

***REPORT TO THE
HOUSE ENVIRONMENTAL MATTERS COMMITTEE
and
SENATE ECONOMIC AND ENVIRONMENTAL
AFFAIRS COMMITTEE***

***SOLID WASTE MANAGED IN MARYLAND
CALENDAR YEAR 1999***

September 1, 2000

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Maryland Department of the Environment



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SOLID WASTE MANAGED IN MARYLAND CALENDAR YEAR 1999

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THIS REPORT IS PRINTED ON RECYCLED PAPER

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Maryland Department of the Environment

Annual Report to the Legislature Solid Waste Managed in Maryland Calendar Year 1999

Introduction

The Maryland Department of the Environment (MDE) respectfully submits to the House Environmental Matters Committee and the Senate Economic and Environmental Affairs Committee the Department's first Annual Report regarding how solid waste was managed in Maryland during calendar year 1999. MDE submits the report in accordance with the requirements under § 9-204(1) of the Environment Article, Annotated Code of Maryland, Chapter 555 of the Acts of 1998.

The reporting requirements defined in § 9-204(1) of the Environment Article direct MDE to prepare a report on the amount of solid waste, by weight or volume, that is disposed of in the State during the previous year. At least annually, all permitted solid waste acceptance facilities must provide MDE with the information needed to prepare this report. The report must identify:

The quantity of waste disposed by the following solid waste categories:

- A. Construction and Demolition Debris (C&D);
 - B. Incinerator Ash;
 - C. Industrial Waste;
 - D. Land Clearing Debris (LCD);
 - E. Municipal Solid Waste (MSW); and
 - F. Any other solid waste identified by the Department;
- (2) The amount of solid waste disposed in the State that is generated outside of the State;
 - (3) The jurisdictions where the solid waste originated;
 - (4) The amount of solid waste generated in the State that is transported outside of the State for disposal; and

- (5) An estimate of the amount of solid waste managed or disposed of by:
 - A. Recycling;
 - B. Composting;
 - C. Landfilling; and
 - D. Incineration

In addition to information relating to the quantities of solid waste managed and disposed, owners of permitted solid waste acceptance facilities may also provide information to MDE relating to the economic benefits provided to the communities where the facilities are located. Information reported by the permitted facilities may include:

- (1) An accounting of the facility's economic benefits provided to the locality where the facility is located;
- (2) The value of disposal and recycling facilities provided to the locality at no cost or reduced cost;
- (3) Direct employment associated with the facility; and
- (4) Other economic benefits resulting from the facility during the preceding calendar year.

Data Collection Methodology

Solid Waste Disposal Data:

To collect the necessary information to comply with the reporting requirements of § 9-204(1) of the Environment Article, MDE compiled the data reported by permitted solid waste acceptance facilities to MDE from the Annual Tonnage Reports. These reports are required to be submitted as a condition of each facility's permit and describe their respective waste management activities for the preceding year. Appendix A provides a listing of the permitted solid waste acceptance facilities which submitted annual reports in 1999. The report also provides an opportunity for the solid waste acceptance facility to document the economic benefits it provides to the community, although this data is optional. Appendix B lists the responses MDE received from the facilities that chose to report the economic benefit data.

Recycling Data:

To develop the required data summarizing recycling activities for 1999, MDE compiled the information contained in the Maryland Recycling Act (MRA) Reporting System Reports. MRA reports are submitted annually to the Department by county recycling programs and the City of Baltimore, and provide detailed information relating to the types and quantities of MRA and other materials recycled in each county for the preceding year. The data contained in an MRA report demonstrates a county's compliance with the mandated recycling goals as defined in § 9-505 of the Environment Article. Specifically, these goals mandate a 15% recycling rate for the State's counties with populations of less than 150,000 and a 20% recycling rate for the State's counties with populations greater than 150,000. MDE uses the information contained in these reports to develop the annual statewide MRA recycling rate.

Definitions

Construction and Demolition Waste - Structural steel, cement, concrete, bricks (excluding refractory brick), lumber, plaster, plasterboard, insulation material, shingles and roofing material, floor and wall tile, asphalt, pipes and wires, and other structural fabrics (COMAR 26.04.07.13).

Incinerator Ash - The residual by-products resulting from the combustion of solid waste, including bottom ash and residuals from air pollution abatement equipment, at permitted incinerators and waste-to-energy facilities.

Industrial Waste - Any waste generated by a process of industry, manufacturing, trade or business or by the development of any natural resource, including agriculture (COMAR 26.08.01.01B(40)).

Land Clearing Debris - Materials from land clearing operations including: earthen materials such as clays, sands, gravels, and silts; topsoil; tree stumps; root mats; brush and limbs; logs; vegetations; and rock (COMAR 26.04.07.11(B)).

Municipal Solid Waste - That portion of "solid waste" defined in COMAR 26.13.02.02 that includes garbage, refuse, or other materials originating from private residences, schools, institutions, businesses, commercial enterprises or as the result of community activities.

Other Wastes - Includes wastes such as special medical waste, asbestos and non-hazardous industrial materials.

Scrap Tires - Tons of scrap tires recycled or managed in Maryland are not included in this report.

Tons of Solid Waste Managed in Maryland by Category

The information presented in this first annual report to the legislature provides the first complete description of how solid waste is managed in Maryland. The report consolidates data collected on municipal solid waste received and disposed at permitted solid waste acceptance facilities and reports on materials recycled pursuant to the Maryland Recycling Act. The information presented in this report expands the picture to include a full description of the categories of solid waste managed in Maryland.

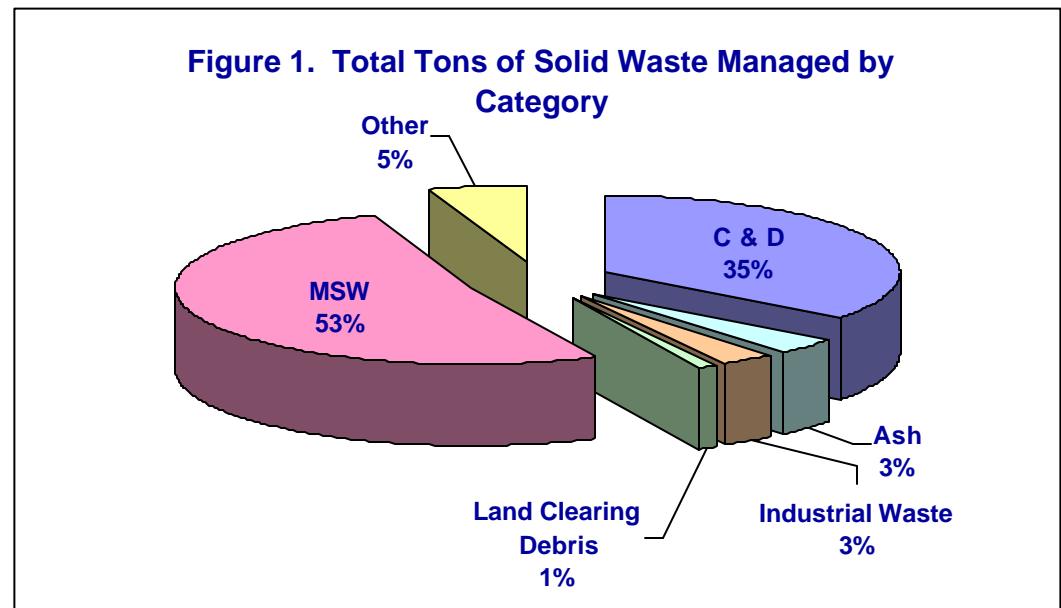
Table 1 represents the tons of solid waste that were managed in Maryland during calendar year 1999. Figure 1 illustrates this data by waste category and the percentage each category contributes to the total. Key elements for interpreting the data include:

- 88% of the solid waste managed in the State during 1999 was either municipal solid waste or construction and demolition waste.
- Construction and demolition waste data include estimates of asphalt and concrete recycling activity reported by the Maryland Department of Transportation and six (6) County Public Works Departments.
- Tons of scrap tires recycled or managed in the State are not included in this report.

Table 1

Solid Waste Category	Tons Received for Disposal	Tons Recycled	Total Tons Managed
Construction & Demolition Waste	2,011,539	2,166,346	4,177,885
Incinerator Ash	160,232	251,224	411,456
Industrial Waste	197,311	166,617	363,928
Land Clearing Debris	77,945	74,036	151,981
Municipal Solid Waste	4,376,622	1,737,165	6,113,787
Other Wastes	244,184	379,102	623,286
TOTAL	7,067,833	4,774,490*	11,842,323

*The total does not include 745,500 tons of pozzolan which counties reported as recycled in 1999. The material is excluded from this report because Maryland law defines pozzolan as a material, not a solid waste (§15-407 of the Environment Article).



Tons of Solid Waste Disposed in Maryland Generated Outside of the State and Jurisdictions Where Solid Waste Originated

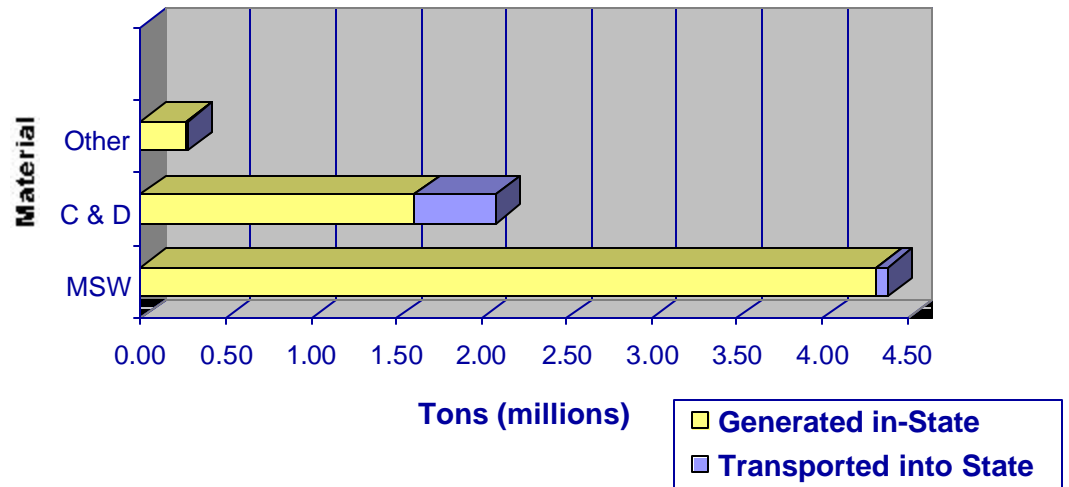
Table 2 compares, by category of waste, the tons of waste imported into Maryland for disposal in relation to the total tons of waste received for disposal at State permitted solid waste acceptance facilities. Figure 2 illustrates this comparison. Waste generated outside of the State comes from neighboring jurisdictions including Delaware, West Virginia, Pennsylvania, Virginia, New York, New Jersey and the District of Columbia.

- The Mountainview landfill in Allegany County is the only permitted solid waste landfill that accepts MSW from other states. This privately owned landfill is authorized by contractual agreement with Allegany County to accept "other than County" waste after meeting the terms of its contract with the County, up to a maximum tonnage of 125,000 tons per year.
- There are 12 operating C&D rubblefills in Maryland, 7 of which are privately owned. Disposal activities at the private facilities reflect regional market conditions.
- "Other wastes" brought into Maryland for disposal consist of medical waste and other materials requiring special disposal at permitted MSW incinerators.

Table 2

Category of Waste	Tons Imported into Maryland	Total Tons Received for Disposal	Source Jurisdiction
MSW	62,246	4,377,641	PA, WV
C&D	469,944	2,084,444	VA, PA, NY, DE, NJ, DC
Other Wastes	2,559	274,052	

Figure 2. Solid Waste Transported into Maryland in relation to the Total Tons of Solid Waste Received for Disposal



Solid Waste Generated In-State and Transported Out-of-State For Disposal

Table 3 represents the amount of solid waste transported from Maryland for disposal. The 1.5 million tons transported for disposal outside Maryland represents approximately 21% of the total waste received at the State's permitted solid waste acceptance facilities.

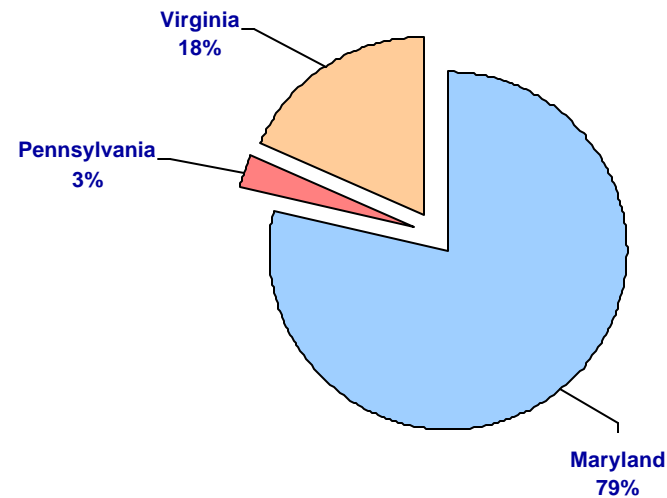
Several counties have contracted for the out-of-state disposal of their waste to extend the useful life of county-owned landfills. Figure 3 illustrates by percentage where Maryland's solid waste was transported for disposal.

Figure 3 also includes 22,600 tons of incinerator ash exported to Pennsylvania for use in a demonstration recycling project to document the beneficial reuse of municipal solid waste incinerator ash.

Table 3

Waste Transported To	MSW	Incinerator Ash	Total
Pennsylvania	196,671	22,626	219,297
Virginia	1,172,140	123,240	1,295,380
Tons Total Transported	1,368,811	145,866	1,514,677

Figure 3. Where Maryland Waste is Transported for Disposal



Amount of Solid Waste Managed in the State

Table 4 summarizes how Maryland managed the solid waste that remained in the State for disposal during 1999.

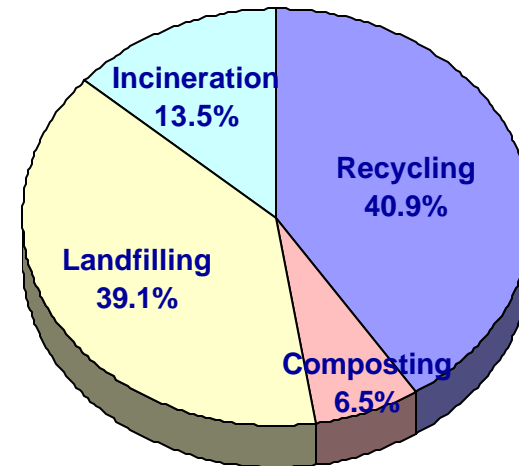
Figure 4 illustrates Maryland's integrated solid waste management system by the percentage each category contributes to the total. Key elements for interpretation include:

- This table does not include approximately 1.5 million tons of solid waste transferred for final disposal outside of Maryland in 1999 (see page 6)
- MDE has historically reported as recycled only those materials identified in the Maryland Recycling Act (MRA). The 4.87 million tons identified in this report as recycled in calendar year 1999 reflects a total of all materials reported by the Counties as being recycled, and includes construction and demolition debris, land clearing debris and scrap metals.
- In 1999, 2.1 million tons of MRA-defined materials were reported as being recycled by Maryland's counties. This equates to a 36% Statewide MRA recycling rate.

Table 4

Waste Management Method	Tons	% of Total
Recycling	4,123,972	40.9%
Composting	650,517	6.5%
Landfilling	3,943,471	39.1%
Incineration	1,359,439	13.5%
TOTAL	10,077,399	100%

Figure 4. How Solid Waste was Managed in Maryland in 1999



APPENDIX A

Maryland Department of the Environment Waste Management Administration

Permitted Solid Waste Acceptance Facilities Submitting Annual Tonnage Reports In 1999

Municipal Solid Waste Landfill

County	Site Name	Owner
Allegany	Mountainview	Private
Anne Arundel	Millersville	County
Baltimore City	Quarantine Road	Municipal
Baltimore	Eastern	County
Calvert	Appeal	County
Carroll	Northern	County
Cecil	Central	County
Charles	Charles Co. #2	County
Dorchester	Beulah	County
Frederick	Fort Detrick Reich's Ford	Federal County
Garrett	Garrett Co	County
Harford	Harford Waste Disposal Center	County
Howard	Alpha Ridge	County
Prince George's	Brown Station Road Sandy Hill*	County County
St. Mary's	St. Andrews	County
Somerset	Fairmount Road	County
Talbot	Midshore	Maryland Environmental Service
Washington	Resh Road II	County
Wicomico	Newland Park	County
Worcester	Central	County

* The Sandy Hill municipal solid waste landfill ceased accepting waste on June 23, 2000. The data contained in this report is from activity in 1999.

Municipal Solid Waste-to-Energy Facilities (WTE) / Municipal Solid Waste Incinerators

County	Site Name	Owner
Baltimore City	BRESCO WTE	Private
Harford	Waste Energy Partnership WTE	Private
Montgomery	Montgomery County Resource Recovery Facility	County/Northeast Maryland Waste Disposal Authority
Somerset	Smith Island MSW Incinerator	County

Municipal Solid Waste Transfer Stations

County	Site Name	Owner
Anne Arundel	Annapolis Junction	Private
Baltimore City	Northwest	Municipal
Baltimore	Eastern Western	County County
Calvert	Appeal	Private
Carroll	Northern	County
Cecil	Stemmers Run Woodlawn	County County
Montgomery	Shady Grove	County
Talbot	Midshore	Maryland Environmental Service
Worcester	Ocean City	Municipal

Municipal Solid Waste Processing Facilities

County	Site Name	Owner
Anne Arundel	Curtis Creek Recovery Systems	Private
Baltimore City	Baltimore Processing Facility	Private
Baltimore	Balto. County Resource Recovery Facility (BCRRF)	County

Construction & Demolition Landfills (Rubble Landfills)

County	Site Name	Owner
Anne Arundel	PST Reclamation	Private
Baltimore	Days Cove	Private
	Honeygo Run	Private
Harford	Oak Avenue	Private
	Phillips Army Airfield	Federal
	Westwood	Federal
Kent	Dulin	County
Montgomery	Bonifant Road	County
Prince George's	Cross Trails Road	Private
	Ritchie Land Reclamation	Private
Queen Anne's	R.B. Baker & Sons	Private
Washington	Washington County Reclamation	County

Construction & Demolition Processing Facilities

County	Site Name	Owner
Baltimore City	Baltimore Environmental	Private
	Environmental Recycling & Waste Red. LLC	Private
Baltimore	Recovermat	Private
Calvert	Southern Maryland	Private
Carroll	Roll Off Express	Private
Prince George's	Sheriff Road	Private

Land Clearing Debris Landfills

County	Site Name	Owner
Calvert	Hance	Private
	Hill	Private
	M.T.Parran	Private
St. Mary's	Knott	Private

Industrial Waste Landfills

County	Site Name	Owner
Baltimore City	Millennium	Private
Frederick	EASTALCO	Private

Special Medical Waste Incinerators

County	Site Name	Owner
Baltimore City	Baltimore Regional Medical Waste Incinerator	Private
	BFI Waste System-NA	Private
Frederick	Fort Detrick	Federal
Harford	MRICD	Federal

Other Processing Facilities

County	Site Name	Owner
Baltimore City	CS&D	Private
	Stericycle, Inc.	Private
Wicomico	Peninsula Regional Medical Center	Private

APPENDIX B

Economic Benefits Provided to Host Communities for 1999 Reported by Permitted Solid Waste Acceptance Facilities

This table provides the economic benefits to host communities as reported by 19 permitted solid waste acceptance facilities in 10 jurisdictions. The information was submitted voluntarily and reflects a 31% response rate for all permitted facilities. Appendix B provides the specific information as reported by each facility. This information in no way represents the total economic benefit to Maryland's communities by all permitted solid waste acceptance facilities.

County	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Annual Salaries / # of Employees)	Other Economic Benefits
Allegany	Mountainview MSWLF (Privately Owned)	Provides County residents and businesses an environmentally safe disposal site at reasonable rates. Saves County the cost of owning and operating a landfill.	Provides County with a site for the collection of recyclables.	\$390,000 / 8 full time employees.	\$300,000 worth of purchases of supplies and materials from Allegany County businesses.
Anne Arundel	Curtis Creek Recovery Systems, Inc MSW Processing & Transfer Facility (Privately Owned)	Host fee equal to \$1.60 per ton paid to Anne Arundel County.	No response	No response	No response
Baltimore City	Baltimore Regional Medical Waste Incinerator (Privately Owned)	\$225,525 - Annual Baltimore City Solid Waste Surcharge. \$150,000 - Annual Personal Property Taxes. \$54,000 - Annual Real Estate Tax \$50,000 - Annual Baltimore City Health Department Fee.	No response	\$1,703,000 / 46 full time employees (25 unskilled laborers 5 maintenance mechanics 16 clerical, technical and management employees) \$2,512,000 / 20 contractual employees, (10 drivers & 10 contract maintenance employees)	No response
Baltimore City	CS&D Processing Facility (Privately Owned)	Facility site is leased from the City of Baltimore in a designated Empowerment Zone.	No response	\$50,000 / 3 employees (Warehouse work, drum handling, forklift loading and unloading operations)	\$6,500 per year in goods & services purchased from local community.

County	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Annual Salaries / # of Employees)	Other Economic Benefits
Baltimore	Days Cove Reclamation Company C&D Landfill (Privately Owned)	Provides funding for the Maryland Department of Natural Resources Smuck Environmental Center.	Processes Baltimore County's wood waste into mulch at no cost and provides mulch to County residents at no cost.	\$600,000 / 22 employees (Jobs range from management level to equipment operators to laborers)	Purchase of goods and services locally for daily landfill operations. Purchases of materials locally for landfill construction.
Baltimore	Environmental Recycling & Waste Reduction, LLC. (Privately Owned)	Provides no-cost disposal of Christmas trees collected by County and processes trees into useable materials.	Processes wood wastes into reusable materials such as mulch or bulking agents for sewage sludge composting and diverts wood waste from landfills thus conserving landfill air space.	\$190,000 / 7 employees (1 Office Manager; 4 Heavy Equipment Operators, & 2 Truck Drivers) Company plans to hire additional people in 2000.	\$226,626 annually to the local community for the purchase of goods and services including fuel, temporary labor, parts and repairs, professional fees, permits and licenses, and the donation of materials and services to community. \$142,000 annually estimated value of materials recycled and reused that would otherwise be disposed.
Baltimore	Honeygo Reclamation Center C&D Landfill (Privately Owned)	Opened in March 1999. \$16,000 paid in taxes to Baltimore County.	No response	\$200,000 / 7 full time & 1 part time employee (75% of employees live within 20 miles of facility)	\$350,000 annually to the local community for the purchase of goods and services including office products, fuel, parts and equipment, equipment and site maintenance, environmental monitoring and leachate disposal. \$500,000 contracted locally in 1999 for landfill construction services.

County	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Annual Salaries / # of Employees)	Other Economic Benefits
Baltimore	Recovermat Mid-Atlantic LLC. C&D Processor (Privately Owned)	\$33,359 paid in annual taxes to Baltimore County. Provides free disposal for the Park Service.	No response	12 - 15 employees (Jobs include laborer, equipment operators, mechanics, administrative and office staff)	90% of all purchases are made locally. \$339,708 in sales of metals recovered.
Carroll	Roll-Off Express, Inc. C&D Processor (Privately Owned)	\$90,000 paid in annual taxes and fees to Carroll County.	Provides an alternative means of disposal for C&D wastes thus conserving landfill space in the county owned Northern MSWLF	\$900,000 to \$1.2 million in annual salaries employing between 40 to 55 people.	\$1.2 million annually to the local community for the purchase of goods and services.
Frederick	Reich's Ford MSWLF and C&D Landfill (Publicly Owned)	Only municipal waste disposal facility in county. Provides free disposal of yard waste for county residents and processes the yard waste into mulch. Mulch is provided free to County residents.	Facility owned and operated by Frederick County for the disposal needs of County residents. Projected useful life through 2014.	\$827,486 / 29 employees (10 heavy equipment operators 4 laborers, 3 recycling coordinators, 3 weighmasters, 1 mechanic, 1 environmental technician, 1 engineer, & 6 administrative staff)	\$2,000,000 spent in 1999 for contractual services.
Harford	Harford Waste Disposal Center MSWLF (Publicly Owned)	Provides county residents with mulch & compost products free or at reduced cost, based on quantity.	Provides county residents with waste disposal services at a competitive cost. Provides recycling services at no cost.	\$1,275,338 / 38 employees (Jobs include management, clerical, equipment operators, mechanics, chauffeur/laborers, laborers, & weighmaster/ attendants)	\$6,067,450 - Contractual Services \$366,950 - Supplies & Materials \$89,500 - Capital Equipment \$116,000 - Savings to County by utilizing County Detention Center trustee labor at facility
Harford	Pappy's, Inc. Oak Avenue C&D Landfill (Privately Owned)	No response	No response	9 employees (Including 2 -Office Employees, 1 Mechanic, 2 Laborers, & 4 Heavy Equipment Operators)	

County	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Annual Salaries / # of Employees)	Other Economic Benefits
Harford	Waste Energy Partners L.P. WTE MSW Incinerator (Privately Owned)	No response	No response	\$2 million / 40 full time employees (Jobs range from entry level through technical, clerical and management positions.)	No response
Prince George's	Brown Station Road MSWLF (Publicly Owned)	Facility provides 50% of the disposal capacity for the County.	Provides over \$1.2 million in waste disposal services to public agencies.	\$1.7 million / 44 employees	\$3,000,000 annually to the local community for the purchase of goods and services.
Prince George's	Ritchie Land Reclamation L.P. C&D Landfill (Privately Owned)	Facility pays property and other taxes, licensing and permit fees.	Recycles concrete, card board, metal, land clearing debris, and some wood products. In 1999 recycled 2262 tons of metal and 687 tons of cardboard from local businesses.	21 employees (Includes laborers, equipment operators, & 1 third party waste checker)	Equipment rentals of \$25,000 to \$35,000 per year from local companies. \$15,000 to \$20,000 per year in operational supplies purchased from area businesses.
Prince George's	Sandy Hill MSWLF (Publicly Owned - Operated by a Private Company)	A \$16 per ton surcharge on incoming MSW is paid to the County.	Provides annual savings of \$26,579 to county residents using residential drop-off boxes at the site which collected 542 tons of waste in 1999.	14 employees (Includes 6 operators, 1 mechanic, 1 operations manager, 1 maintenance manger, & 6 administrative staff members)	The Adopt-A-Road program, managed by a facility operator, helps to keep County roads clean. An average of 60 hours is devoted to cleaning litter on county roads and collecting up to 300 bags of litter annually.
St. Mary's	St. Andrew's MSWLF (Publicly Owned)	Clean dirt accepted from developers at no cost.	No response	\$552,000 annual salaries for full and part time solid waste employees. (Includes a Solid Waste Manager, 4 equipment operators, 2 scale house operators, and landfill attendants)	\$350,000 - Full County subsidy of Recycling & Convenience Centers. \$620,000 - County subsidy from General Fund for residential waste disposal.

County	Site Name	Economic Benefits To Community	Value of Facilities Provided	Direct Employment Benefits (Annual Salaries / # of Employees)	Other Economic Benefits
Washington	Resh Road II MSWLF (Publicly Owned)	Only municipal waste disposal facility in county.	No response	23 - full time employees (serving as administrative, scale personnel, equipment operators, mechanics, and caretakers)	No response
Washington	Washington County Reclamation and C&D Landfill (Publicly Owned)	Diverts C&D waste from and conserves air space in the more expensive county MSWLF.	13 acres of site will be developed as into a county park with 3 softball fields. Free disposal of yard waste for county residents with permit.	3 employees (Includes a scale person/ weigh clerk and 2 equipment operators)	No response
Worcester	Worcester County Central MSWLF (Publicly Owned)	Provides waste disposal services to County at rates below adjacent communities.	No response	\$615,000 in salaries and an additional \$200,000 in benefits for 27 employees	\$200,000 in goods and services purchased from local community.