

I. Background

The Harford County Recycling Plan established an aggressive recycling program designed to comply with the requirements of the Maryland Recycling Act (MRA) to protect the environment, conserve and preserve natural resources and save energy.

In 1988, the State of Maryland enacted the MRA. This law required each county with a population greater than 150,000 to develop a plan to reduce its solid waste stream, through recycling, by 20 percent with the plan to be fully implemented by January 1, 1994.

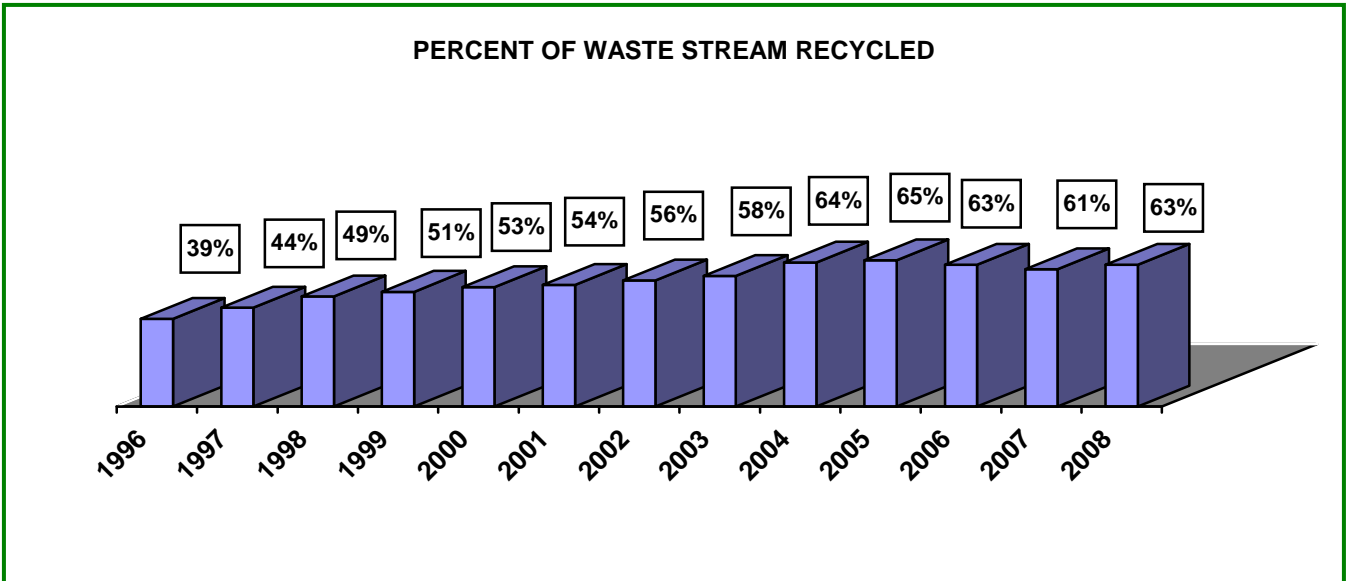
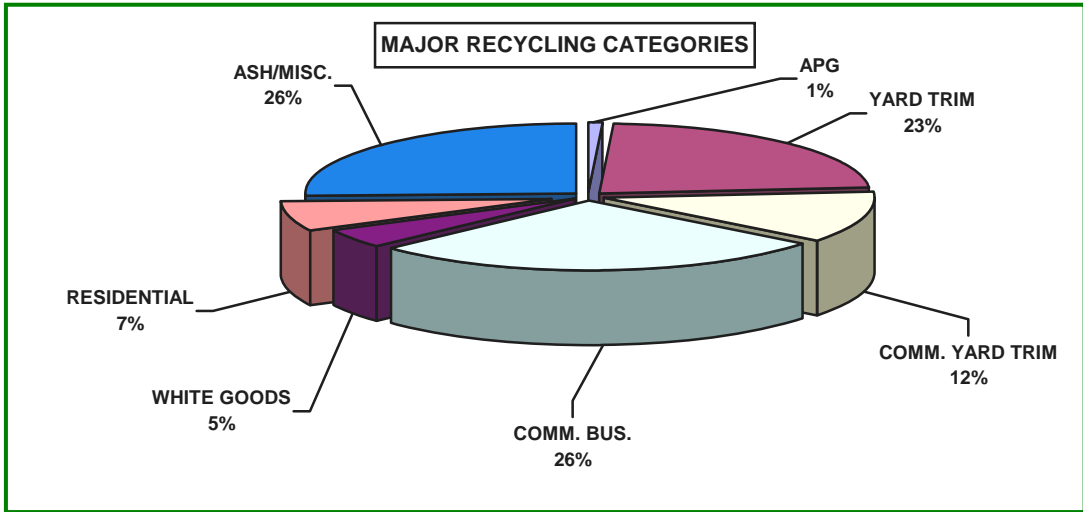
Each Maryland County was to have a plan approved by the State by January 1, 1992; report annually to the State; and show that it had attained the goal of 20 percent by January 1, 1994. Each subsequent annual report to the State must include the total amount of solid waste disposed of and the amounts and types of solid waste recycled; methods of waste reduction other than recycling; and the waste reduction percentage achieved. The MRA and subsequent guidelines distinguished those wastes that were "eligible." Construction and demolition debris, for example, is not an eligible waste item for the annual reporting.

An essential component to the success of Harford County's Recycling Plan comes as a result of the ban imposed in 1992 on landfilling or incinerating yard trim from residential and commercial generators. The ban prohibits yard trim (leaves, grass clippings, branches, trimmings, stalks, and Christmas trees) found in the municipal solid waste stream from being collected and disposed of with household trash. Homeowner drop-off convenience centers, which receive yard trim material, have been established in Bel Air at the former Tollgate landfill and at the Harford Waste Disposal Center (HWDC). The HWDC also receives material from commercial establishments.

II. Current Statistics

The most recent County report, submitted to the Maryland Department of the Environment (MDE) in April, 2008, reported a total recycling rate of 62.64 percent including a four percent credit achieved through source reduction practices.

The 2008 figures from the MDE indicate 193,486 tons of recyclables within Harford County were sent to secondary markets. That equates to a 58.64 percent solid waste diversion directly resulting in the saving of valuable landfill space. The Calendar 2008 Maryland Waste Diversion Rates & Tonnages report is presented in Attachment I.



III. Waste Reduction

Waste reduction, or source reduction, activities focus on preventing the generation of solid waste, generally by decreasing the volume of materials produced and consumed. Very simply, waste that is not generated will not enter the waste stream. The Office of Recycling continues education and outreach programs in waste reduction through advertising and presentations. The fourth grade curriculum in Harford County public schools includes a recycling course, presented by the Recycling Office.

MDE has developed a reporting system to be submitted annually that can earn counties an additional one to five percentage points for source reduction. These values are added to the calculated recycling rate. Harford County earned 4 percent source reduction in 2008 bringing the total recycling rate to 62.64 percent as represented on Attachment I.

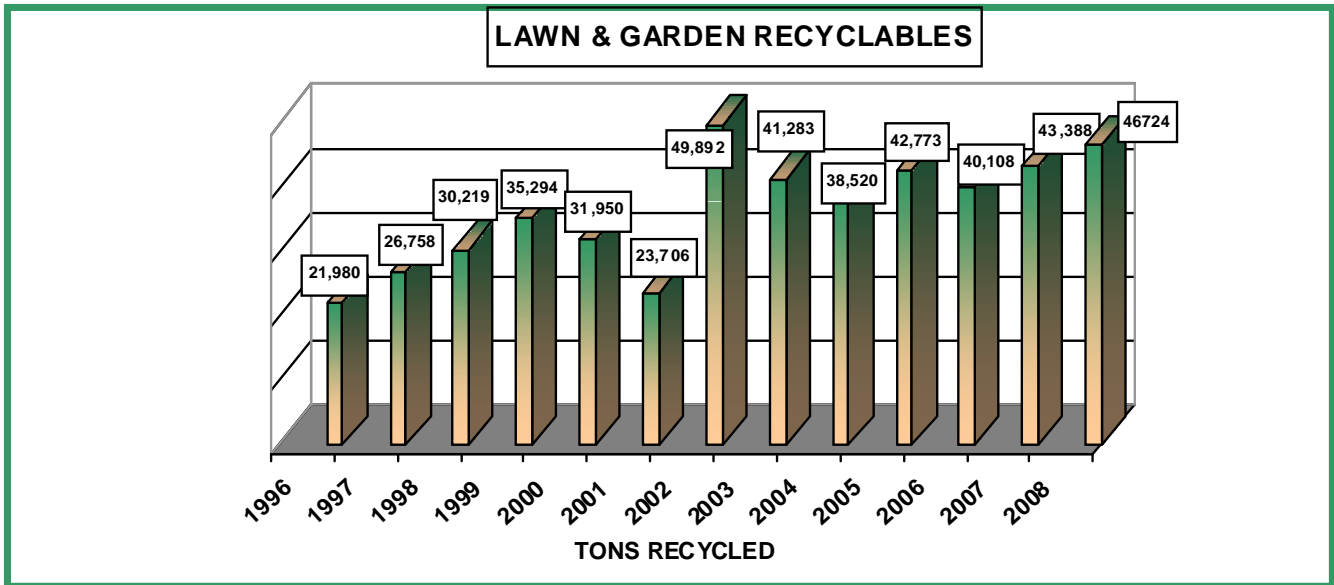
IV. Recycling Programs

1. Lawn & Garden Recyclables (Yard Trim)

Yard trim material is defined as leaves, grass clippings and woody wastes (branches, garden trimmings, stalks, Christmas trees) found in the municipal solid waste stream. The EPA estimates that yard trim constitutes approximately 18 percent of the national municipal solid waste flow. Recovery of yard trim by processing into a high-grade compost and mulch is an intricate component of Harford County's integrated solid waste management program.

The HWDC has an eleven-acre, paved Mulch and Compost Facility that processes an average 900 tons of materials weekly or more than 46,000 tons per year.

Through the State-approved mulching and composting operation, mulch and compost is made available to Harford County residents. Residents may self-load three 30-gallon bags or cans of nutrient-rich mulch or compost at the HWDC free of charge whenever it is available. Larger quantities can be obtained for \$10 per cubic yard.



2. Backyard Composting

Backyard composting is the most practical and convenient way for homeowners to handle lawn and garden materials. It is easier and less expensive than bagging and transporting these materials to a drop-off site.

The Office of Recycling encourages backyard composting with advertising and brochures available to the public.

3. Grasscycling

Grasscycling is a term coined by the Professional Lawn Care Association of America to describe the natural process of recycling grass clippings rather than collecting and bagging them for disposal. According to University research, grass clippings consist of 80 percent water; leaving grass clippings on the lawn when mowing returns the remaining 20 percent nitrogen content to the soil. Nitrogen fertilizes the root system for healthier grass plants.

4. Christmas Tree Recycling

The Christmas tree recycling program reached its twentieth anniversary in 2008. Since the ban on landfilling and incinerating yard trim was imposed in June 1992, a yearly average of more than 25,000 Christmas trees have been received and converted to mulch.

Christmas trees are accepted at the HWDC and Tollgate Yard Trim drop off site. The trees are ground into mulch and after proper maturing made available to Harford County residents.

5. White Goods & Scrap Metal Recycling

The white goods/scrap metal recycling program conducted at the HWDC has been in operation for 20 years and has collected and marketed more than 40,000 tons of scrap metal. Significant amounts of steel are contained in large appliances such as refrigerators, freezers, washers, dryers, water heaters, stoves and furnaces. Items containing at least 80 percent metal such as bicycles, lawn mowers, barbecue grills and wheelbarrows are also accepted. In 2008, over 2,000 tons of scrap metal was collected at the HWDC.

6. Litter Control & Adopt-a-Road

The litter control and Adopt-a-Road programs are administered through the HWDC.

In 2008, the litter control crews cleaned over 946 miles and collected 46,476 pounds of recyclables and 166,531 pounds of solid waste along Harford County roads.

The Adopt-a-Road program is similar to the State's Adopt-a-Highway program enlisting volunteers to adopt 1- to 2-mile sections of the County's roads and to pick up litter and recyclables approximately four times a year. In 2008 more than 267 miles were cleaned and 4,367 pounds of recyclables and 12,130 pounds of solid waste were collected.

7. Other Waste

In addition to the above wastes, there are other wastes which by nature, should be properly disposed and many cause harm to the environment if illegally dumped. The following other wastes can be received at the HWDC.

- a. **Lead-Acid Batteries:** the largest component of batteries by weight is discarded automobile batteries. The traditional lead-acid battery can pose an environmental threat due to its lead content when disposed of with municipal solid waste. Lead-acid batteries are accepted for recycling at the HWDC daily.
- b. **Motor Oil & Antifreeze:** used motor oil and antifreeze are accepted at nine locations throughout the County including the HWDC. 65 tons of used motor oil and antifreeze were collected at the HWDC in 2008.
- c. **Empty Pesticide Containers:** in cooperation with the Maryland Department of Agriculture (MDA), the farming community is offered an environmentally sound method of recycling/disposing of pesticide containers. The program offers one drop-off day per month from June to September. Over this fourteen year period, more than 20,000 containers have been accepted for recycling with 2,070 containers accepted in 2008. Attached and presented as Attachment II is the report from MDA.
- d. **Gasoline/Oil Mixture:** In 2005, in response to resident concerns, a program was developed to accept gasoline/oil mixtures used primarily in outboard motors and lawn equipment. In 2008 4 tons were collected at the HWDC.

8. Electronics Recycling

In 2004, two separate one-day events brought in a total of 40 tons of computers and televisions. In 2005, computer recycling collection became permanent at the HWDC. The program accepts monitors, hard drives, scanners, printers, mice, speakers, cables, modems, and peripherals. 187 tons of computers were

collected in 2008. Beginning in November 2009, televisions will also be accepted at the HWDC

9. Textiles & Clothing Recycling

Textile and clothing recycling which includes clean and dry clothing, hats, drapes, curtains, belts, handbags, towels, sheets, blankets, paired shoes and any piece of material 15"x15" or larger, has been a permanent drop-off program since 2000 at the HWDC. In 2008 more than 12,000 pounds of material was collected. Textile and clothing recycling provides clothing for less fortunate individuals and/or material for industrial shop rags from remnants

V. Public Education & Outreach

Recycling represents an essential component of Harford County's integrated waste management system. Recycling, along with waste reduction, landfilling, incineration and composting, allows us to take maximum advantage of limited disposal capacity while reducing pollution and conserving natural resources and energy.

All Harford County public school fourth grades include recycling in the science unit, inviting a speaker from the Recycling Office to familiarize students with the importance of recycling and how recycling works in Harford County.

A speaker from the Recycling Office is available to community associations, civic organizations, scouting groups and others. Additionally, the Office of Recycling is able to perform recycling audits to commercial, business or institutional organizations at no cost.

VI. Independent Initiatives

1. **Aberdeen Proving Ground** contracts with a private trash hauler for the collection of trash and recyclables from their buildings on Post. The recyclables are the same as those collected throughout the County.

2. Municipalities

The Town of Bel Air operates its own trash and recycling collection fleet. The Town is split into two districts with curbside recycling picked up on Thursdays and Fridays. Recyclables are delivered to the County's transfer station.

The City of Aberdeen operates its own trash and recycling collection fleet. Additionally, Aberdeen has a “pay as you throw” program wherein recycling collection is free and trash collection requires stickers priced according to the size of trash bags set out for collection. Aberdeen also provides their residents with containers for recyclables.

The City of Havre de Grace contracts with a private trash hauler to provide trash and recycling collection to their residents. Collection of bulk items and yard trim can be arranged through City Hall.

3. Private Recycling Companies

Always Recycling at 1353A Old Post Road, Havre de Grace, 410-939-9201, buys aluminum, copper, brass, stainless steel, and accepts computers, cell phones, electronics, batteries and vinyl siding.

Green Marble Recycling at 1646 Main Street, Cardiff, 410-452-8945, buys aluminum, copper, brass and stainless steel.

Maryland Recycle Co. at 343 Granary Road, Forest Hill, 410-836-0070, buys aluminum, copper, lead, brass, insulated cable and wire, auto/truck batteries and radiators.

VII. Attachments

- I. Calendar 2008 Maryland Waste Diversion Rates & Tonnages, from MDE, dated October 21, 2008.
- II. 2008 Pesticide Container Recycling Program totals from the MDA.

Calendar 2008 Maryland Waste Diversion Rates & Tonnages

County	Total MRA (tons)*	MRA Recyclables (tons)	MRA Recycling Rate**	Source Reduction Credit^	Source Reduction (tons)***	Total Tonnage Diverted****	MRA Waste Diversion Rate*****	Non-MRA Recyclables (tons)	Non-MRA Waste (tons)	Total Waste (tons)^^	Overall Waste Diversion Rate^^^
Allegany	88,397.26	25,121.58	28.42%	3%	2,733.94	27,855.52	31.42%	485,497.69	21,547.00	595,441.95	88.75%
Anne Arundel	727,813.90	310,827.05	42.71%	3%	22,509.71	333,338.76	45.71%	349,125.46	211,679.90	1,288,619.26	54.21%
Baltimore City	798,301.90	248,595.47	31.14%	0%	0.00	248,595.47	31.14%	239,473.10	263,493.78	1,301,288.78	39.76%
Baltimore County	1,805,097.54	1,055,888.45	58.49%	5%	95,005.13	1,150,893.58	63.49%	845,963.42	342,229.32	2,993,290.28	68.54%
Calvert	82,944.95	21,101.95	25.44%	0%	0.00	21,101.95	25.44%	14,132.63	38,706.00	135,783.58	25.95%
Carroll	146,759.91	48,216.88	32.85%	5%	7,724.21	55,941.09	37.85%	130,135.46	45,348.52	322,243.89	60.35%
Cecil	165,680.91	82,299.13	49.67%	3%	5,124.15	87,423.28	52.67%	43,658.89	53,017.65	262,357.45	51.01%
Charles	136,576.86	58,450.86	42.80%	5%	7,188.26	65,639.12	47.80%	512,189.12	32,082.35	680,848.33	88.81%
Dorchester	53,232.95	12,158.95	22.84%	0%	0.00	12,158.95	22.84%	19,806.06	19,008.00	92,047.01	34.73%
Frederick	257,850.78	106,728.29	41.39%	3%	7,974.77	114,703.06	44.39%	77,422.36	90,340.77	425,613.91	46.27%
Garrett	43,422.82	20,820.82	47.95%	1%	438.61	21,259.43	48.95%	8,844.35	37,639.00	89,906.17	34.00%
Harford	329,984.62	193,486.53	58.64%	4%	13,749.36	207,235.89	62.64%	17,913.51	49,961.01	397,859.14	57.13%
Howard	449,114.21	190,928.62	42.51%	5%	23,637.59	214,566.11	47.51%	3,000.00	97,264.00	549,378.21	40.30%
Mid-Shore	221,730.20	101,738.20	45.88%	0%	0.00	101,738.20	45.88%	136,810.39	41,304.15	399,844.74	59.66%
Montgomery	1,105,671.65	451,605.72	40.84%	5%	58,193.24	509,798.96	45.84%	79,766.62	223,274.53	1,408,712.80	42.72%
Prince George's	788,731.95	304,970.84	38.67%	5%	41,512.21	346,483.05	43.67%	320,517.80	203,543.31	1,312,793.06	52.65%
Somerset	26,784.80	8,426.91	31.46%	0%	0.00	8,426.91	31.46%	6,173.90	6,178.00	39,136.70	37.31%
St. Mary's	69,651.20	23,870.27	34.27%	4%	2,902.13	26,772.40	38.27%	11,748.48	17,946.13	99,345.81	39.85%
Washington	150,945.11	48,414.82	32.07%	1%	1,524.70	49,939.52	33.07%	28,210.38	93,048.99	272,204.48	29.15%
Wicomico	129,512.09	23,774.09	18.36%	0%	0.00	23,774.09	18.36%	7,241.84	4,195.00	140,948.93	22.01%
Worcester	100,277.30	31,634.30	31.55%	0%	0.00	31,634.30	31.55%	56,737.19	41,180.00	198,194.49	44.59%
Roads Data	N/A	N/A	N/A	N/A	N/A	N/A	N/A	103,000.00	N/A	103,000.00	N/A
MARYLAND TOTALS	7,678,482.91	3,369,059.63	43.88%	3.64%	290,218.01	3,659,277.64	47.52%	3,497,368.65	1,932,987.41	13,108,838.97	56.02%

MRA + Non MRA Recycling Rate
52.38014057

- * Total MRA = MRA Recyclables + MRA Waste - MSW Ash Recycled
- ** MRA Recycling Rate = MRA Recyclables (tons) ÷ Total MRA (tons)
- *** Source Reduction (tons) = (Total MRA (tons) ÷ (1 - Source Reduction Credit)) - Total MRA (tons)
- **** Total Tonnage Diverted = Source Reduction (tons) + MRA Recyclables (tons)
- ***** MRA Waste Diversion Rate = MRA Recycling Rate + Source Reduction Credit
- ^ Source Reduction Credit for Maryland = Source Reduction (tons) ÷ (Total MRA (tons) + Source Reduction (tons))
- ^^ Total Waste (tons) = Total MRA (tons) + Non-MRA Recyclables (tons) + Non-MRA Waste (tons)
- ^^^ Overall Waste Diversion Rate = ((MRA Recyclables (tons) + Non-MRA Recyclables (tons)) ÷ Total Waste (tons)) + Source Reduction Credit

2008 PESTICIDE CONTAINER RECYCLING PROGRAM

LOCATION	PARTICIPANTS	REJECTED	ACCEPTED	WEIGHT (lbs.)
Caroline County – Crop Production Services, Denton	1	0	1,300	1,000
Carroll County – Southern States, Hampstead	1	0	5,300	4,000
Frederick County – County Landfill, Frederick *	24	0	2,300	1,500
Eddie Mercer, Frederick	1	0	3,300	2,500
Willard Agri Service, Frederick	1	0	2,600	2,000
Willard Agri Service, Mt. Airy	1	0	2,500	2,500
Harford County – Scarboro Landfill, Street *	11	0	470	500
The Mill of Black Horse, White Hall	1	0	1,600	1,200
Kent County – Angelica Nurseries	1	0	3,000	2,500
Chesapeake Ag. Air, Worton	2	0	2,000	1,600
Nicholson Transfer Facility, Chestertown *	7	0	1,200	1,000
Southern States, Kennedyville	1	0	2,000	1,500
Willard Agri Service, Lynch	1	0	2,600	2,000
Prince George's County – USDA, ARS, Beltsville *	15	0	1,200	1,800
Queen Anne's County – Southern States, Centreville	1	0	2,600	2,000
Talbot County – Mid-Shore Reg. Solid Waste Facility, Easton *	27	0	2,000	1,500
Washington County – Martin's Elevator, Hagerstown *	16	0	1,800	1,500
Wicomico County – County Landfill, Salisbury *	11	0	800	1,000
Tim's Aerial	1	0	3,800	3,000
TOTAL	124	0	42,370	34,600 (17.3 Tons)

* denotes sites that are operated by MDA and open to the public