

T&E COMMITTEE #3  
January 12, 2015

Update/Discussion

MEMORANDUM

January 9, 2015

TO: Transportation, Infrastructure, Energy & Environment Committee

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Recycling Update/Discussion**

Attachments to this memorandum include:

- Update on Recycling Presentation Slides (©1-15) prepared by Division of Solid Waste Services Staff
- Material Flow Diagram (Calendar Year 2012) (©16)

For the January 12 Committee meeting, Eileen Kao – Chief, Waste Reduction and Recycling Section, Division of Solid Waste Services (Department of Environmental Protection) will provide a presentation regarding the County’s recycling trends and ongoing efforts to reach its current goal of 70% by 2020.

Below is some background information and Council Staff comments that may help focus the discussion.

Prioritization of Recycling

The County’s Comprehensive Solid Waste Management Plan includes the following prioritization structure for the management of solid waste: “...waste reduction as the most preferred management technique, followed by reuse and recycling, then incineration with energy recovery, and, least preferred, landfilling.”

With regard to recycling, the Plan also notes that, “All waste recycling measures should be implemented that are practical with available technologies and markets and which are not significantly more expensive than the waste disposal measures that would otherwise be needed.”

Recycling Rate

For many years, the County’s recycling goal had been to recycle 50 percent of the County’s municipal solid waste by 2010. While the County fell short of that goal (topping out at a little over

44 percent under the recycling methodology in place at that time), the County's recycling numbers regularly stacked up well with comparable jurisdictions throughout the country.

In October 2012, the Council approved Executive Regulation 7-12, which created a new recycling rate methodology and a new recycling/diversion goal for the County of 70% by 2020.

This recycling rate methodology (which is consistent with how the State of Maryland calculates its recycling rate and waste diversion rate) varies in two major respects from the County's prior rate methodology:

- Ash generated at the Resource Recovery Facility (RRF) that is ultimately recycled (typically used as road base or daily cover at a landfill) is included in the new recycling rate.
- The County had previously used estimates of source reduction, but is now using the State's percentage credit (up to 5%) and includes this credit in the overall recycling rate calculation, making the County's recycling rate consistent with the State's waste diversion rate.

In FY14, DEP initiated a multi-media recycling campaign incorporating the new recycling rate methodology (i.e., 70% by 2020). For FY15, the budget includes \$310,000 to continue this campaign.

Slides on ©6 and ©7 show the County's calendar year 2012 official recycling and diversion rates (54.8% and 59.8% respectively). The slide on ©7 shows the results for each county, with Montgomery County having the highest overall recycling and diversion percentages among all Maryland counties. The State is still reviewing calendar year 2013 County recycling data.

For a sense of how complicated the County's waste management flow and recycling rate calculation is, the Material Flow Diagram for Calendar Year 2012 is attached on ©16.

The table below shows fiscal year recycling rates (under the new methodology) by sector from FY12 actuals through FY20 projections based on FY15 budget assumptions from last spring. The economic downturn resulted in reduced trash volumes and recycled materials volumes and also in a reduction in the demand and price for recycled materials. However, the numbers are expected to tick back up as the economic recovery continues.

Category* (FY15 Projected % of waste generated)	FY12	FY13	FY14 Proj	FY15	FY16	FY17	FY18	FY19	FY20
Single Family (37.7%)	48.2%	44.9%	48.5%	50.1%	50.9%	52.1%	53.4%	53.4%	54.3%
Multi-Family (8.4%)	10.3%	9.6%	10.5%	11.1%	11.6%	12.1%	12.5%	12.7%	13.5%
Non-Residential (53.9%)	44.0%	43.4%	46.6%	47.7%	49.5%	50.9%	52.5%	53.3%	55.9%
<b>Total Municipal Solid Waste (MSW) Recycled</b>	<b>42.7%</b>	<b>41.0%</b>	<b>44.2%</b>	<b>45.5%</b>	<b>46.7%</b>	<b>48.0%</b>	<b>49.3%</b>	<b>49.7%</b>	<b>51.4%</b>
<b>Total MSW Recycled including Ash</b>	<b>55.4%</b>	<b>53.3%</b>	<b>57.1%</b>	<b>58.9%</b>	<b>60.3%</b>	<b>61.6%</b>	<b>63.1%</b>	<b>63.6%</b>	<b>65.5%</b>
<b>State Waste Diversion Rate**</b>	<b>60.4%</b>	<b>58.3%</b>	<b>62.1%</b>	<b>63.9%</b>	<b>65.3%</b>	<b>66.6%</b>	<b>68.1%</b>	<b>68.6%</b>	<b>70.5%</b>

\*Recycling rates by category shown above do not include ash recycled.

\*\* Includes the total MSW recycled including ash plus the source reduction credit (up to 5%)

DSWS estimates that, under current strategies, the diversion rate (including ash and the source reduction credit) will rise to about 70.5% by FY20. For FY13, the latest actuals available, DSWS estimates its recycling rate at 53.3% and its diversion rate at 58.3% although this data is still under review by the State.

## Waste Composition Study and Opportunities for Increasing the Recycling Rate

Every few years, DSWS does a waste composition study to better understand the mix of different materials in the County's waste stream. Based on this study, DSWS can extrapolate recycling percentages for different materials and identify opportunities where improvement is possible. The most recent study was done in FY13, utilizing calendar year 2012 actual data. A summary chart from this study is attached on ©14. Non-residential paper and food waste continue to be two major areas of opportunity for increasing the recycling rate.

Food waste is the largest non-banned material type. The County has an ongoing food waste composting pilot in place. Since the last waste composition study (FY09), the food waste "capture rate" is estimated to have increased from 4.6% to 8.4% (through calendar year 2012 actuals). ***NOTE: A comprehensive T&E Committee discussion of the County's composting pilot and potential composting strategies is scheduled for March 9.***

With regard to mixed paper, the single-family sector recycles approximately 64.4 percent of its mixed paper waste generated. The non-residential sector recycling rate is lower (at 60%) and generates about 45% more mixed paper waste than the single-family sector. Multi-family recycling rates for paper are quite low (18.4%)<sup>1</sup> although the total amount generated is also quite low (18,180 tons).

The non-residential mixed paper capture rate is up slightly (from 58.3% to 60.0%) from the prior waste composition study. Interestingly, the estimate of overall non-residential mixed paper generated is down about 19% (from over 165,000 tons to just over 134,000 tons). This may be an indication that, while we are still far from realizing the "paperless office" concept, technology improvements, changes in office practices, and improvements in product packaging are reducing the use of paper in the non-residential sector.

### Attachments

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<sup>1</sup> During last year's budget discussions, Councilmember Berliner expressed concern that, in his experience, multi-family buildings often do not have sufficient space or provide frequent enough pickup of collected materials. He asked DSWS staff to provide additional information regarding DEP's outreach and enforcement efforts regarding recycling in multi-family buildings. Mr. Riemer suggested that stickers be placed on multi-family recycling bins telling residents to call 311 if they have any issues or concerns with recycling in their building. DSWS staff agreed to look into this idea. Mr. Berliner suggested making recycling implementation and enforcement information for multi-family properties available to the public through the County's open government program. Solid Waste staff can speak to these issues at the January 12 update.

# **Update on Recycling**

## **Presented to the T & E Committee**



**Division of Solid Waste Services**  
**Department of Environmental Protection**

**January 12, 2015**

# Montgomery County's Recycling Goal

# 70% by 2020

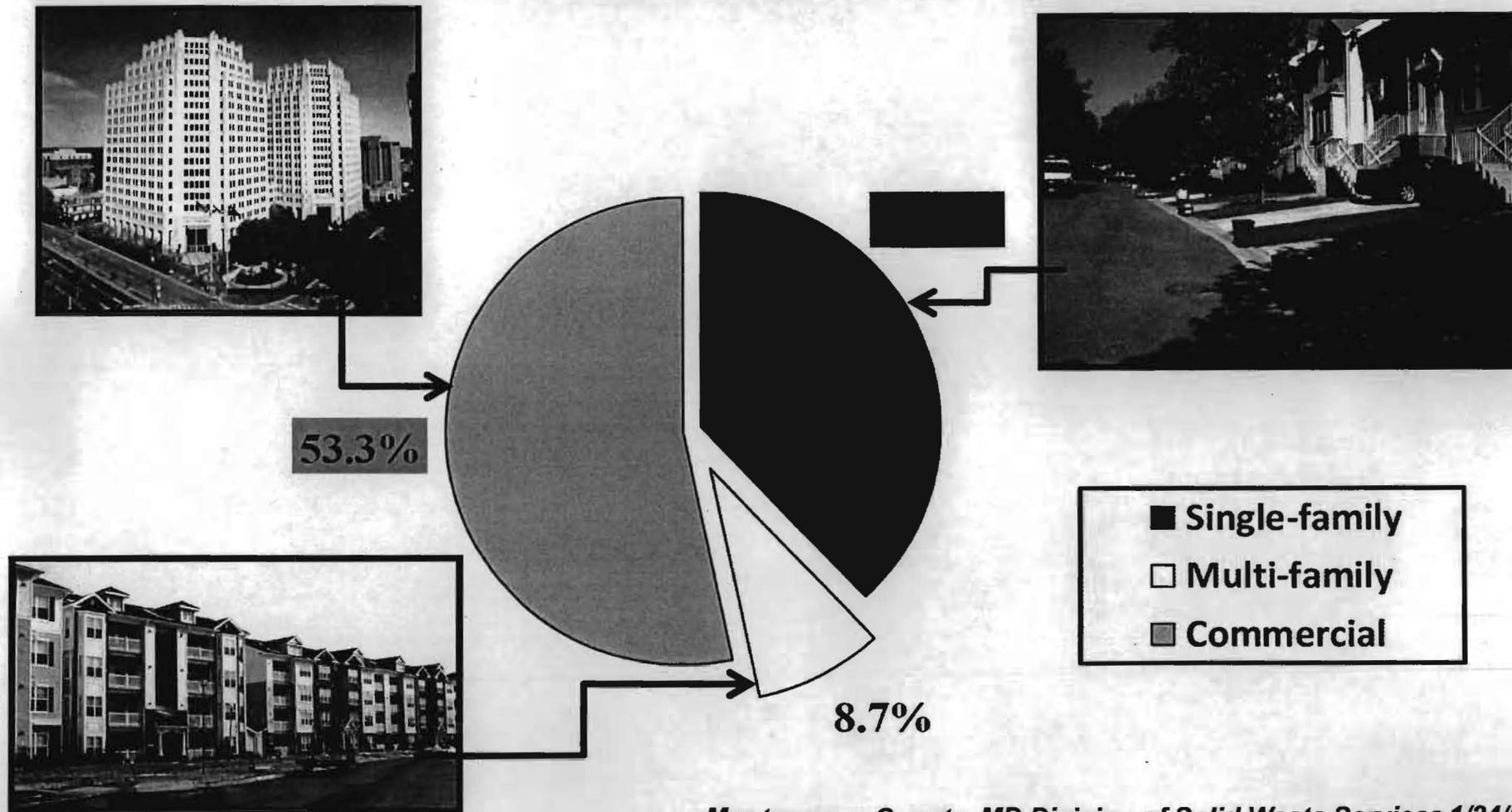
# Recycling is Mandatory

- First Recycling Regulation  
109-92AM (1993)
- Revised Recycling Regulation 15-04AM  
(2005)
- Regulation 18-04 (2005)

 <b>MONTGOMERY COUNTY</b> <b>EXECUTIVE REGULATION</b> Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850	
<b>Subject</b> Residential and Commercial Recycling	<b>Number</b> 15-04AM
<b>Originating Department</b> DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	<b>Effective Date</b> February 8, 2005
Montgomery County regulation on	
<b>SOLID WASTE AND RECYCLING</b> DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	
<b>REGULATION</b>	
Issued by: County Executive Regulation No. 15-04AM COMCOR 48-00.03, Solid Waste and Recycling, Chapter 48	
Authority: Montgomery County Code, 1994, Sections 48-6, 48-24 and 48-51 Supersedes: Regulation 109-92AM Council Review: Method 11) under Code Section 2A-15 Register Vol. 21, No. 9	
Effective Date: February 8, 2005 Sunset Date: None	
<b>Summary</b>	The proposed regulation describes the residential recycling requirements for single-family and multi-family dwellings (including reporting requirements for multi-family property owners), nonresidential recycling and reporting requirements, and recycling requirements for collectors of solid waste and recyclable materials.
Comment deadline: September 30, 2004 Effective date:	
<b>Address for comments</b>	Director, Department of Public Works and Transportation Executive Office Building Tenth Floor 101 Monroe Street Rockville, Maryland 20850
<b>Staff contact</b>	Eileen Kao, Recycling Coordinator 240.777.6400

# The Sources of Waste

1,080,344 tons of waste generated during Calendar Year 2012

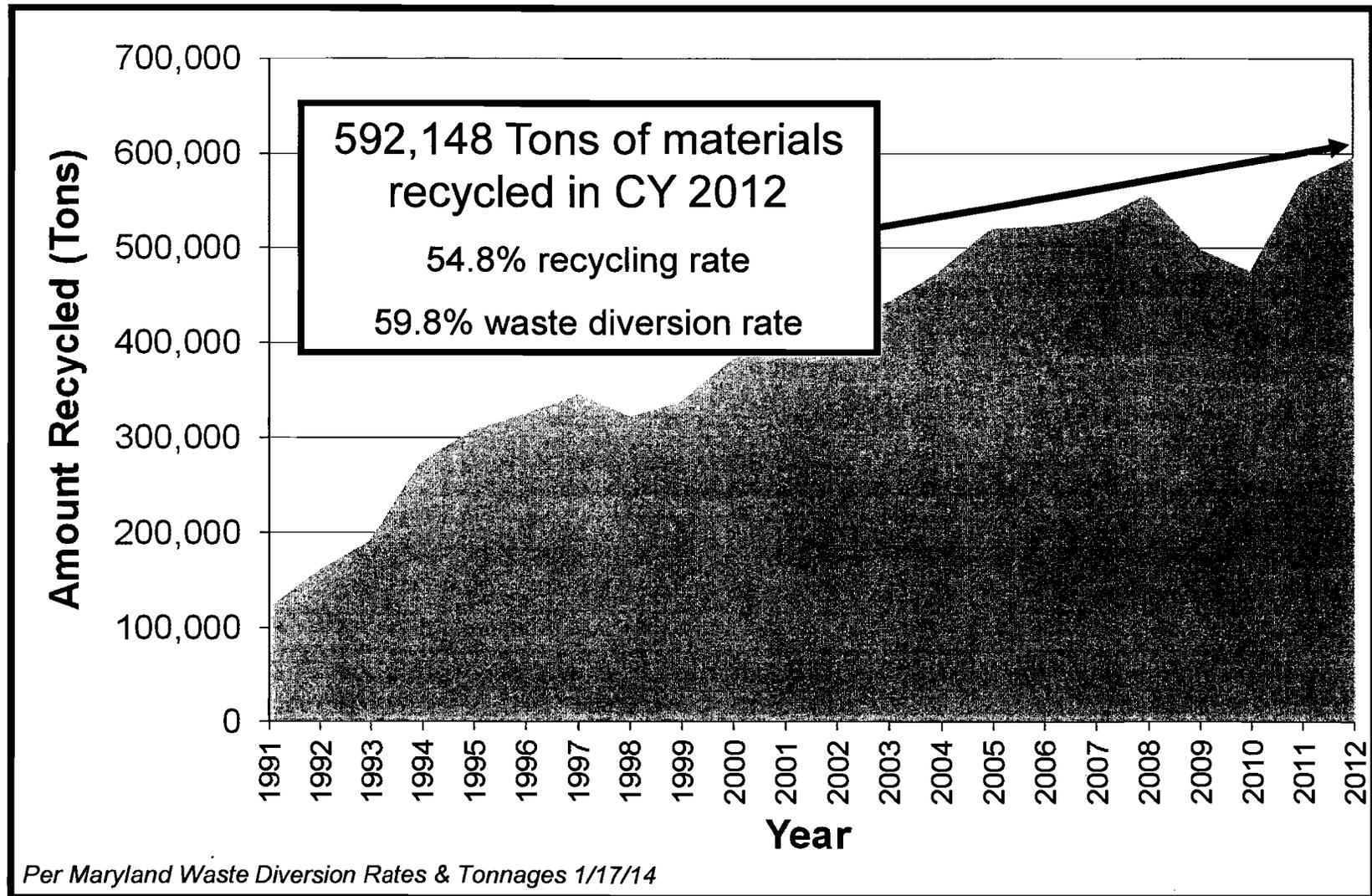


Montgomery County, MD Division of Solid Waste Services 1/24/14

# Recycling Services

- **Single-Family Sector**
  - Weekly curbside collection
  - Outreach, education, and training
- **Multi-Family Sector**
  - Outreach, education, technical assistance
  - Training, hands-on guidance and support
- **Non-Residential Sector**
  - Outreach, education, technical assistance
  - Training, hands-on guidance and support

# Steady Increases in Recycling





## County Recyclables by Commodity in Tons for Calendar Year 2012

*Compiled by the Maryland Department of the Environment from Reports Submitted for Calendar Year 2012*

County	MRA Rate <sup>2</sup> (%)	Waste Diversion Rate <sup>3</sup> (%)	Maryland Recycling Act (MRA) Materials							Non-MRA Recyclables <sup>4</sup>	Total Recycling*
			Compostables	Glass	Metals	Paper	Plastic	Misc.	Subtotal		
Allegany	30.55	<b>33.55</b>	5,399	253	5,959	11,120	432	6,040	<b>29,203</b>	501,783	<b>530,986</b>
Anne Arundel	45.85	<b>49.85</b>	126,583	13,753	39,186	93,439	10,389	16,435	<b>299,785</b>	196,922	<b>496,707</b>
Baltimore City	29.65	29.65	5,529	4,135	11,267	76,030	9,940	114,755	<b>221,656</b>	330,598	<b>552,254</b>
Baltimore County	41.52	<b>46.52</b>	109,103	9,761	81,857	91,037	8,739	120,791	<b>421,286</b>	497,722	<b>919,010</b>
Calvert	45.10	45.10	13,832	1,436	2,480	10,079	1,178	1,559	<b>30,564</b>	5,336	<b>35,900</b>
Carroll	36.86	<b>41.86</b>	26,868	8,900	6,412	10,065	3,938	4,873	<b>61,056</b>	544,071	<b>605,127</b>
Cecil	37.15	<b>41.15</b>	16,990	517	8,384	9,130	1,853	1,135	<b>38,009</b>	30,186	<b>68,195</b>
Charles	49.12	<b>53.12</b>	12,476	3,296	31,940	22,597	2,622	2,035	<b>74,966</b>	502,499	<b>577,465</b>
Dorchester	21.22	21.22	1,882	171	209	1,003	79	4,932	<b>8,276</b>	11,300	<b>19,576</b>
Frederick	46.71	<b>51.71</b>	33,829	3,105	6,946	39,606	2,357	39,111	<b>124,954</b>	35,758	<b>160,712</b>
Garrett	46.83	<b>47.83</b>	15,252	194	597	1,901	108	1,672	<b>19,724</b>	2,397	<b>22,121</b>
Harford	54.79	<b>59.79</b>	59,946	2,304	2,419	63,506	744	21,157	<b>150,076</b>	108,780	<b>258,856</b>
Howard	46.79	<b>50.79</b>	100,340	11,746	4,101	95,299	4,367	9,828	<b>225,681</b>	48,569	<b>274,250</b>
Mid-Shore <sup>1</sup>	52.68	52.68	11,433	2,091	5,060	30,255	936	58,996	<b>108,771</b>	63,655	<b>172,426</b>
Montgomery	54.81	<b>59.81</b>	179,192	22,775	83,011	143,369	8,897	154,905	<b>592,149</b>	106,918	<b>699,067</b>
Prince George's	55.44	<b>59.44</b>	86,333	11,834	129,915	131,426	8,199	10,954	<b>378,661</b>	356,588	<b>735,249</b>
Somerset	17.06	17.06	6	35	2,540	165	37	909	<b>3,692</b>	8,391	<b>12,083</b>
St. Mary's	34.78	<b>38.78</b>	6,928	986	5,997	9,321	674	3,068	<b>26,974</b>	36,008	<b>62,982</b>
Washington	55.11	55.11	1,993	1,024	1,330	69,742	1,441	1,747	<b>77,277</b>	53,881	<b>131,158</b>
Wicomico	39.22	39.22	15,971	2,289	6,827	16,620	4,201	11,257	<b>57,165</b>	12,196	<b>69,361</b>
Worcester	29.30	29.30	12,329	441	1,288	3,469	428	11,316	<b>29,271</b>	31,086	<b>60,357</b>
State Highways of Additional Asphalt and Concrete Recycled										173,459	<b>173,459</b>
<b>TOTAL*</b>	<b>45.42</b>	<b>48.95</b>	<b>842,214</b>	<b>101,046</b>	<b>437,725</b>	<b>929,179</b>	<b>71,559</b>	<b>597,475</b>	<b>2,979,198</b>	<b>3,658,103</b>	<b>6,637,301</b>

\* Due to rounding, tonnage totals in this table differ slightly from the sum of actual values (i.e., MRA = 2,979,203.17 tons, Non-MRA = 3,658,103.55 tons, Total = 6,637,306.72 tons).

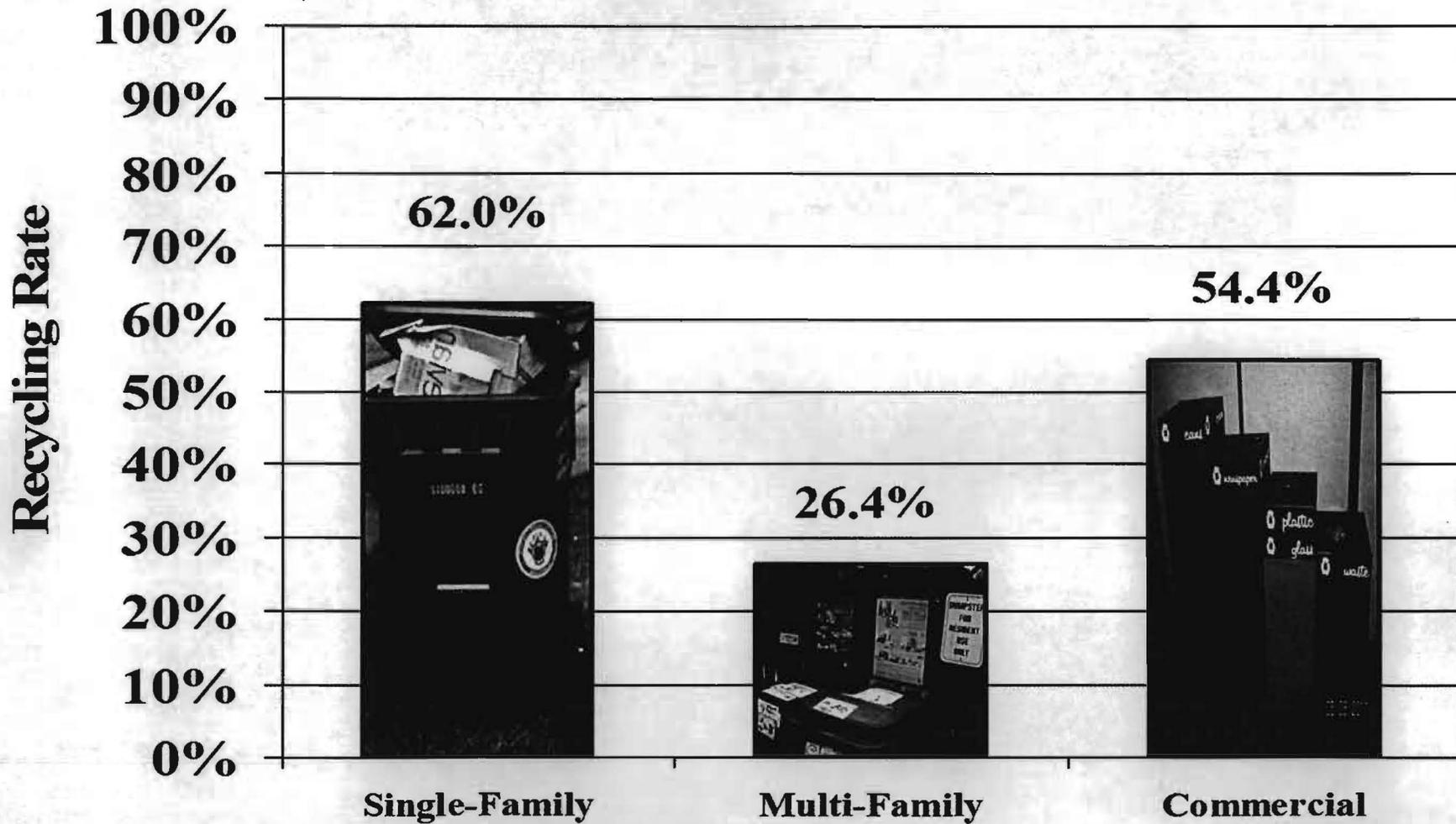
1 Mid-Shore Regional Recycling Program includes Caroline, Kent, Queen Anne's and Talbot Counties.

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

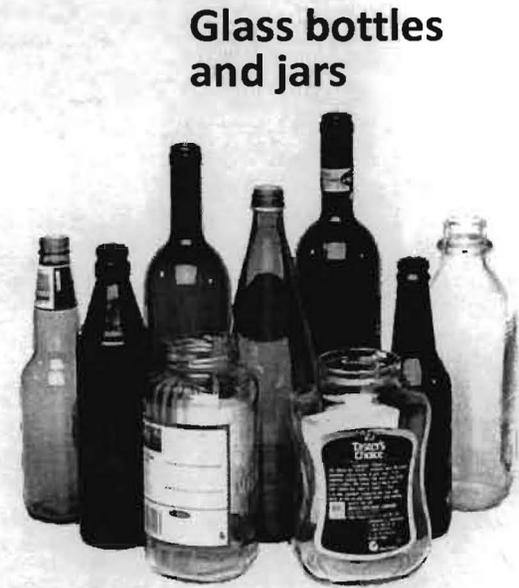
# CY12 Recycling Rate by Sector



# Commingled Materials All Recyclable Containers



Plastic bottles, tubs, jars, containers, pails, buckets, flower pots, caps/lids, clamshell containers, trays, and more



Glass bottles and jars

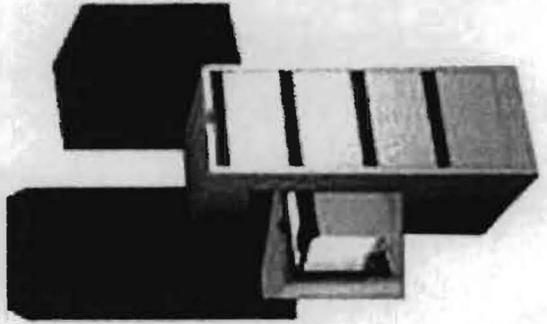
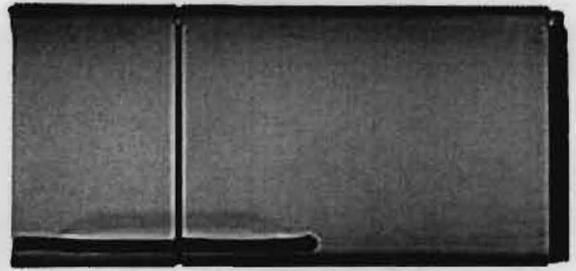
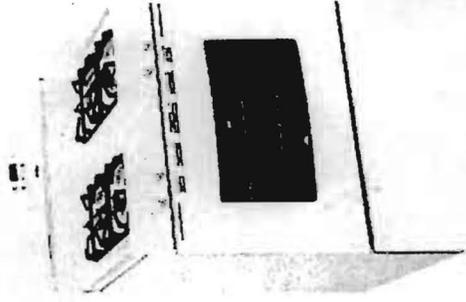
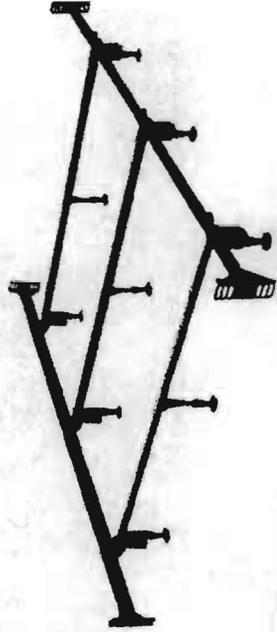


Aluminum cans, foil, and foil products

Bi-metal (steel/tin) and empty non-hazardous aerosol cans



# Scrap Metal Items



# Yard Trim & Christmas Trees



Grass



Leaves



Branches



Christmas Trees

# Additional Items Recycled

- Bulky rigid plastics
- Electronics
- Clothing and textiles
- Building materials in usable condition
- Fluorescent bulbs and tubes
- Metal appliances and other scrap metal items
- Propane cylinders
- Rechargeable batteries (lead acid and other non-alkaline)
- Antifreeze
- Motor oil
- Tires

## Waste Recycling by Material Type: Achievement and Opportunity

Basis: CY12 actual recycled tonnages plus composition of the disposed waste from FY13 "Tip&Sort" applied to CY12 disposed waste tonnages.*		CY12 Actuals									Opportunity			Currently Disposed (Tons)
		Single-Family			Multi-Family			Non-Residential			Disposed by Sector (tons)			
		Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Single-Family	Multi-Family	Non-Residential	
Banned ER15-04	Subtotal, Banned Components	239,426	185,587	77.5%	35,324	8,474	24.0%	316,229	227,729	72.0%	53,838	26,850	88,500	
	Paper	92,355	59,467	64.4%	18,180	3,343	18.4%	134,171	80,559	60.0%	32,888	14,837	53,612	101,338
	Glass	19,252	16,017	83.2%	4,542	590	13.0%	14,485	6,168	42.6%	3,234	3,952	8,318	15,504
	Other Ferrous	12,294	9,211	74.9%	2,154	1,378	64.0%	71,988	68,220	94.8%	3,083	776	3,768	7,627
	Yardwaste	99,701	94,635	94.9%	4,585	3,003	65.5%	76,154	71,104	93.4%	5,066	1,582	5,050	11,697
	Narrow-Neck Plastics	8,226	3,453	42.0%	3,200	39	1.2%	9,985	256	2.6%	4,772	3,161	9,730	17,663
	Ferrous/Bimetal Containers	4,279	2,191	51.2%	1,396	104	7.4%	6,344	1,245	19.6%	2,089	1,293	5,099	8,480
	Aluminum Beverage Cans	1,587	594	37.4%	613	17	2.8%	1,754	176	10.0%	993	595	1,579	3,167
	Other Aluminum (Foil)	1,286	19	1.5%	506	0	0.0%	1,263	1	0.1%	1,267	506	1,262	3,034
	Other Non-Ferrous Metal	446	-	0.0%	148	-	0.0%	84	-	0.0%	446	148	84	678
Potential and Encouraged	Food Waste	45,605	-	0.0%	15,996	-	0.0%	87,449	7,337	8.4%	45,605	15,996	80,112	141,713
	Shopping Bags	1,021	-	0.0%	504	-	0.0%	1,229	20	1.6%	1,021	504	1,209	2,735
	Other Film Plastic	18,478	-	0.0%	5,652	-	0.0%	27,099	437	1.6%	18,478	5,652	26,662	50,792
	Plastic Flower Pots	584	58	10.0%	28	1	2.4%	475	4	0.9%	525	27	471	1,023
	Plastic Tubs and Lids	2,776	218	7.9%	1,137	2	0.2%	4,794	16	0.3%	2,558	1,135	4,777	8,470
	Other Rigid Plastic	5,232	1,309	25.0%	2,025	170	8.4%	10,252	2,932	28.6%	3,923	1,855	7,320	13,098
	Textiles & Leather (no Rugs)	13,579	100	0.7%	4,684	1	0.0%	9,804	7	0.1%	13,479	4,683	9,796	27,958
	Carpets / Rugs	1,344	-	0.0%	1,144	-	0.0%	12,181	8,894	73.0%	1,344	1,144	3,288	5,776
	Wood Waste (including Pallets)	651	-	0.0%	278	50	17.9%	5,973	3,881	65.0%	651	229	2,092	2,972
	Whole Tires (as Rubber)	2,220	2,220	100.0%	716	555	77.5%	4,030	2,776	68.9%	-	161	1,254	1,415
	Lubricants (e.g. Motor Oil)	107	6	5.6%	0	0	100.0%	344	256	74.6%	101	-	88	189
	Electronics	5,107	1,771	34.7%	1,954	20	1.0%	6,889	1,349	19.6%	3,336	1,934	5,539	10,809
	Batteries	93	93	100.0%	1	1	83.0%	2,464	2,464	100.0%	-	0	-	0
	Latex Paint	633	269	42.4%	43	3	7.1%	147	20	13.6%	365	40	127	531
	Tire Steel	278	-	0.0%	89	-	0.0%	504	-	0.0%	278	89	504	871
No Markets	Other Wood	4,316	-	0.0%	1,468	-	0.0%	8,283	-	0.0%				
	Other Glass	637	-	0.0%	396	-	0.0%	508	-	0.0%				
	Disposable Diapers	10,778	-	0.0%	5,189	-	0.0%	4,794	-	0.0%				
	Other Waste	57,048	-	0.0%	17,667	-	0.0%	72,686	983	1.4%				
RRF Ash		62,487			15,652			53,996						
<b>TOTAL</b>	<b>409,914</b>	<b>254,119</b>	<b>62.0%</b>	<b>94,298</b>	<b>24,928</b>	<b>26.4%</b>	<b>576,131</b>	<b>313,101</b>	<b>54.3%</b>	<b>145,602</b>	<b>60,300</b>	<b>231,738</b>	<b>437,541</b>	

\*For latest "Tip&Sort" study of the composition of the disposed waste stream, see: <http://www.montgomerycountymd.gov/sws/resources/files/studies/waste-composition-study-130726.pdf>

Notes:  
Banned ER15-04: These materials are required to be recycled under Executive Regulation 15-04, and are banned from disposal in waste from all sectors.

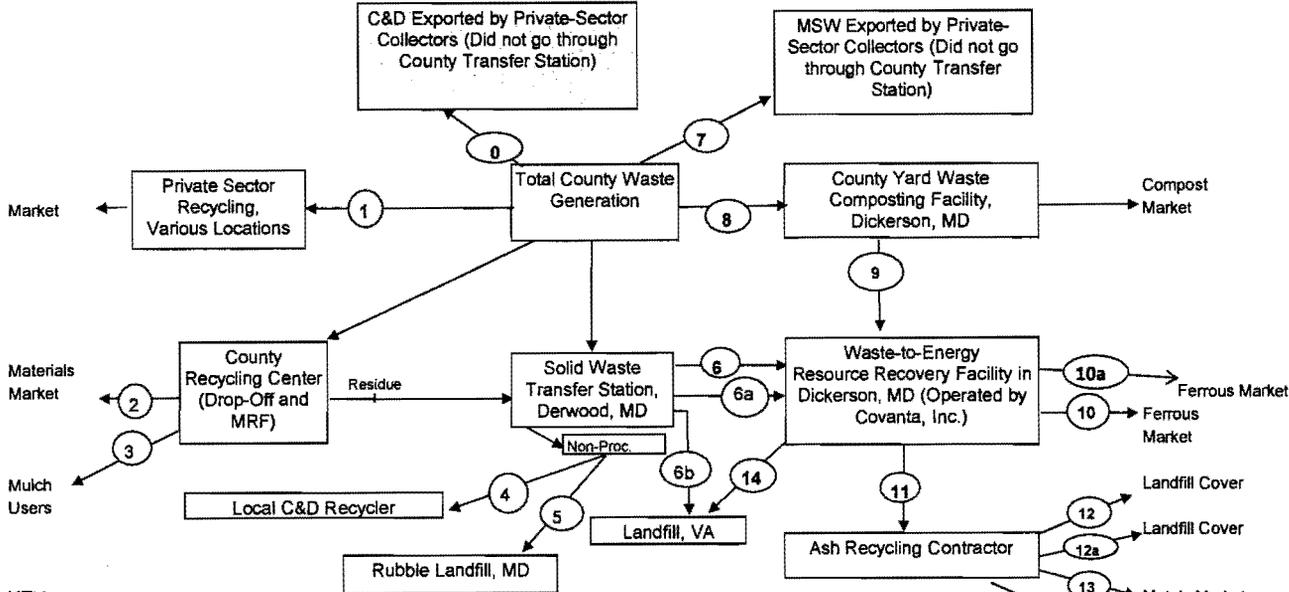
Potential and Encouraged: Markets vary for these materials. Although not subject to the disposal ban, recycling is encouraged for all materials for which there are available markets.

No Markets: No existing or anticipated markets for these materials.

# Efforts to Increase Recycling

- Assess and evaluate to expand recycling programs to include more materials
- Continued education and assistance
- Enforce recycling requirements

## MATERIAL FLOW DIAGRAM Calendar Year 2012



KEY:

1, 7	Audited or otherwise documented. Often based on truck scales of others.
	Data is from State-certified County truck scales Owned by County.
	Data is from State-certified truck scales, privately operated under contract to County.
	This color indicates C&D waste, which is not MSW, not eligible for recycling and is not to be included in recycling rate calculation.*

Total Waste Generation, including C&D Exported by Private Sector	1,336,422
County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6a + 6b + 7 + 8	1,186,726
<b>MSW Generated (above less streams 4, 5 and 6a)</b>	<b>1,080,344</b>

Stream No.	Material Description	Sources of Data	Total (tons/yr)	Comments
0	Construction & Demo Debris Private Export	Licensed Collector Reports under ER 92-59	149,696	Not County-managed, includes both disposed and recycled C & D
1	Recycled via non-County Facilities	Collector, Processor, Business & Self-Hauler Rpts.	270,161	Filtered to avoid double-counting
2	County Recycling Facility Material Sales	County TS & MRF Scales, Outbound	82,986	Outgoing to market from County Recycling Center
3	Mulch Loaded Out From TS	County Transfer Station (TS) Scale Records	35,069	Scaled out as taken to County Mulch Contractor & Preserve Locations
4	Non-Processibles Recycled**	County TS Scale Out Records	30,077	Not included in MRA recycling calculation
5	Non-Processibles Landfilled**	County Trans. Stat'n. & Covanta Scale Records	4,825	Not included in MRA recycling calculation
6	Loaded on Rail to RRF (MSW burned)	Covanta Scales as Loaded	470,182	Total tons loaded on rail to RRF Net of 6a
6a	Loaded on Rail to RRF (C&D Burned)	County Transfer Station (TS) Scale Records	71,480	In-Bound C&D less Outbound Non-Processibles Landfilled
6b	By-pass (Accepted Processible Landfilled)	County TS Scale Out Records	-	
7	Refuse Disposed Out of County	Audited 6-Mo. Hauler Reports	161,715	Private Sector MSW Collection not delivered to County TS
8	All Incoming Leaves and Grass	Compost Facility & TS Scale Records	60,231	Includes 0 to Backup Composters
9	Composting Residue to RRF	MES Scale Records	-	Reported by Compost Facility Manager
10	Ferrous recovered at RRF	Covanta Scale Records	8,602	Recovered from ash at County Facility
10a	Ferrous recovered at RRF (C&D Residue)	Internal Calculation	1,313	Not included in MRA recycling calculation
11	Ash Loaded to Ash Recycling Contractor	Allied Monthly Report	155,722	Total ash (includes 12, 12a, 13, and 13a)
12	Non-Metal Outgoing from Ash Recycler	Allied Monthly Report	132,134	Included in MRA recycling calculation
12a	Non-Metal Outgoing from Ash Recycler (C&D Residue)	Internal Calculation	20,170	Not included in MRA recycling calculation
13	Metals Outgoing from Ash Recycler	Allied Monthly Report	2,965	Metals from ash recycled; included in MRA rate calculation
13a	Metals Outgoing from Ash Recycler (C&D Residue)	Internal Calculation	453	Not included in MRA recycling calculation
14	All ash not recycled	Covanta Scale Records	-	

### Montgomery County Recycling Rate and Waste Diversion Rate Calculations (MRA Method)

		Numerator	Denominator	Rate
Recycling Rate	$(1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (CMW - 4 - 5 - 6a)$	592,148	1,080,344	54.8%
Waste Diversion Rate	$((1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (CMW - 4 - 5 - 6a)) + 5.0\%$	592,148	1,080,344	59.8% ***

Notes: \* Construction and Demolition waste (C&D) is waste identified by place of origin - construction or land clearing sites. C&D is reported on licensed hauler reports, but there may be additional C&D tons not reported and therefore not included in stream 0.

\*\* Nonprocessibles are Construction & Demolition-type materials; not eligible for recycling credit, but are County-managed solid waste.

\*\*\* Diversion Rate = Recycling Rate + 5.0% Source Reduction Credit

Nomenclature:

"C&D" means "Construction and Demolition" waste, exclusive of MSW, traditionally managed by the private sector, but much now comes to County TS.

"CMW" means "County Management Waste". It includes all MSW, whether or not exported by private sector collectors, but only C&D delivered to TS.

"MSW" stands for "Municipal Solid Waste", and represents the waste eligible for recycling under the State recycling law, regulations and guidelines.

"TS" stands for the County's "Transfer Station", located in Derwood, Maryland, just south of Gaithersburg.

"MRF" stands for Material Recovery Facility

"RRF" stands for Resource Recovery Facility