, or a single individual or business that provides recycling services solely for its employees or for its own recyclable materials generated on its own premises. Additionally, facilities that only accept processed wood are not required to obtain a NWWR Facility Permit from MDE. During 2009, of twenty-nine permitted operations, twenty-five facilities reported approximately 293,181 tons of NWW managed. The two highest volume facilities, Recycled Green Industries of Carroll County and Edrich Lumber in Baltimore County, accepted approximately 95,377 tons and 33,809 tons, respectively. Details of the NWWR 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/LandProgram

[s/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

Table 12 – Natural Wood Waste Recycling Facilities

Jurisdiction	Facility Name	Permittee	Waste Recycled *	Waste Handled	
				Waste Stored	Waste Marketed
Anne Arundel	A-A Recycle & Sand	A-A Recycle & Sand, Inc.	13,554	0	22,472
	Bronson Contracting, Inc.	Bronson Contracting, Inc.	176	176	0
	L and W Recycling	L & W Recycling, Inc.	27,000	0	27,000
	Chesterfield Farms	Red Wagon Hauling LLC	0	0	0
Baltimore County	King Mulch and Pallet	Albert J. Bierman	6,850	50	6,800
	Edrich Lumber	Edrich Lumber, Inc.	33,809	0	33,809
	Northwest Recycling	Northwest Recycling LLC.	13,572	6,482	7,090
	Wirtz & Daughters	Wirtz And Daughters, Inc.	17,659	0	31,889
	Hollins Organic Products	Hollins Organic Products, Inc.	11,258	4,225	7,033
Calvert	Sawmill Road Natural Wood Waste Recycling Facility	Quality Built Homes, Inc.	18,192	10,134	8,058
Carroll	C. J. Miller	C. J. Miler, LLC.	7,769	3,108	9,090
	Recycled Green Industries	Recycled Green Industries, LLC.	95,377	14,638	80,739
Cecil	Grass Busters Landscaping	Grass Busters Landscaping Company, Inc.	1,600	0	1,600
	A L C Stump and Brush Recycling	A L C Stump and Brush Recycling	0	0	0
Charles	Maxi Mulch	Maxi Mulch, LLC.	0	0	0
	James E. Hill	James E. Hill	2000	1100	900
Frederick	Butler Wood Recycling	William Lee Butler	1,268	0	1,933
	Bussard Brothers Landscape	R. W Bussard & Sons, Inc.	4,700	0	4,700
Harford	Arthur D. Heston	Arthur D. Heston	1,875	0	1,875
	Crouse Construction Company	Crouse Construction Co., Inc.	570	0	570
	T and M Mulch Natural Wood Waste Recycling	Pope	6,352	0	6,352

Thomas/T&M

Jurisdiction	Facility Name	Permittee	Waste Recycled *	Waste Handled	
				Waste Stored	Waste Marketed
	Facility	Mulch, Inc.			
	Comer Construction, Inc.	Comer Construction, Inc.	13,242	2,216	11,025
Howard	Jerom M. Carlin	Jerom M. Carlin	0	0	0
Montgomery	Twin Ponds Farm	Twin Ponds Farm, LLC.	2,466	746	1,720
	Acme Biomass Reduction	Acme Biomass Reduction, Inc.	10,373	4,272	6,101
Queen Anne's	Baker Rubble Landfill	R.B. Baker & Sons, Inc.	1,965	0	2,200
Talbot	Dependable Sand and Gravel Company	Dependable Sand And Gravel Company, Inc.	681	0	681
Wicomico	Dunn's Tractor Service	Dunn's Tractor Service Inc.	333	0	373
	Eastern Shore Forest Products	Eastern Shore Forest Products, Inc.	540	0	540
TOTAL			293,181	47,147	274,550

* Waste Recycled will not always equal the sum of the waste handled columns. For example, waste may be accepted in 2009, but not managed until 2010.

Imported Solid Waste

Table 13 compares the amount of solid waste in tons, by category, that was generated outside Maryland and imported into the State for management, to the total amount of solid waste managed at permitted solid waste acceptance facilities in Maryland. Figure 2 illustrates the comparison of the amount of solid waste in tons imported into Maryland for management, to the total amount of Maryland-generated solid waste accepted at permitted solid waste acceptance facilities. In CY 2009, Maryland's permitted solid waste acceptance facilities accepted waste from Delaware, Massachusetts, New Jersey, New York, Pennsylvania, Virginia, Washington D.C., West Virginia, and North Carolina. Highlights include:

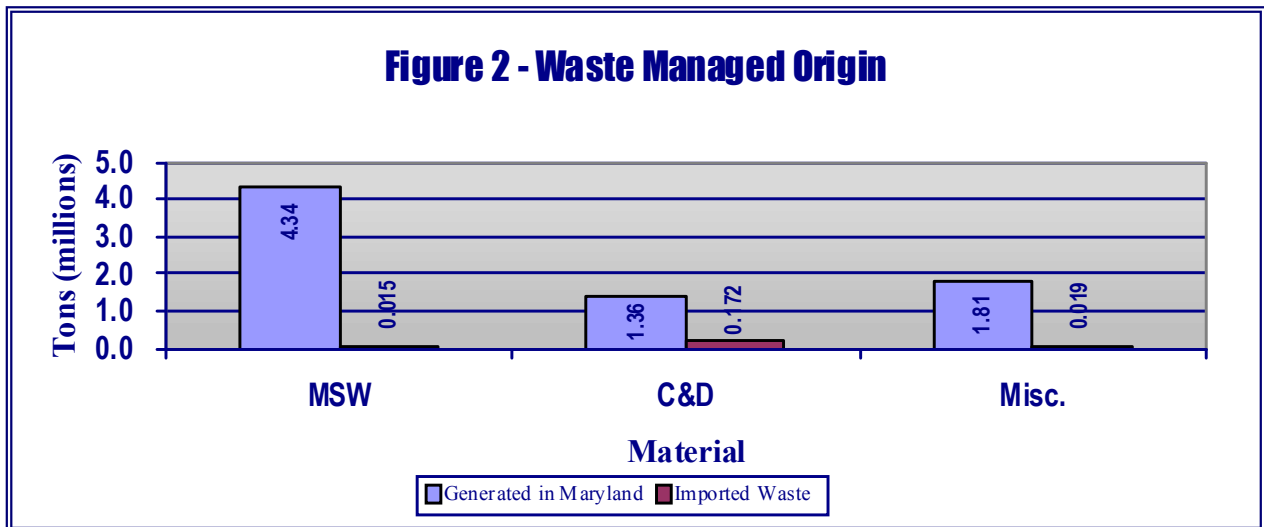
- ⊙ In 2009, there was a decrease of about 24 percent (2008 – 272,036 tons, 2009 – 206,698 tons) of solid waste imported into Maryland from out of State compared to calendar year 2008.
- ⊙ The solid waste imported into Maryland comprises approximately 2.75 percent of the 7.5 million tons of solid waste managed at permitted Maryland solid waste acceptance facilities.
- ⊙ The facilities that received the most imported MSW were the Mountainview Sanitary Landfill in Allegany County, BFI Baltimore Processing and Transfer Center in Baltimore City, and Wheelabrator Baltimore, LP. in Baltimore City.
- ⊙ C&D waste that was imported into Maryland was disposed of at privately owned rubble landfills, or was processed into segregated recyclables that were then transferred to Mid-Atlantic recycling facilities. The landfill and processing facilities that received the majority of C&D were Honeygo Run

Reclamation Center and Days Cove Rubble Landfill – Lateral Expansion in Baltimore County; Ritchie Reclamation – Marlboro Road and Brandywine Enterprises 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
MSW	15,452	DE, PA, VA, WV, NJ District of Columbia	4,336,278
C&D	172,330	DE, NJ, NY, PA, VA, WV, District of Columbia	1,362,065
Miscellaneous *	18,916	DE, MA, PA, VA, WV, NC, District of Columbia	1,808,671
TOTAL	206,698		7,507,014

* 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, many counties in Maryland transport some of their solid waste out of State for recycling or disposal. These jurisdictions include: Allegany, Anne Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Harford, Howard, Montgomery, Prince George’s, St. Mary’s, Talbot, Washington, and Worcester Counties. The Annapolis Junction Recycling and Transfer Station in Anne Arundel County exported the majority of its MSW to King George Landfill in Virginia and the Baltimore County Resource Recovery Facility

transported their solid waste to various facilities in Virginia and Pennsylvania. Ash from the Montgomery County Solid Waste Transfer Station in Dickerson was exported to Brunswick, Virginia for disposal. A large amount of recyclables collected at Montgomery County Solid Waste Transfer Station were transported to various out-of-state facilities. Figure 3 illustrates, by percentage, where solid waste captured by Maryland's permitted solid waste acceptance facilities was managed. Table 14 gives a destination breakdown of solid waste exported by Maryland permitted solid waste acceptance facilities. Highlights include:

- ❖ Nearly 2.7 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 approximately 36 percent of the total solid waste managed at Maryland's permitted solid waste acceptance facilities.
- ❖ A total of thirty-eight (38) facilities exported solid waste for disposal or recycling to out of State facilities.
- ❖ The Annapolis Junction Recycling and Transfer Station, which transferred 499,640 tons of waste, was the largest State exporter of solid waste.

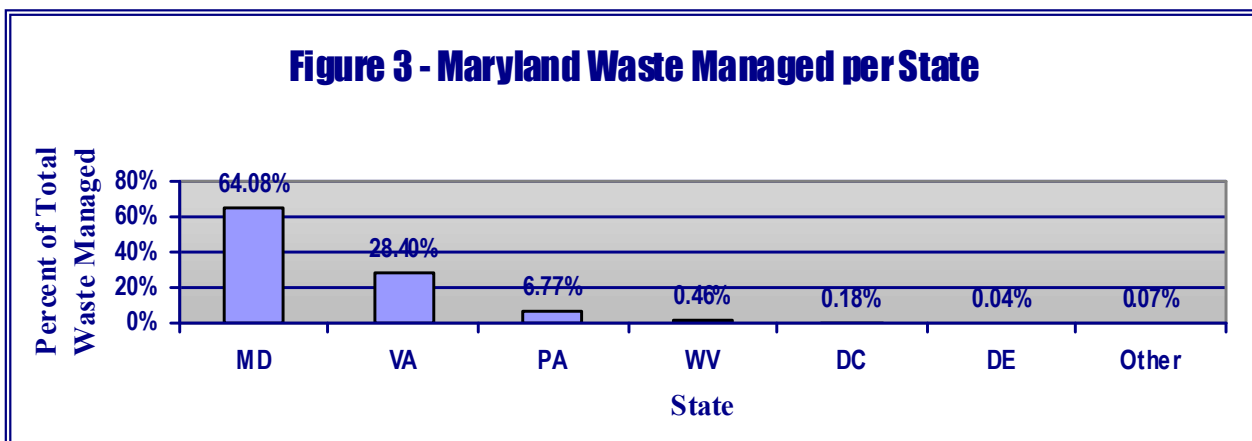


Table 14 – Maryland Exported Waste Tonnage by State Destination

Solid Waste Category	Virginia	Pennsylvania	Delaware	West Virginia	District of Columbia	Other	Total (Tons)
MSW	1,470,539	456,115	0	0	0	0	1,926,654
C&D	442,709	26,694	0	0	0	0	469,403
Recycling	56,784	2,717	2,842	34,649	13,464	2,955	113,411
Miscellaneous *	160,647	22,959	0	0	0	2,081	185,687
TOTAL (Tons)	2,130,679	508,485	2,842	34,649	13,464	5,036	2,695,155

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

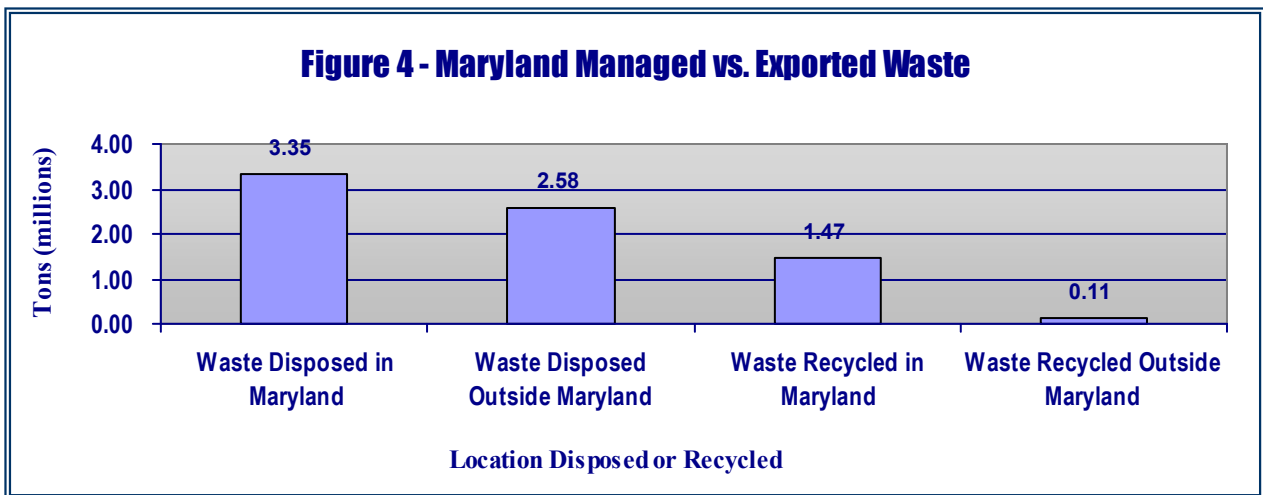
Solid Waste Management Practices

In 2009, 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 in Maryland. Table 15 gives a breakdown of the management practices by the Maryland permitted solid waste acceptance facilities.

Table 15 – Maryland Solid Waste Management Practices

Solid Waste Management Method	Tons	Percentage of Total Solid Waste Managed
Exported	2,695,155	35.9%
Landfilled in Maryland	2,043,901	27.2%
Incinerated in Maryland	1,301,501	17.3%
Recycled/Reused in Maryland	1,466,457	19.6%
TOTAL	7,507,014	100%

Approximately 151,394 tons of the 2,695,155 tons of Maryland exported waste was incinerator ash. Figure 4 details how Maryland solid waste was managed.



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 60,485,412 tons (96,008,590 CY x 0.63 compaction factor) with 1,769,936 tons being disposed in 2009. This available capacity is based on the calculated compaction rates provided by the landfills. Thus, at the current disposal rate, there would be approximately 34 years ($60,485,412 \div 1,769,936$) 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	Permit Number	Permitted Capacity (CY)	Landfilled To Date (CY)	Landfilled To Date (TONS)	Remaining Capacity (CY)	Reach Capacity Year	Landfilled in 2009 (TONS)	Used in 2009	Permitted Cells
Alpha Ridge Municipal Landfill	2005-WMF-0110	9,978,000	4,139,066	2,276,586	5,838,934	2126	324	.09%	4
Appeal Municipal Landfill	2007-WMF-0531	2,799,290	607,113	364,268	2,192,177	2033	1,519	0.9%	5
Beulah Sanitary Landfill	2009-WMF-0554	1,483,205	1,226,797	1,312,784	256,408	2015	51,624	3%	4
Brown Station Road Landfill	2003-WMF-0589	16,000,000	12,218,711	6,964,110	3,781,289	2016	433,075	4%	11
Cecil County Central Landfill	2007-WMF-0532	6,527,539	4,040,431	2,505,067	2,487,108	2022	100,659	2.4%	3
Central Sanitary Landfill	2006-WMF-0152	4,800,000	1,778,080	1,244,656	3,021,920	2037	76,273	2.3%	9
Charles County Municipal Landfill	2005-WMF-0076	5,289,000	1,460,851	876,510	3,828,149	2039	61,631	2.8%	4
Eastern Sanitary Landfill	2005-WMF-0052	22,813,000	10,425,000	5,213,000	12,388,000	2040	136,584	1.2%	9
Fort Detrick – Area B & Main Post	2005-WMF-0327	1,000,900	100,941	79,172	899,959	2376	693	0.2%	17
Forty West Municipal Landfill	2007-WMF-0266A	20,273,000	2,989,264	1,222,476	17,283,736	2070	110,071	1.4%	15
Garrett County Solid Waste Disposal & Recycling Facility	2006-WMF-0094	2,042,927	860,626	504,536	1,182,301	2026	29,209	3.2%	4
Harford Waste Disposal Center	2005-WMF-0098	2,980,000	2,838,003	1,539,713	141,997	2011	19,574	1.5%	10
Harford Waste Disposal Center (Expansion) **	2000-WMF-0570	4,870,330	0	0	4,870,330	2028	0	0	6
Midshore Regional Solid Waste Facility	2004-WMF-0144	3,924,994	3,515,354	1,935,257	409,640	2010	108,557	4.8%	4
Midshore II Regional Solid Waste Facility **	2005-WMF-0608	7,800,000	0	0	7,800,000	2031	0	0	5
Millersville Landfill & Resource Recovery Facility	2007-WMF-0240	14,156,000	4,579,011	2,888,404	9,576,989	2034	61,073	0.8%	9
Montgomery County Site 2**	2009-WMF-0237	0	0	0	0	N/A	0	0	0
Mountainview Sanitary Landfill	2006-WMF-0010	4,260,000	3,089,642	2,133,262	1,170,358	2016	97,755	2.6%	9
Newland Park Municipal Landfill	2005-WMF-0283	7,200,000	2,293,968	1,238,743	4,906,032	2036	99,125	2.5%	10
Northern Municipal Landfill	2005-WMF-0066	3,504,187	1,057,352	528,676	2,446,835	2064	9,145	0.5%	4
Quarantine Road Landfill	2005-WMF-0325	18,320,622	11,725,880	10,632,202	6,594,742	2026	336,605	2%	6
Reichs Ford/Site B Municipal Sanitary Landfill	2005-WMF-0307	7,003,487	3,110,542	1,792,858	3,892,945	2045	11,988	.03%	3
St. Andrews Municipal Landfill*	2005-WMF-0138	0	0	0	0	2001	0	0%	5
Somerset County Landfill – Fairmount Site	2009-WMF-0268	1,610,000	571,259	281,345	1,038,741	2023	24,452	3%	4
Totals		168,636,481	72,627,891	45,533,625	96,008,590		1,769,936	1.9%	160

* 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.

** Harford Waste Disposal Center (Expansion) and Midshore II Regional Solid Waste Landfills are being constructed. Montgomery County Site 2 Landfill's construction is on hold until the County needs landfill space in the future.

Construction and Demolition Debris landfills (Table 17) reported a total available capacity of 14,615,567 tons (18,737,906 CY x 0.78 compaction factor) with 463,987 tons disposed in CY 2009. At the current disposal rate, there would be approximately 31 years of available C&D landfill capacity in Maryland.

Table 17 – C&D Landfill Capacity

Landfill Facility Name	Permit Number	Permitted Capacity (CY)	Landfilled To Date (CY)	Landfilled To Date (TONS)	Remaining Capacity (CY)	Reach Capacity Year	Landfilled in 2009 (TONS)	Used in 2009	Permitted Cells
Baker Rubble Landfill	2006-WRF-0622	820,000	493,940	288,469	326,060	2018	15,524	4%	1
Days Cove Rubble Landfill – Lateral Expansion	2009-WRF-0592	3,200,000	1,245,349	757,602	1,954,651	2015	101,833	6%	9
Honeygo Run Reclamation Center	2008-WRF-0579A	11,723,461	4,135,958	2,528,416	7,587,503	2034	163,186	2.3%	9
Oak Avenue Rubble Fill	2004-WRF-0104	2,750,000	2,750,000	2,145,000	0	2008	0	0	0
Ritchie Land Reclamation Partnership	2003-WRF-0590	7,055,800	221,082	221,082	6,834,718	2047	183,444	2.6%	5
Washington County Rubble Landfill	2009-WRF-0270	2,201,664	166,690	83,345	2,034,974	2020	0	0	5
TOTALS		27,750,925	9,013,019	6,023,914	18,737,906		463,987	3.7%	29

Industrial landfills (Table 18) have 12,039,721 tons (6,763,888 CY x 1.78 compaction factor) of available capacity if 40,724 tons are disposed annually. At the current disposal rate, there would be approximately 296 years of available industrial landfill capacity in Maryland.

Table 18 – Industrial Landfill Capacity

Landfill Facility Name	Permit Number	Permitted Capacity (CY)	Landfilled To Date (CY)	Landfilled To Date (TONS)	Remaining Capacity (CY)	Reach Capacity Year	Landfilled in 2009 (TONS)	Used in 2009	Permitted Cells
W.R. Grace and Co. – Davison Chemical Division	2005-WIF-0613	495,000	63,662	84,323	431,338	2035	22,992	3.5%	1
Eastalco Aluminum Company	2009-WIF-0537	380,000	79,517	109,256	300,483	2050	0	0%	5
Millennium Inorganic Chemicals – HPP Landfill	2005-WIF-0527	7,293,378	1,261,311	2,179,643	6,032,067	2555	17,732	.03%	5
TOTALS		8,168,378	1,404,490	2,373,222	6,763,888		40,724	1.7%	11

Landclearing Debris landfills (Table 19) have 69,165 (223,113 CY x 0.31 compaction factor) tons of capacity. At the current disposal rate, there would be approximately 21 years of available landclearing debris landfill capacity in Maryland.

Table 19 – Landclearing Debris Landfill Capacity

Landfill Facility Name	Permit Number	Permitted Capacity (CY)	Landfilled To Date (CY)	Landfilled To Date (TONS)	Remaining Capacity (CY)	Reach Capacity Year	Landfilled in 2009 (TONS)	Used in 2009	Permitted Cells
Howlin Land Clearing Debris Landfill	2008-WLC-0577	64,120	37,745	47,181	26,375	2016	3,083	3.8%	1
Knott Land Clearing Debris Landfill	2006-WLC-0134	94,500	75,621	6,875	18,879	2015	0	0%	1
Hance Land Clearing Debris Landfill	2005-WLC-0252	267,053	126,973	63,486	140,080	2044	0	0%	1
Hill Land Clearing Debris Landfill	2004-WLC-0551	25,439	22,600	33,900	2,839	2015	0	0%	1
M.T. Parran Landclearing Debris Landfill	2004-WLC-0550	55,180	20,240	30,360	34,940	2025	180	0.3%	1
TOTALS		506,292	283,179	181,802	223,113		3,263	2%	5

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. The promotion and encouragement of waste diversion is accomplished by partnering with Maryland's jurisdictions and the public and private sectors to develop markets for recyclable materials and by working with other State agencies to increase the volume of materials that are diverted from landfills.

Solid waste disposed quantities used in Part II – Waste Diversion of this report were gathered from Maryland Recycling Act (MRA) Tonnage Reporting Surveys, filed 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 MDE to reduce the disposal of solid waste in Maryland through management, education and regulation. The MRA requires:

- ▲ Each jurisdiction to develop and implement recycling programs by January 1, 1994. Jurisdictions with populations greater than 150,000 are required to recycle 20 percent or more of their waste and jurisdictions with populations less than 150,000 are required to recycle 15 percent or more of their waste. In no case is the recycling rate to be less than 10 percent.
- ▲ 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.
- ▲ 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.
- ▲ Telephone directories distributed in the State to have a recycled content, by weight, of 40 percent for 2005 and all subsequent years.
- ▲ 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.

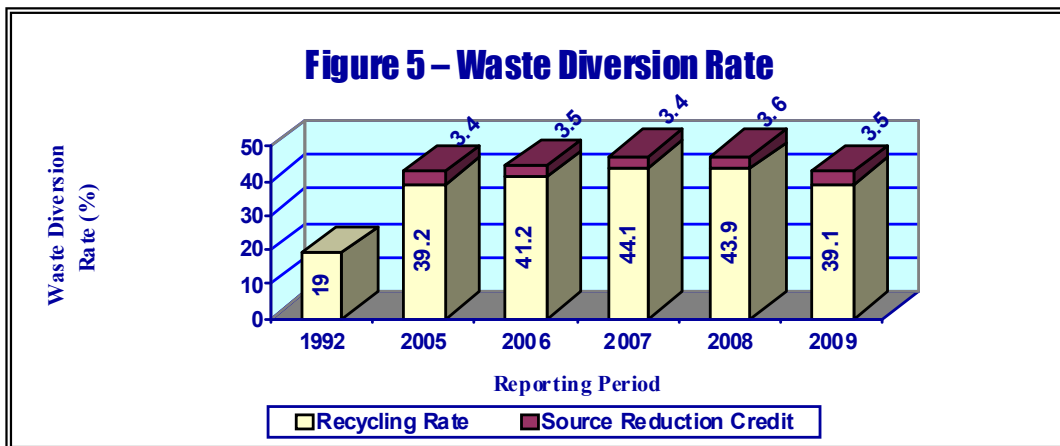
The MRA excludes from its scope scrap metal, landclearing debris, construction and demolition debris, sewage sludge, hospital wastes, and waste generated by a single individual or business and disposed of in a facility dedicated solely for that entity's waste.

Additional legislation 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).
- ▶ Addressing, by Counties, the feasibility of composting mixed solid waste when developing solid waste management plans (1992).
- ▶ Composting in the calculation of the recycling rate (1992).
- ▶ Banning separately collected yard waste from disposal at solid waste acceptance facilities (1994).
- ▶ 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. The law also prohibits 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 manufacturers of an average of more than 1,000 computers and video display devices in the previous three years who sell or offer for sale their product in Maryland to register and pay a fee to MDE. Fees may be used to provide grants to counties and municipalities for computer and video display device recycling activities. Replaces the 2005 computer recycling pilot program (2007).
- ▶ 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).
- ▶ Requiring a county recycling plan to address the collection, processing, marketing, and disposition of recyclable materials from county public schools; requiring a county to submit a revised recycling plan to MDE by October 1, 2010 (2009).
- ▶ Requiring, 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 this plan by January 1, 2012 (2009).
- ▶ Requiring a county recycling plan to address the collection and recycling of fluorescent and compact fluorescent lights that contain mercury; requiring a county to submit a revised recycling plan to MDE by October 1, 2011 (2010).

Maryland's 42.6 Percent Waste Diversion Rate

The recycling rate plus the source reduction (SR) credit make up the waste diversion rate. Through the efforts of its citizens, businesses and government agencies, Maryland achieved a statewide waste diversion rate of 42.6 percent in calendar year (CY) 2009. The 42.6 percent waste diversion rate was composed of a 39.1 percent MRA recycling rate and a 3.5 percent SR credit. This exceeds the requirements of the MRA and the 40 percent waste diversion goal targeted for 2005. Figure 5 provides a historical breakdown of Maryland's waste diversion rate.



Maryland's 39.1 Percent Recycling Rate

In CY 2009, Maryland residents and businesses recycled 39.1 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 6 summarizes the recycling tonnages since 1992 and Figure 7 categorizes the total MRA tons recycled by material in CY 2009. 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 45 percent of the total miscellaneous materials). Table 20 details recycling and waste diversion totals for each of Maryland's jurisdictions.

Maryland's 33.8 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 gathers recycling

Figure 6 – MRA Recycling Tonnage

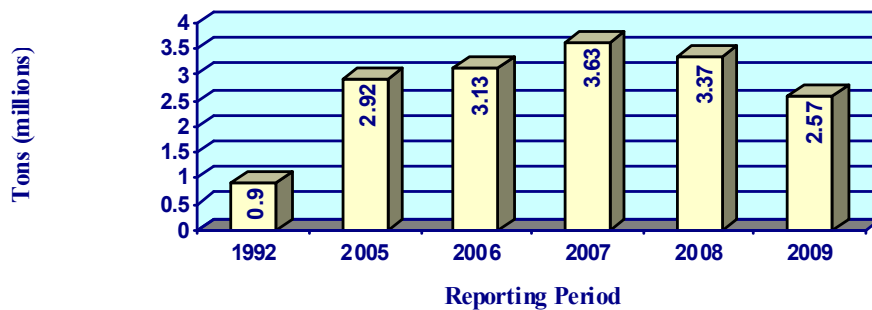
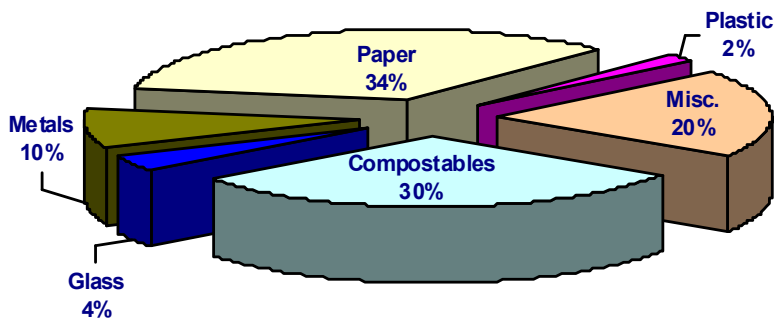


Figure 7 – MRA Materials Breakdown



information from States that has been standardized as to which materials count towards the recycling rate. In Maryland, the major differences between the EPA and Maryland recycling rates relate to Maryland allowing 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 529,133 tons to 2,039,182 tons, for an EPA recycling rate of 33.8 percent. EPA's recycling rate goal is 35 percent by 2008.

Maryland's 3.5 Percent Source Reduction Credit

In 2009, fourteen of Maryland's jurisdictions were able to add from 1 percent to 5 percent 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 2009 is available in the "State, County, and City Recycling Rates" section of MDE's web page at www.mde.state.md.us/recycling.

Table 20 – County Recyclables by Commodity in Tons for Calendar Year 2009*Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2009*

County	MRA Rate ² (%)	Waste Diversion Rate ³ (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables ⁴	Total Recycling*
			Compostables	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	30.01	32.01	4,953	224	1,062	7,258	1,013	11,444	25,954	131,309	157,263
Anne Arundel	39.40	42.40	89,606	14,057	20,244	82,128	5,696	31,635	243,366	301,514	544,880
Baltimore City	33.28	33.28	6,694	6,184	15,703	73,975	1,439	147,770	251,765	382,309	634,074
Baltimore County	35.94	40.94	87,517	6,197	36,325	124,986	7,603	123,462	386,090	2,032,835	2,418,925
Calvert	25.92	25.92	1,434	1,043	2,778	9,023	614	1,661	16,553	35,415	51,968
Carroll	38.05	42.05	37,294	8,133	4,094	9,067	3,344	3,495	65,427	194,664	260,091
Cecil	46.21	50.21	52,256	2,208	7,085	9,091	2,164	1,025	73,829	25,848	99,677
Charles	50.79	55.79	25,994	1,950	3,218	16,326	1,480	2,569	51,537	154,549	206,086
Dorchester	21.39	21.39	2,435	71	564	2,440	114	3,724	9,348	10,143	19,491
Frederick	41.63	46.63	25,648	6,747	4,556	36,297	2,902	25,586	101,736	64,560	166,296
Garrett	47.70	48.70	10,738	266	834	1,983	114	6,049	19,984	5,573	25,557
Harford	59.03	62.03	57,413	1,855	10,786	69,197	599	36,774	176,624	16,348	192,972
Howard	42.71	46.71	85,391	12,939	9,391	75,958	5,570	6,554	195,803	7,673	203,476
Mid-Shore¹	53.30	53.30	22,083	1,449	1,692	26,898	570	73,321	126,013	179,177	305,190
Montgomery	42.04	47.04	168,852	20,190	74,912	147,977	7,316	14,259	433,506	90,820	524,326
Prince George's	37.57	42.57	72,077	9,203	37,362	140,643	4,485	13,811	277,581	298,696	576,277
Somerset	15.01	15.01	275	56	2,613	99	27	24	3,094	8,725	11,819
St. Mary's	25.28	28.28	3,947	682	4,363	9,404	282	804	19,482	15,006	34,488
Washington	29.68	30.68	3,230	1,197	1,074	25,609	2,909	3,274	37,293	28,049	65,342
Wicomico	18.57	18.57	5,079	560	3,467	10,432	628	1,678	21,844	3,457	25,301
Worcester	31.92	31.92	12,376	1,087	3,544	6,657	322	7,495	31,481	39,237	70,718
State Highways of Additional Asphalt and Concrete Recycled										185,885	185,885
TOTAL*	39.12	42.58	775,292	96,298	245,667	885,448	49,191	516,414	2,568,310	4,211,792	6,780,102

* Due to rounding, tonnage totals in this table may differ slightly from the sum of actual values.

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

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

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

4 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.

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 information on how to improve their bottom line through recycling and SR. As counties learn from their successful colleagues, even more SR programs are expected.

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. In fact, over 4.2 million tons of other Non-MRA materials were reported as being recycled in 2009. Table 21 offers a breakdown by category of the amount of Non-MRA materials reported as recycled in 2009.

Table 21 – Recycling of Non-MRA Materials in Tons

*Compiled by the Maryland Department of the Environment
from Reports Submitted for Calendar Year 2009*

MATERIAL	TONS RECYCLED
Antifreeze	4,199
Asphalt & Concrete	894,363
Coal Ash	122,836
Construction/Demolition Debris	287,799
Landclearing Debris	51,954
Scrap Automobiles	183,917
Scrap Metal	1,377,048
Sewage Sludge	100,314
Slag	810,534
Soils	206,481
Waste Oil	48,233
Other Materials	124,114
TOTAL	4,211,792

Maryland's 26.3 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) that 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. The MRA also requires State agencies to institute 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. 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 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 designate a Recycling Coordinator to manage recycling activities at their various sites throughout Maryland. They provide technical support to encourage recycling and to facilitate reporting on collection activities.

In 2009, State agencies recycled over 23,413 tons of MRA materials for an overall MRA recycling rate of 26.3 percent. This is a slight decrease from the 27.5 percent recycling rate reported in 2008. Table 22 summarizes the performance of each State agency participating in the All StAR program.

Table 22 – Maryland State Agencies' 2009 Recycling Rates

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2009

Agency Name	No. of Sites	No. of Sites Reporting	No. of People *	Total MRA 2009 (tons)	2009 MRA Recycling Rate (%) ^
Department of General Services	18	18	11,728	667.92	23.34
Department of Labor, Licensing & Regulation	13	6	1,317	89.35	17.90
Department of Agriculture	3	3	256	43.50	25.85
Maryland Public Broadcasting Commission	1	1	160	20.00	12.08
Comptroller of the Treasury	1	1	875	163.38	75.86
Maryland School for the Deaf	2	2	805	92.79	34.69
Department of Natural Resources	2	2	605	31.94	32.09
Department of Juvenile Services	15	14	2,861	250.99	12.02
Maryland State Archives	1	1	82	2.65	7.97
Department of the Environment	1	1	858	31.62	25.07
Department of Transportation	78	77	24,834	7,981.44	42.16
Department of Health and Mental Hygiene	13	11	6,349	743.83	11.95
Maryland General Assembly	1	1	1,107	80.56	20.21
Dept. of Public Safety and Correctional Services	29	29	37,996	1,894.98	10.89
Department of Human Resources	11	11	4,652	162.28	19.03
Department of Assessments and Taxation	1	1	10	1.00	27.78
University of Maryland System	17	17	132,612	8,466.60	34.68
St. Mary's College of Maryland	1	1	2,510	787.32	39.60
Morgan State University	1	1	7,241	786.44	29.93
Department of Education	4	4	1,736	47.97	18.18
Maryland Automobile Insurance Fund	1	1	408	76.78	55.17
Maryland Stadium Authority	1	1	1,100	327.93	16.27
Baltimore City Community College	1	1	7,495	17.22	21.55
Maryland Environmental Service	1	1	212	14.38	35.52
Maryland Food Center Authority	1	1	1,327	118.00	2.00
Judiciary of Maryland	1	1	147	35.47	40.13

Agency Name	No. of Sites	No. of Sites Reporting	No. of People *	Total MRA 2009 (tons)	2009 MRA Recycling Rate (%) ^
Subsequent Injury Fund Board	1	1	17	1.78	29.08
Department of Veterans Affairs	1	1	4	1.00	69.44
Department of Budget and Management	1	1	210	8.99	30.18
Maryland State Police	26	26	1,621	284.11	29.76
Maryland Higher Education Commission	1	1	67	10.6	43.95
Dept. of Housing and Community Development	1	1	400	157.12	79.07
Maryland Insurance Administration	1	1	632	13.07	56.90
TOTALS	251	240	252,234	23,413.01	26.26

* State employees comprise approximately 79,935 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

 Recycling Rate greater than previous year
 Not all offices reported

Additionally, State government recycled over 93,911 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 2009 All StAR statistics is available under "State Agency Recycling" on MDE's web page at www.mde.state.md.us/recycling. MRA tonnages reported by State agencies are included in the 2009 recycling totals reported by the Counties (Table 20).

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. In 2009, State agencies recycled 10.1 percent less material over 2008. Consider the following money-saving scenarios based upon 2009 data with an average Maryland tipping fee of \$52:

- § Maryland State government realized \$ 1,217,476 of avoided disposal costs by recycling 23,413 tons of MRA material.
- § If each State agency (per the EO) achieves a 20 percent recycling rate by increasing its MRA tonnage, \$178,509 in additional avoided disposal costs would be realized for a potential total savings of \$1,395,985.
- § If each State agency (per the EO) achieves a 20 percent recycling rate by decreasing the amount of waste generated, additional savings of \$892,651 would be realized for a potential total savings of \$2,110,127.

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 through technical support and on-site expertise, the *All StAR News* (a newsletter devoted to recycling in State government – see Appendix D), and acting 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 who process

and collect recyclables are in the 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. In these situations, legislation requiring State offices to recycle will not change this fact. Requiring the State to lease office space where recycling is integrated into State leasing and janitorial contracts, similar to waste collection contracts, could overcome this obstacle and make improvements in the recycling programs for Maryland State government. Currently, leasing contracts allow State offices to set up recycling programs, but they do not require them as part of the lease. MDE and the Lease Management and Procurement Division of DGS have met on this issue and are working toward this goal.

In addition, designating a recycling coordinator in each State office with responsibility to reach the recycling goals and ensuring that State offices have the means to support a recycling program, such as establishing a material staging area, locations for recycling bins, etc., could improve State agency recycling rates.

Climate Change

Atmospheric concentrations of greenhouse gases (GHG) such as carbon dioxide, methane, and nitrous oxide, that trap the sun's energy from radiating back into space, have dramatically increased since the industrial revolution of the mid 19th 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; coast; 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 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) that was charged with the task of developing a plan for Maryland that discusses the drivers and consequences of climate change, 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 and the EPA's web page at www.epa.gov/climatechange/index.html.

Using the EPA WARM (Waste Reduction Model), Tables 23 and 24 detail greenhouse gas and energy scenarios over the life-cycle (*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.

Table 23 – Per Ton Greenhouse Gas (MTCO₂E*) Emissions

Material	MTCO ₂ E – Landfilled	MTCO ₂ E – Source Reduced	MTCO ₂ E – Recycled	MTCO ₂ E – Combusted
Aluminum Cans	0 **	(8.31) **	(13.67) **	0.02 **
PET Plastic Bottles	0 **	(2.16) **	(1.59) **	1.10 **
Newspaper	0 **	(4.02) **	(1.93) **	0.18 **
Glass	0 **	(0.57) **	(0.32) **	0.01 **

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

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

Table 24 – Per Ton Energy Use (BTU[^])

Material	BTU (million) – Landfilled	BTU (million) – Source Reduced	BTU (million) – Recycled	BTU (million) – Combusted
Aluminum Cans	0 **	(126.75) **	(206.95) **	0.12 **
PET Plastic Bottles	0 **	(71.28) **	(53.36) **	(10.57) **
Newspaper	0 **	(36.87) **	(16.91) **	(8.59) **
Glass	0 **	(7.46) **	(2.66) **	0.02 **

[^] 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.

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.

Tables 25 and 26 detail product lifecycle GHG emissions and energy use with and without waste diversion activities in Maryland in CY 2009. In Table 25, for example, the GHG emissions associated with the lifecycle of glass without waste diversion (*i.e.*, recycling and source reduction) activities is 3,858 metric tons of carbon equivalent and -6,381 metric tons of carbon equivalent with Maryland's waste diversion activities, for a total savings of 10,239 (3,858 - -6,381 = 10,239) metric tons of carbon equivalent. Additional information on EPA's WARM is available at www.epa.gov/climatechange/wydc/waste/calculators/Warm_home.html.

The metric tons of GHG savings in Table 25 are the equivalent of removing 1,101,709 passenger cars from the roadway each year, conserving 682,759,995 gallons of gasoline, conserving 2,506,298,149 cylinders of propane used for home barbeques, or conserving 31,411 railway cars of coal. The BTU savings reported in Table 26 are the equivalent of the annual

energy consumption of 398,467 households (*i.e.*, 18.3 percent of the estimated 2,175,110 households in Maryland in 2009), or the amount of energy contained in 7,368,822 barrels of oil or 343,878,371 gallons of gasoline.

**Table 25 – Maryland Waste Diversion and GHG Emissions
for Calendar Year 2009**

MRA Material	MTCE NWD	MTCE WD	MTCE Savings	MTCO ₂ NWD	MTCO ₂ WD	MTCO ₂ Savings
Compostables	52,125	29,677	(22,448)	191,128	108,816	(82,312)
Glass	3,858	(6,381)	(10,239)	14,146	(23,397)	(37,543)
Metals	(58,659)	(387,392)	(328,733)	(215,087)	(1,420,439)	(1,205,352)
Paper	(47,818)	(913,055)	(865,237)	(175,332)	(3,347,865)	(3,172,533)
Plastic	99,837	68,494	(31,343)	366,070	251,145	(114,925)
Miscellaneous	(17,680)	(400,166)	(382,486)	(64,826)	(1,467,276)	(1,402,450)
TOTAL	31,663	(1,608,823)	(1,640,486)	116,099	(5,899,016)	(6,015,115)

MTCE = Metric Tons of Carbon Equivalent

MTCO₂ = Metric Tons of Carbon Dioxide Equivalent

NWD = No Waste Diversion (baseline = 61.1% landfilled and 38.9% incinerated)

WD = From Maryland CY 2009 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 2009

(in million BTUs)

MRA Material	BTUs NWD	BTUs WD	BTU Savings
Compostables	(1,579,894)	(485,003)	1,094,891
Glass	177,132	(164,758)	(341,890)
Metals	(131,591)	(19,261,204)	(19,129,613)
Paper	(5,489,240)	(19,558,278)	(14,069,038)
Plastic	(4,543,794)	(6,911,994)	(2,368,200)
Miscellaneous	(2,653,123)	(10,578,441)	(7,925,318)
TOTAL	(14,220,510)	(56,959,678)	(42,739,168)

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

NWD = No Waste Diversion (baseline = 61.1% landfilled and 38.9% incinerated)

WD = From Maryland CY 2009 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.
- ⊙ The promotion of 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 procurement initiatives including:

- ❖ State government is required to purchase products with recycled content whenever practicable. An 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 2009, buying paper products made with recycled content paper was the rule, not the exception, with 95 percent of paper products (*e.g.*, bond paper, computer paper, etc.) purchased made from recycled content paper. This is consistent with the preceding 4 fiscal years rates of FY 2006 – 99 percent, FY 2007 – 96 percent, and FY 2008 – 99 percent and FY 2009 – 97 percent.
 - Details on State procurement guidelines along with lists of products available with recycled content such as picnic tables, park benches, and re-refined motor oil are available on the DGS web page at www.dgs.maryland.gov/Procurement/index.html. Local jurisdictions in Maryland are able to piggyback on State procurement contracts.
 - Boilerplate language stating, "All products used in packing to cushion and protect during the shipment of commodities are to be made of recycled, recyclable, and/or biodegradable materials" is included on all Maryland Invitation to Bid Solicitations and Purchase Orders.

Special Programs

From July 2009 through June 2010, 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 2009, the newsprint recycled content percentage was 53 percent, exceeding the requirements of the MRA.

Table 27 contains 58 known publishers that distribute 164 different newspapers in Maryland. MDE continues to seek increased compliance from publishers who did not fulfill reporting requirements.

Table 27 – Maryland Newspaper Publishers

Publisher	Content %	Publisher	Content %
A&C Business News	NR	Gannett Company, Inc.	31.0
Afro-American Newspapers	40.8	Gay & Lesbian Community Ctr. of Baltimore	41.3
American Farm Publications	39.3	Greenbelt Cooperative Publishing	NR
Ascend Communications	24.2	Herald-Mail	56.1
Baltimore Business Journal	31.9	Independent Newspapers, Inc.	47.2
Baltimore Jewish Times	52.7	Kimbel Publications	40.9
Baltimore Newspaper Publishing Co., LLC	25.3	Landmark Community Newspapers	40.9
Baltimore Sun Community Newspapers	100	Latin American Times	NR
Baltimore Sun	73.5	Legal Times	NR
Baltimore Times Publications	33.7	Maryland Coast Dispatch	NR
Bay Weekly	44.8	Morgan Messenger	30.1
Bayside Gazette	35.8	New York Times Company	30.2
Capital-Gazette Newspapers	36.6	News Journal, Wilmington	27.7
Carroll Publishing Company	42.1	Post Newsweek Media	65.2
Catholic Review	33.8	Prince George's Post	NR
Chatsworth Enterprises	40.8	Randall Family, LLC	57.5
Chesapeake Publishing Corporation	33.9	Sentinel Newspapers	34.5
Citizen Communications, Inc.	100	Sincell Publishing Company	NR
City Paper	18.9	Southern Maryland Printing	31.0
Connection Publishing	100	Southern Maryland Publishing Co.	38.7
Courier	39.4	St. Mary's Today Newspaper, LLC	NR
Cumberland Times News	30.1	USA Today	32.2
Daily Record	40.7	Washington Business Journal	NR
Dow Jones & Company	30.1	Washington County Pickett	NR
El Tiempo Latino	49.9	Washington Newspaper Company	NR
Express Publications Company, LLC	49.8	Washington Newspaper Publishing Co., LLC	26.8
Flag Publications	43.5	Washington Post	49.1
Freestate Independent Inc.	74.6	Washington Times	33.3
FT Publications Inc.	7.5	Western Montgomery Bulletin	43.2
		Statewide	53.0
NR – Did not report		% based upon partial reporting period data	

Telephone Directory

The MRA requires telephone directory publishers, who in the previous calendar year used at least 50 tons of directory stock in telephone directories distributed in 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 five known publishers of telephone directories distributed in the State of Maryland. In 2009, recycled content for these directories was reported as follows:

- ✕ BSMG Directories – Did Not Report;
- ✕ Hispanic Yellow Pages – Did Not Report;
- ✕ Idearc Media – 39.7 percent recycled content;
- ✕ Yellow Book USA – 36.7 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.

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 their disposal.

In 2005, Maryland became the third state to enact electronics recycling legislation. The Statewide Computer Recycling Pilot Program (SCRPP) required computer manufacturers to register with, and pay an annual registration fee to, MDE in order to sell their products in Maryland. In 2007, the Statewide Electronics Recycling Program (SERP) was passed. Effective October 1, 2007, the SERP builds upon the success of the SCRPP. Key changes to the SCRPP include expanding the scope of electronics covered and clarification to the definition of “manufacturer”. Highlights of the SERP include:

- ★ Requiring manufacturers who manufacture an average of more than 1,000 covered electronic devices (*i.e.*, a computer or video display device (*e.g.*, televisions, monitors, etc.) with a screen that is greater than 4 inches measured diagonally) per year in the immediately preceding 3-year period to register with and pay a registration fee to MDE if they plan to sell or offer for sale to any person in the State a new covered electronic device.
- ★ Payment of an initial annual registration fee of \$10,000. The subsequent annual renewal registration fee is \$5,000 but the fee can be reduced to \$500 provided the manufacturer has a MDE approved takeback program.
- ★ Prohibiting a retailer from selling or offering for sale to any person in the State a new covered electronic device manufactured by a

manufacturer who has not registered and paid the required registration fee to MDE.

- ★ Provision for civil and administrative penalties against manufacturers and retailers who fail to comply with the SERP.
- ★ Issuance of grants to counties and municipalities to assist with covered electronic device recycling activities.
- ★ Requiring counties 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, 2010, 62 manufacturers registered with MDE and were authorized to sell their products in Maryland in 2010. In Fiscal Year (FY) 2009 (July 1, 2009 through June 30, 2010), \$616,552 in registration fees were utilized to provide grants to 8 municipalities and 17 counties for eCycling activities including establishing permanent collection facilities, curbside pickup for seniors, purchasing equipment, expanding electronics recycling, and holding special collection events.

Highlights of eCycling in Maryland from October 2001 **to December 2009**, include:

- ✓ 181 special collection events (*i.e.*, 1 or 2-day collection events) were held in 24 jurisdictions.
- ✓ There were 40 special events in 2009, and increase of 2 over the 38 collection events in 2008.
- ✓ 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, Talbot, Washington, Wicomico, and Worcester Counties, and Baltimore City.
- ✓ Regularly scheduled eCycling collection events are held in the cities of Annapolis, College Park, Greenbelt, Salisbury, and Westminster.
- ✓ A one-day event in Baltimore County on April 30, 2005, collected over 89 tons of electronic equipment from 1,600 participants.
- ✓ Nearly 28,000 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. Table 28 gives a breakdown of the electronics equipment collected. An additional 7,676 tons of electronics were collected in 2009, which Counties reported to MDE as being from commercial businesses that 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	5,790,136	–	thru 12-31-08	–	19,129.15	38,258,327	–
eCycling Special Events in 2009							
Allegany (2)	74,060	1-day	Apr, Jun	258	14.22	28,441	110
Carroll (5) **	177,724	1-day	Aug thru Dec	169	6.48	12,972	77
Midshore Region * (3)	139,346	1-day	May, Oct, Nov	616 (2 events)	34.59 (2 events)	69,180 (2 events)	112 (2 events)
Montgomery (8)	987,358	1-day	Mar thru Sept, Dec	–	97.71	195,420	–
Prince George's (20) **	868,318	1-day	Jan, Apr, May, Jun, Jul, Oct	2,095 (19 events)	89.39	178,760	53
Worcester (2)	51,886	1-day	Apr, Oct	386	6.80	13,600	35
Subtotal Events	2,298,692	–	2009	3,524	249.19	498,373	86
Permanent eCycling in 2009							
Anne Arundel ***	523,943	–	2009	–	1,024.29	2,048,592	–
Baltimore City	643,755	–	2009	–	706.91	1,413,820	–
Baltimore County	813,237	–	2009	–	1,262.86	2,525,710	–
Calvert	95,494	–	2009	–	261.68	523,360	–
Caroline	33,390	–	2009	–	1.88	3,753	–
Carroll	177,724	–	2009	–	214.48	428,960	–
Cecil	107,132	–	2009	–	189.24	378,480	–
Charles	149,862	–	2009	–	122.41	244,821	–
Frederick	239,429	–	2009	–	332.61	665,220	–
Garrett	30,876	–	2009	–	66.13	132,260	–
Harford	251,768	–	2009	–	214.6	429,200	–
Howard	289,749	–	2009	–	680.33	1,360,660	–
Kent	20,298	–	2009	–	14.52	29,040	–
Montgomery ***	987,358	–	2009	–	1,797.69	3,595,374	–
Prince George's ***	868,318	–	2009	–	315.05	630,101	–
Queen Anne's	49,192	–	2009	–	3.53	7,052	–
St. Mary's	106,170	–	2009	–	0	0	–
Talbot	36,465	–	2009	–	0	0	–
Washington	149,013	–	2009	–	106.74	213,480	–
Wicomico ***	93,783	–	2009	–	1,015.66	2,031,320	–
Worcester	51,886	–	2009	–	117.2	234,400	–
Subtotal Permanent	5,718,842	–	2009	–	8,447.81	16,895,603	–
TOTALS (2001 – 2009)				3,524 (2009)	27,826.15	55,652,303	86 (2009)

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

** The totals for special events in the city of Westminster were included in Carroll County's special events total. The totals for special events in the cities of Bowie, College Park, Greenbelt, Hyattsville, 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 – 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 2009 and 2010, 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).

MDE continues to implement the 2001 mercury legislation entitled *"Mercury and Products that Contain Mercury"* (Environment Article, Subtitle 9 Sections 6-904 through 6-907). MDE has developed informational materials on the hazards of mercury, designed programs to encourage voluntary efforts of Marylanders to reduce mercury, increased awareness of mercury, and provided an information source for Marylanders in the event of mercury spills. In conjunction with County Health Officers and Environmental Health Directors, MDE worked to develop and distribute information for adults and children on mercury and mercury-containing products. Fact sheets are available on MDE's web page at www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/Mercury/Pages/Programs/LandPrograms/Recycling/mercury/index.aspx. The fact sheets cover such topics as mercury thermometer drop-off locations, general mercury information, alternative products to those containing mercury, mercury spill cleanup and spill kit vendor information, and fish consumption advisories. The MDE Emergency Response Division also continues to provide mercury specific response training to firefighters throughout the State.

MDE has collaborated with many organizations to fulfill the *Mercury and Products that Contain Mercury Act* mandates. Collaborations have been useful in ensuring that more Marylanders are aware of the hazards of mercury and the requirements of legislation concerning mercury. Some collaborations include:

- ✧ Support of the NVMSRP. 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 – Mercury Switch Removal from Vehicles (Environment Article Section 6-905.4 to 6-905.6) in 2009. In addition to being free

to scrap recyclers, the program pays scrap recyclers \$4 per switch that is returned for recycling. As of December 31, 2009, 112 recyclers of a possible 152 had enrolled in the program and submitted 39.25 pounds of mercury for recycling.

Mercury legislation 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)

The Annotated Code of Maryland, Environment Article § 9-1801, 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.

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 at www.mde.state.md.us/recycling 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.

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 where 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. Old automobile batteries can be returned to the 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. Table 29 details battery recycling companies listed in the "Recycling Market Directory." Please contact these companies for details.

Table 29 – Battery Recycling Companies

Company Name	Telephone Number
AERC Recycling	321-952-1516
Air Cycle Corporation	800-909-9709
Arundel Recycling	410-761-6595
Battery Solutions, Inc.	810-494-5010
Cambridge Iron & Metal	410-327-7867
Eco-Battery, Inc.	888-768-2004
Envirolight and Disposal	727-526-8870
Everlights, Inc.	773-734-9873
Exide Corporation	610-378-0540
Inmetco	724-758-2800
Maryland Recycle Company	410-780-3060
Rechargeable Battery Recycling Corporation	877-723-1297
Schultz & Sons Salvage	410-479-2110
Southeast Recycling Technologies Inc.	800-592-3970
USA Lights	301-699-6244
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. 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/airmanagementpermits/home/pages/permits/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 you determine your permitting needs.

Local Permitting Issues for Recycling and Composting Facilities – This fact sheet lists various local permits and approvals 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. This factsheet is available by request or by going to the MDE's recycling web page at www.mde.state.md.us/recycling and clicking on “Education and Outreach”.

Solving the Permit Puzzle in Maryland – This document outlines common State permit procedures and permits that may be required of recycling and composting businesses. This booklet is available by going to MDE's recycling web page at www.mde.state.md.us/recycling and clicking on “Publications”. Information on permit requirements is available on MDE’s web page at www.mde.maryland.gov/Programs/Permits/Pages/Permits/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.

Public Resources

As waste diversion programs continue to mature, it is important for MDE to keep the public informed on waste diversion programs in the State. From July 2009 thru June 2010, 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 eighth Annual "Rethink Recycling" Sculpture Contest on November 13, 2009, at MDE headquarters.

The "Rethink Recycling" Sculpture Contest featured over 50 entries from 19 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 containing records, plastic bags, old shoes, playing cards, computer parts, 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 squid and a seahorse, a tree, a peacock, and a trash truck 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. 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 Forums

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 pharmaceutical 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.

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) 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/) 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/) 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.

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's 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 2009 include:

- Twelve (15) counties achieved waste diversion rates greater than the 40 percent waste diversion goal.
- Fourteen (14) counties earned SR credits. Five (5) of these counties, Baltimore, Charles, Frederick, Montgomery, and Prince George's earned the maximum 5 percent SR credit.
- Fifteen (15) counties accept fluorescent lights for recycling.
- Nine (9) Counties accept expired medication for proper disposal.
- Twenty-One (21) Counties had permanent electronic drop-off locations.
- Eight (8) counties and 6 municipalities held 40 eCycling collection events.
- Sixteen (16) counties operated textile collection programs.
- Sixteen (16) counties maintained mercury thermometer drop-off locations.

- Twelve (12) counties collected paint for recycling.
- Nineteen (19) 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 recycling web page at 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	✓	✓	✓	✓/✓			✓	✓	✓	eCycle event, tire events; No hard cover books
Anne Arundel*	✓		✓	✓/✓	✓	✓			✓	wood pallets, scrap metal, tires, shingles
Baltimore City*	✓		✓	✓/✓	✓	✓				Bagged leaves and x-mas tree only
Baltimore County*	✓	✓	✓	✓/✓	✓	✓		✓	✓	gasoline, usable building material, residential rechargeable batteries
Calvert*	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	cooking oil, printer cartridges, scrap metal, auto tires, oil filters
Caroline			✓	✓/✓	✓		✓		✓	eCycle event; No hard covers books w/ mixed paper; Mid-shore program
Carroll*	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; scrap metal, vinyl siding, plastic bags, grease/oil, AL can reimbursement
Cecil*	✓	✓	✓	✓/✓	✓	✓	✓	✓	✓	wood pallets, rechargeable batteries, latex paint
Charles*	✓	✓	✓	✓/✓	✓	✓	✓		✓	household batteries, oil filters; No books, paperboard
Dorchester				✓/✓				✓		No books
Frederick*	✓	✓	✓	✓/✓	✓		✓		✓	pesticide bottles, wood pallets, propane; No books
Garrett	✓			✓/✓	✓					#1 & 2 plastic only, inkjet & toner cartridges; No books
Harford	✓		✓	✓/✓	✓	✓	✓	✓		gasoline, pesticide containers, oil filters, propane tanks, inkjet cartridges
Howard*	✓		✓	✓/✓	✓	✓	✓	✓	✓	propane tanks, asphalt roof shingles, scrap metal, reusable building materials, carpet, vegetable oil
Kent			✓	✓/✓	✓		✓	✓	✓	eCycle event; pesticide containers, boat shrink-wrap; Mid-shore program; No hardback books
Montgomery	✓		✓	✓/✓	✓	✓	✓	✓	✓	eCycle event; bicycles, cooking oil, propane tanks, tires, reusable building materials, scrap metal, rechargeable batteries
Prince George's*	✓	✓	✓	✓/✓	✓	✓		✓	✓	eCycle event; cooking oil, mattress foam
Queen Anne's				✓/✓	✓		✓	✓	✓	eCycle event; boat shrink-wrap, bicycles, passenger tires; vegetable oil; Mid-shore program
St. Mary's*	✓	✓	✓	✓/✓	✓	✓	✓		✓	pesticide containers, oil filters, ink jet cartridges, cooking oil, rechargeable batteries, propane cylinders, scrap tires, scrap metal
Somerset				✓/✓				✓		No 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

* Single-stream Recycling (in Calvert Co. only some individual towns offer single-stream)

° Have established Mercury Thermometer Drop-offs

Household Hazardous Waste Collection Day - Contact the County for details including materials accepted

^ In this section, eCycle = electronics recycling

APPENDIX

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APPENDIX A

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Permitted Solid Waste Acceptance Facility Economic Benefits

This table provides information that was voluntarily reported by permitted solid waste acceptance facilities in 13 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 2009 are highlighted by (*).

Table A1 – Economic Benefits

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Allegany	Mountainview Sanitary Landfill (Privately Owned)	Provides County residents and businesses an environmentally safe disposal site for County solid wastes at reasonable rates. The facility has eliminated the need for Allegany Co. to fund and operate its own solid waste disposal facility.	Allegany County uses Mountainview Landfill as a collection site for recycling materials including, glass, cardboard, plastic, aluminum cans, newspaper, and magazines. The facility also provides an ash disposal area for citizen use during the winter months.	No information provided.	The Mountainview Landfill had purchases for supplies and materials from Allegany County businesses. Also has on-site used oil, cardboard, and aluminum recycling programs to boost recycling in Allegany County.
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.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Baltimore City	Cannon Hygiene* USA), Inc. (Privately Owned)	Local employment, rent and other direct local purchases to support business.	Not provided.	8 full time employees. Salary and benefit valued at \$250,000.	Local expenditure: \$200,000.
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 Calvert County by allowing the Division of Solid Waste to extend the useful life of the Appeal Municipal Landfill by at least 20 years, providing a tangible economic benefit.	Revenues are collected from users of the landfill via user fees and excise taxes. County residents may use the convenience centers free of charge, and for chargeable items, county residents pay a lower fee at the landfill than commercial haulers for disposal. The transfer station is complementary to the Appeal Municipal Landfill, and is operated in conjunction with ongoing solid waste refuse collection, landfilling and recycling operations.	The landfill operations and convenience centers are supported by a group of 38 staff with \$2,057,145 in salaries. The employees 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].	The landfill capital and operational projects have utilized various contractors and vendors within Calvert County.
Carroll	Roll-Off Express, Inc. (Privately Owned)	\$54,000/year paid in real estate, personal property and sales taxes.	\$2.25 million investment for facilities.	\$275,000/17 employees including equipment operators, drivers, laborers.	\$375,000 annual purchase of goods and services.
Cecil	Cecil County Central Landfill (County Owned)	Amnesty program for recycling materials, household hazardous waste days, and eCycling	Provides waste disposal and recycling opportunities for approximately 30% of Cecil County's	\$400,000/23 Employees.	Special no cost or reduced cost program for recycling. Approximately \$7,000,000

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Cecil (continued)		events. Mulch for minimum fees.	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.		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, mulch free, yard waste grinding & sampling and analysis of 29 off-site residential water wells adjoining landfill property.	Disposal of C&D and MSW.	\$2.2 Million/42 employees.	Spent \$2.6 million on various recycling contracts and programs.
Harford	Harford Waste Disposal Center (Publicly Owned)	Provides County residents with mulch and compost products free or at a reduced cost based on quantity.	Provides County residents with solid waste disposal services at a competitive cost. Provides recycling services at “no cost.”	\$2.2 Million/52 full time employees. Jobs include management, clerical, equipment operators, mechanics, chauffeurs, laborers, and weigh-master/attendants involved in both landfill and recycling activities.	\$1.1 Million Contractual Services. \$0.31 Million Supplies and Materials. \$0.49 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.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
Howard (continued)	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.	22 full time County employees. 50 full time Covanta Montgomery, Inc. and 15 full time/15 temporary MES employees.	No information provided.
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.	\$1.7 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 (8), 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).	\$8.7 million annual operating budget spent locally for the purchase of materials, goods and services.
Washington	Washington County Hospital	Provides health care for Washington County residents and the tri-state region.	No information provided.	Over 2,000 employees.	No information provided.

Jurisdiction	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Salaries/No. of Employees)	Other Economic Benefits
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	2006-WMF-0010	3/29/2011	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	2006-WPT-0158	2/12/2011	- / 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.
	Cannon Hygiene (USA), Inc. Transfer Station	WTS	PRI	894 / 522	2006-WTS-0621	2/27/2012	-/2.3	1505 Bloomfield Avenue, Baltimore MD 21227. Accepts soiled feminine hygiene and other related products from the rest rooms.
	Curtis Bay Energy Medical Waste Incinerator	WMI	PRI	926 / 568	2005-WIN-0036	5/4/2011	- / 4.0	3200 Hawkins Point Rd, Baltimore MD 21226. Formerly Pheonix Services.
	Millennium Inorganic Chemicals – HPP Industrial Landfill	WIF	PRI	925 / 501	2005-WIF-0527	3/8/2012	57 / 95	3901 Fort Armistead Road, Baltimore MD 21226.
	Northwest Transfer Station	WTS	MUN	855 / 550	2005-WTS-0038	8/9/2010	- / 6.6	5030 Reisterstown Road, Baltimore MD 21215.
	Baltimore Recycling Center LLC Processing Facility and Transfer Station	WPT	PRI	535 / 920	2006-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	2005-WMF-0325	3/31/2010	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	2005-WMI-0512	3/7/2010	- / < 1	714 W. Lombard St., Baltimore MD 21201-1010.
	Wheelabrator Baltimore, LP Waste-to-Energy Facility	WTE	PRI	904 / 523	2005-WTE-0030	2/2/2011	- / 15	1801 Annapolis Road, Baltimore MD 21230. Formerly BRESKO.
	W.R. Grace and Co. Industrial Landfill	WIF	PRI	921 / 500	2005-WIF-0613	1/24/2012	10.7/157	5500 Chemical Road, Baltimore MD 21226
	Baltimore County Resource Recovery Facility	WPT	CTY	900 / 507	2004-WPT-0048	4/7/2010	6.0 / 7.3	10275 Beaver Dam Road, Cockeysville MD 21030.
	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.
Baltimore	Eastern Sanitary Landfill	WMF	CTY	974 / 570	2005-WMF-0052	8/25/2010	200 / 367	6259 Days Cove Road, White Marsh MD 21162.
	Eastern Sanitary Landfill	WTS	CTY	974 / 570	2006-WTS-0508	12/21/2011	- / 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	2005-WPF-0341	9/12/2010	- / 8.5	2202 Halethorpe Farm Road, Baltimore MD 21227. Accepts Only C&D Waste.
	Western Acceptance Facility Transfer Station	WTS	CTY	905 / 510	2003-WTS-0599	6/13/2009	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	401Sweetwater Road, Lusby MD 20678.
	Appeal Transfer Station	WTS	PRI	961 / 200	2007-WTS-0519	5/30/2012	- / 1	401Sweetwater Road, Lusby MD 20678.
	Hance Land Clearing Debris Landfill	WLC	PRI	923 / 246	2005-WLC-0252	11/22/2010	10.2 / 23.6	1/4 mile west of MD Rtes 2 & 506, Prince Frederick MD 20678.
	Hill Land Clearing Debris Landfill	WLC	PRI	914 / 304	2004-WLC-0551	10/5/2009	2.9 / 17.6	MD Rte. 2 & Dalrymple Rd, Sunderland MD 20689.
	Howlin Land Clearing 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	2004-WLC-0550	1/17/2010	4.3 / 6.6	Eastside MD Rte 765 - North of MD Rtes 2 & 4, St. 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	2005-WMF-0066	8/9/2010	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 Rd., Elkton MD 21921.
	Stemmer's Run Transfer Station	WTS	CTY	1095 / 581	2005-WTS-0072	3/2/2010	- / 9.7	45 Stemmer's Run Road, Earleville MD 21919.
	Woodlawn Transfer Station	WTS	CTY	1058 / 658	2005-WTS-0074	3/2/2010	- / 37	Fire Tower & Waibel Rds, Port Deposit MD 21904.
Charles	Charles County Municipal Landfill	WMF	CTY	832 / 269	2005-WMF-0076	10/12/2010	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 Rd, 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 Rd, Frederick MD 21703.
	Fort Detrick -- Area B & Main Post Municipal Landfill	WMF	FED	672 / 583	2005-WMF-0327	7/10/2010	61 / 297	Area B - Rosemont Avenue & Shookstown Road. Fort Detrick Waste Only.
	Fort Detrick -- Area B & Main Post Incinerator	WIN	FED	678 / 582	2005-WIN-0341	6/29/2010	- / 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	2004-WPT-0604	7/20/2011	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	2006-WMF-0094	3/29/2011	30 / 188	3118 Oakland-Sang Run Rd, 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	2005-WMF-0098	10/27/2010	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 Rd, Joppa MD 21085. Produces Steam for APG Complex.
	Oak Avenue Rubble Fill	WRF	PRI	982 / 580	2004-WRF-0104	3/21/2010	39 / 42.8	1020 Oak Avenue, Joppa MD 21085.
Howard	Alpha Ridge Municipal Landfill	WMF	CTY	823 / 539	2005-WMF-0110	10/27/2010	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.
	Ameriwest Processing Facility and Transfer Station	WPT	PRI	865 / 489	2006-WPT-0572	11/5/2011	- / 12.89	7150 Kit Kat Road, Elkridge MD 21075. Accepts Only C&D Waste.
	Workplace Essentials Transfer Station	WTS	PRI	885 / 550	2003-WTS-0594	9/28/2009	- / 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	2004-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	2006-WPT-0617	11/2/2011	- / 43	16101 Frederick Road, Derwood MD 20850.
Prince George's	Brown Station Road Municipal Landfill	WMF	CTY	865 / 365	2003-WMF-0589	9/20/2010	134 / 164	3500 Brown Station Road, Upper Marlboro MD 20772.
	Dower House Recycling and Processing Center	WPF	PRI	843 / 355	2005-WPF-0563	8/30/2010	- / 10	5900 Dower House Road, Upper Marlboro MD 20772.
	Ritchie Reclamation Rubble Landfill Marlboro Road	WRF	PRI	849 / 372	2003-WRF-0590	1/10/2011	78 / 258	2001 Ritchie Marlboro Rd, 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.
	Kenilworth Recycling Plant Processing Facility	WPF	PRI	820/302	2006-WPF-0571	10/19/2011	- / 9.2	4516 "S" Street Capitol Heights MD 20743
	Lawrence Street C & D Processing Facility	WPF	PRI	818/400	2006-WPF-0626	10/9/2012	1.8/2.85	4700-A Lawrence St. 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 Land Clearing Debris Landfill	WLC	PRI	946 / 140	2006-WLC-0134	4/23/2011	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	2005-WMF-0138	10/27/2010	36.8 / 55	44825 St. Andrews Church Rd., 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
Somerset	St. Andrews Waste Processing & Transfer Facility	WPT	CTY	934 / 167	2006-WPT-0624	9/11/2013	1 / 55	44861 St. Andrews Church Rd, California MD 20619
	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	2005-WIN-0140	9/12/2010	0.06	Smith Island Road, Ewell MD 21824.
Talbot	Midshore Regional Solid Waste Facility	WMF	MES	1080 / 356	2004-WMF-0144	2/14/2010	67 / 140	7341 Barkers Landing Road, Easton MD 21601. Serves Talbot, QA, Caroline and Kent Counties.
	Midshore Transfer Station	WTS	MES	1080 / 356	2004-WTS-0549	10/4/2009	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 Hospital	WMI	PRI	658 / 598	2005-WMI-0553	6/15/2010	0.25 / 77	251 East Antietam Street, 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	2003-WPF-0579	8/4/2010	5 / 14.3	513-515 South Camden Ave., Fruitland MD 21826.
	Newland Park Municipal Landfill	WMF	CTY	1180 / 200	2005-WMF-0283	3/21/2010	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	2006-WMF-0152	5/31/2011	230 / 725	7091 Central Site Lane, Newark MD 21841.
	Ocean City Transfer Station	WTS	MUN	1353 / 207	2005-WTS-0156	8/7/2010	- / 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: Rubble/Construction & Demolition Landfill	6
WLC: Land Clearing Debris Landfill	5
WIF: Industrial Landfill	3
WIN: MSW or Special Medical Waste Incinerator	3
WMI: Medical Waste Incinerator	3
WPF: Processing Facility	8
WPM: Special Medical Waste Processing Facility	1
WTS: Transfer Station	10
WPT: Processing Facility & Transfer Station	15
WTE: Waste to Energy/MSW Incinerator	3
TOTAL	81
Type of Ownership	Number of Facilities
CTY: County Government	32
PRI: Private (Commercial)	39

MUN: Municipal Government	3
UMD: University of Maryland System	1
FED: Federal Government	3
MES: Maryland Environmental Service	3
TOTAL	81

Table B3 – Permitted Solid Waste Acceptance Facilities NOT in Operation

Jurisdiction	Site Name	Facility Type	Ownership Type	Status
Harford	Gravel Hill Rubble Landfill	C&D Landfill	Private	Not Built
Montgomery	Montgomery County Site 2 Municipal Landfill	MSW Landfill	County	Not Built
Prince George's	Dower House Recycling and Processing Facility	Processing Facility	Private	Not Built
	Kenilworth Recycling Plant	Processing Facility (C&D Only)	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	2006-NWW-GP01	9.90	9/22/06	9/21/11	(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) 551-9142	(410) 551-9155
	Chesterfield Farms 2641 Brickhead Road Gambrills, MD 21054	GP	2004-NWW-GP01	10.00	11/24/2004	11/23/2009	(410) 721-7206	(410) 721-2253
Baltimore	King Mulch and Pallet 1114 Hengemihle Avenue Essex MD 21221	GP	2002-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	2005-NWW-GP01	12.00	6/8/05	6/7/10	(410) 922-5959	(410) 521-2778
	Hollins Organic Products, Inc. 6247 Falls Road Baltimore MD 21209	GP	2005-NWW-GP01	2.00	4/22/05	4/21/10	(410) 828-0210	(410) 823-7645
	Northwest Recycling, LLC 212 Cockeys Mill Road Baltimore MD 21136	GP	2005-NWW-GP01	5.00	11/2/05	11/1/10	(410) 833-9369	(410) 833-3963
	Wirtz & Daughters, Inc. 6275 Days Cove Road White Marsh, MD 21162	IP	2005-NWW-0552	14.00	3/31/2005	3/30/2010	(410) 335-0400	(410) 592-6248
Calvert	Sawmill Road Natural Wood Waste Recycling Facility 7185 Sawmill Road Lusby MD 20657	GP	2006-NWW-GP01	11.25	7/14/06	7/13/11	(410) 535-6008	(410) 535-6011
Carroll	C.J. Miller, LLC 390 Vision Way Westminster MD 21158	GP	2006-NWW-GP01	40.00	8/15/06	8/14/11	(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	A L C Stump & Brush Recycling 1726 East Old Philadelphia Road Elkton MD 21421	GP	2006-NWW-GP01	25.00	4/18/06	4/17/11	(410) 392-0770	(410) 392-2317
	Grass Busters Landscaping Company, Inc. Shop 383 Hotton Road Elkton MD 21921	GP	2004-NWW-GP01	48.80	3/30/05	3/29/10	(301) 292-1166	(302) 292-1197
Charles	James E. Hill 6585 Ripley Road Ripley MD 20646	GP	2005-NWW-GP01	8.50	9/2/05	9/1/10	(301) 934-7158	(301) 934-1536
	Maximulch, LLC 12340 Crain Highway Newburg MD 20664	GP	2005-NWW-GP01	12.50	6/2/05	6/1/10	(301) 259-4906	(301) 259-4168
Frederick	Butler Wood Recycling 4039 Tuscarora Road Point of Rocks MD 21777	GP	2009-NWW-GP01	58.00	7/20/04	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	2002-NWW-GP01	3.67	11/2/08	11/1/13	(410) 692-2673	(410) 692-2253
	T&M Mulch, Inc. 1808 N. Fountain Green Road Bel Air MD 21015	GP	2008-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	2000-NWW-GP01	25.00	6/27/05	6/26/10	(410) 879-1822	(410) 893-0045
Howard	Jerom M. Carlin 2020 Daniels Road Ellicott City MD 21043	GP	2004-NWW-GP01	15.00	12/2/04	12/1/09	(410) 465-4078	(410) 465-5483
Montgomery	ACME Biomass Reduction, Inc. 21601 New Hampshire Ave. Brookville MD 20833	GP	2004-NWW-GP01	107.50	9/8/04	9/7/10	(301) 540-2968	(301) 540-9630
	Twin Ponds Farm, LLC 15315 Mt. Nebo Road Poolesville MD 20837	GP	2003-NWW-GP01	4.00	5/23/08	5/22/13	(301) 942-6700	(301) 942-6734
Queen Anne's	Baker Rubble Landfill 501 4-H Park Road Queenstown MD 21658	IP	2006-NWW-0620	3.00	12/13/06	12/12/11	(410) 827-8831	(410) 827-8831
Talbot	Dependable Sand and Gravel Company, Inc. 13155 Ocean Gateway Queen Anne, MD 21657	GP	2005-NWW-GP01	343	9/30/05	9/29/10	(410) 822-6363	(410) 820-7789
Wicomico	Dunn's Tractor Services, Inc. 9042 Taylor Road Delmar MD 21875	GP	2004-NWW-GP01	10.00	5/7/04	5/6/09	(410) 742-7429	(410) 742-7429
	Eastern Shore Forest Product, Inc. 3667 St. Lukes Road Salisbury MD 21804	IP	2005-NWW-0615	2.00	12/13/06	12/12/11	(410) 548-7136	(410) 742-5540
General Permits (GP):				26				
Individual Permits (IP):				3				
TOTAL				29				

APPENDIX D

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All StAR News

Fall, 2009

All StAR



Maryland Legislature Passes State Agency Recycling Law

During Maryland's 2009 Legislative Session, State representatives strengthened Maryland government's recycling requirements by mandating the recycling of certain materials. House Bill (HB) 595 requires State agencies to develop a State agency recycling plan by July 1, 2010, that addresses the placement of collection bins and the recycling of aluminum, glass, paper, and plastic. Each agency and unit of State government must implement this plan by January 1, 2012.

To facilitate the implementation of the plan, the Maryland Department of the Environment (MDE) is working with the Department of General Services

(DGS) to include language in all State leasing contracts that mandates that landlords provide recycling collection at all State leased buildings. Also, MDE's Recycling Unit is available to assist State agencies in developing recycling programs. Contact Christy Bujnovszky for help with your All StAR program.

23 Maryland 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 eco-nomically feasible. In no case may the amount to be recycled be less than 10 percent. In 2008, Maryland State Government exceeded the minimum rate and recycled 27.5 percent of the waste generated.

Congratulations to the following agencies for increasing their recycling rate over 2007: MD Public Broadcasting Commission, MD State Archives, MD General



Assembly, St. Mary's College, Morgan State University, MD Automotive Insurance Fund, MD Environmental Service, MD Food Center Authority, Judiciary of MD, MD State Police, MD Insurance Administration and Departments of Agriculture, Natural Resources, Health and Mental Hygiene, Public Safety and Correctional Services, Human Resources, Assessments and Taxation, Education, Veterans Affairs, and Transportation.

A detailed breakdown of the 2008 All StAR recycling activities and additional information on Maryland's 27.5% All StAR Recycling Rate (including a breakdown of each State agency's recycling rate) will soon be posted on MDE's recycling web page at www.mde.state.md.us/Programs/LandPrograms/Recycling/StateAgencies/index.asp.

RECYCLING CONTACTS

MD Department of the Environment
Land Management
Administration

www.mde.state.md.us/recycling

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Technical Services and
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David Mrgich, Chief
Recycling Unit
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Christy Bujnovszky
Recycling Unit
cbujnovszky@mde.state.md.us

The next All StAR News is scheduled for the Spring of 2010!

Have a story idea or specific questions on a topic? Send comments and ideas for future stories to Christy Bujnovszky at cbujnovszky@mde.state.md.us.

Maryland State Agencies' 2008 Recycling Rates

Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2008

Agency Name	No. of Sites	No. of Sites Reporting	No. of People*	Total MRA 2008 (tons)	2008 MRA Recycling Rate (%)^
Department of General Services	18	18	11,674	720.48	24.59
Department of Labor, Licensing & Regulation	13	0	1,218	NR	NR
Department of Agriculture	3	3	266	44.13	37.94
Maryland Public Broadcasting Commission	1	1	212	18	11.00
Comptroller of the Treasury	1	1	850	198.59	71.80
Maryland School for the Deaf	2	2	834	92.60	36.89
Department of Natural Resources	5	1	721	17.60	22.00
Department of Juvenile Services	15	15	2,881	281.97	13.84
Maryland State Archives	1	1	84	2.80	8.24
Department of the Environment	1	1	858	23.35	19.81
Department of Transportation	74	74	25,252	10,381.57	44.30
Department of Health and Mental Hygiene	17	10	7,525	853.29	19.23
Maryland General Assembly	1	1	1,223	89.73	20.38
Dept. of Public Safety and Correctional Services	29	29	35,409	1,864.07	10.63
Department of Human Resources	11	11	4,433	220.77	25.55
Department of Assessments and Taxation	1	1	11	1.00	20.16
University of Maryland System	17	17	128,607	9,223.98	33.22
St. Mary's College of Maryland	1	1	2,567	791.54	42.39
Morgan State University	1	1	8,237	127.84	7.50
Department of Education	4	4	1,839	57.92	21.15
Maryland Automobile Insurance Fund	1	1	408	65.51	36.91
Maryland Stadium Authority	1	1	1,100	308.39	13.51
Baltimore City Community College	1	1	8,251	10.30	3.11
Maryland Environmental Service	1	1	210	16.26	34.26
Maryland Food Center Authority	1	1	1,327	3.00	0.05
Judiciary of Maryland	1	1	142	36.50	61.55
Subsequent Injury Fund Board	1	1	17	1.74	22.14
Department of Veterans Affairs	1	1	657	1.00	40.98
Department of Budget and Management	1	1	210	16.69	38.20
Maryland State Police	26	26	1,614	311.23	32.97
Dept of Business and Economic Development	1	1	580	31.16	23.74
Maryland Higher Education Commission	1	1	72	11.00	29.79
Dept. of Housing and Community Development	1	1	400	202.74	61.90
Maryland Insurance Administration	1	1	283	22.33	36.40
TOTALS	255	231	249,972	26,049.06	27.49

* State employees comprise approximately 84,541 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

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd. • Suite 610 • Baltimore, Maryland 21230-1719

410-537-3314 • 800-633-6101 x3314 (within Maryland) • <http://www.mde.state.md.us/recycling>

APPENDIX E

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County Recycling Coordinators

Allegany

Ms. Terry Bennett
Recycling Coordinator
Allegany County Department of Public Works
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Anne Arundel

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Ms. Kelly Mackall, Program Specialist
Mr. Robb Fish, Program Specialist

Baltimore City

Ms. Tonya Simmons
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Baltimore County

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Mr. Clyde Trombetti, Public Info. Specialist
Mr. Tim Dunn, Public Info. Specialist
Ms. Julie Roby, Public Info. Specialist

Calvert

Mr. Bill Teter
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Caroline

Mr. Marshall Monteith
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Carroll

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Dept. of Public Works
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Cecil

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Charles

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Mr. David Helmecki

Harford

Mr. C. Robert Ernst
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Howard

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Ms. Kim Reichart, Recycling Coordinator

Kent

Mr. Martin Holden
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Mr. Tom Kusterer
Mr. Bill Davidson

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Ms. Marilyn Rybak, Planner

Queen Anne's

Ms. Connie Mayberry
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Somerset

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Talbot

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Wicomico

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Ms. Mary Phillips (MRA Report)

Worcester

Mr. Ronald Taylor
Recycling Coordinator
Central Facility Landfill
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Newark, MD 21841-

Phone: (410) 632-3177 **Ex:**

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Email: rtaylor@co.worcester.md.us