

T&E COMMITTEE #4
April 22, 2015

Worksession

MEMORANDUM

April 20, 2015

TO: Transportation, Infrastructure, Energy and Environment Committee

FROM: *KL* Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY16 Operating Budget:** Department of Environmental Protection (DEP)-Division of Solid Waste Services Operating Budget and FY16 Solid Waste Charges

Budget Summary

- The Solid Waste Collection Fund Budget is recommended to increase by 1.0 percent, due to technical adjustments (such as transferring a portion of a permitting inspector's costs from the Disposal to the Collection Fund and FY16 compensation adjustments).
- The Solid Waste Disposal Fund Budget is recommended to increase by 2.2 percent. The largest increases are for new and replacement capital equipment (\$3,905,757), mandatory contractual increases (\$1,595,818), and increases in tonnage of out of County haul (\$927,882) costs. The biggest decreases are in debt service for the Resource Recovery Facility (-\$4,538,325) and removal of one-time items approved in FY15 (-\$2,630,624).
- FY16 is the final fiscal year for debt service payments on the Resource Recovery Facility (\$21.4 million).
- DEP continues to assume a \$28.5 million liability in the Solid Waste Disposal Fund related to future Gude Drive Landfill remediation efforts (*\$746,000 assumed to be spent in FY16 on additional study and fieldwork, based on follow-up questions from MDE regarding the County's Assessment of Corrective Measures Report*).

Solid Waste Charges Summary

- The CE recommends decreases in overall Solid Waste charges for single-family, multi-family, and non-residential property owners (as shown on page 11).
- The CE recommends keeping Transfer Station Tipping Fees at FY15 levels.

Council Staff Recommendation:

- Approve the DEP-Division of Solid Waste Services FY16 Operating Budget as recommended by the County Executive.
- Approve the FY16 Solid Waste charges as recommended by the County Executive with the exception of the leaf vacuuming charge where Council Staff recommends a smoother rate increase scenario

NOTE: Action on FY16 Solid Waste charges is scheduled for Council action for May 13.

Attachments to this memorandum include:

- DSWS Excerpt from the County Executive’s FY16 Recommended Budget (©1-16)
- Vacuum Leaf Collection Fund Six-Year Fiscal Plan (©17)
- Excerpt from Council Staff Packet for DOT General Fund: Vacuum Leaf Collection Fund (©17A)
- Material Flow Diagram Calendar Year 2013 (©18)
- CY12 Waste Composition Study Summary Table: Waste Recycling by Material Type (©19)
- Solid Waste System Disposal Fund, Rate Setting Methodology (FY16) (©20-21)
- Resolution to Approve FY16 Solid Waste Service Charges (©22-24)
- Solid Waste Advisory Committee Comments on the FY16 Recommended Budget (©25)
- Gude Drive Landfill Remediation Presentation (©26-39)

Meeting Participants Include

- Lisa Feldt, Director, Department of Environmental Protection (DEP)
- Dan Locke, Chief, Division of Solid Waste Services (DSWS), DEP
- Anthony Skinner, Business Manager, DSWS
- Eileen Kao, Chief, Waste Reduction and Recycling Section, DSWS
- Bill Davidson, Chief, Northern Operations and Strategic Planning Section, DSWS
- Peter Karasik, Chief, Central Operations Section, DSWS
- Robin Ennis, Chief, Collections Section, DSWS
- Alex Espinosa, Manager, Office of Management and Budget (OMB)
- Elyse Greenwald, Management and Budget Specialist, OMB

OVERVIEW

Expenditure Summary

For FY16, the Executive recommends total expenditures of \$111.9 million for the Division of Solid Waste Services, a \$2.3 million increase (2.1%) from the FY15 approved budget. The overall increase is primarily related to costs in the Disposal Fund (detailed later).

**Table #1
DPW&T-Solid Waste Services (All Funds)**

	Actual FY14	Approved FY15	Estimated FY15	Rec FY16	Change from FY15 \$\$\$	%
Personnel Costs	10,200,122	10,824,607	10,744,390	11,244,457	419,850	3.9%
Operating Expenses	88,019,891	96,858,283	96,280,959	96,698,939	(159,344)	-0.2%
Capital Outlay	-	1,857,206	-	3,946,457	2,089,251	112.5%
Total	98,220,013	109,540,096	107,025,349	111,889,853	2,349,757	2.1%
Full-Time Positions	79	79	79	79	-	0.0%
Part-Time Positions	-	1	1	1	-	n/a
Workyears/FTEs	102.2	103.0	103.0	103.0	-	0.0%

The Division budget is funded entirely by the Solid Waste Collection and Solid Waste Disposal Funds. Both funds are supported through various Solid Waste charges discussed later. As Enterprise Funds, these funds are self-supporting, and revenues and expenditures within these funds are kept distinct from the General Fund. Any cost savings or cost increases that may be identified in these funds have no impact on the General Fund.

Positions

For FY16, DSWS’ recommended position complement is 79 full-time positions and one part-time position and a total of 103.0 Full Time Equivalents (FTEs). These numbers are the same as the Approved Budget.

Much of the direct service provided by DSWS is done via contracts (such as for refuse and recycling collection and contract staff at the Transfer Station, Materials Recovery Facility, RRF, and Compost Facility). DSWS provides contract oversight and manages the overall operations at the various facilities.

Solid Waste Advisory Committee Comments

The Solid Waste Advisory Committee’s (SWAC) comments on the FY16 Recommended Budget are attached on ©25. SWAC is supportive of the FY16 Solid Waste budget, especially with regard to the DSWS food waste recycling pilot.

TONNAGE AND RECYCLING ASSUMPTIONS

Below are some important assumptions that drive much of the Solid Waste budget. In general, tonnages have been down in recent years as a result of economic conditions but have been gradually increasing again, consistent with the County’s and the region’s economic recovery.

The most recent Materials Flow Diagram (CY13) is attached on ©18. This diagram shows how various materials enter the County’s Solid Waste system, how they are processed, and the volumes involved in the various processes. The building blocks for the recycling rate and waste diversion rate are also shown and the totals calculated.

Resource Recovery Facility

Processible Tons of Waste to the Resource Recovery Facility (RRF) for FY16: 590,000 tons (an increase of about 12,000 tons over what is projected for FY15). The permit level is 657,000 tons per year. The policy goal is 85 percent to 92 percent of the RRF permit capacity (i.e., 558,450 to 604,000 tons per year). Economic conditions resulted in a significant downward trend in tonnages beginning in FY07 (prior tonnages had been over 600,000), and tonnages have not returned to prior levels yet. Table 2 (below) shows the RRF tonnage throughput calculation from the FY13 actual through the FY16 projection.

**Table #2
Resource Recovery Facility (RRF) Throughput Assumptions**

	FY13 Actual		FY14 Actual		FY15 Projected		FY16 Projected	
	% of MSW	Tons	% of MSW	Tons	% of MSW	Tons	% of MSW	Tons
Total Municipal Solid Waste (MSW) (in tons)*		1,095,149		1,106,956		1,118,373		1,132,812
Recycling Rate/Tons (excluding ash)	41.0%	449,374	44.2%	472,092	45.5%	487,203	46.7%	506,813
Exportation Rate/Tons	15.6%	171,171	12.6%	140,008	12.3%	137,937	10.7%	120,990
Processable Waste to RRF	43.3%	474,604	44.7%	494,856	44.1%	493,233	44.6%	505,009
addback metals from ash (counted in recycling)	0.8%	8,695	0.8%	8,972	1.0%	10,809	1.0%	11,033
Total RRF MSW Burned	44.1%	483,299	45.5%	503,827	45.1%	504,042	45.6%	516,041
Construction/Demotion Debris (C/D) Burned		63,364		73,959		73,959		73,959
Total RRF Throughput (MSW+C/D)		546,663		577,786		578,001		590,000
% of permit level (permit level = 657,000)		83.2%		87.9%		88.0%		89.8%

*MSW actuals do not include C/D. FY15 and beyond numbers do not break out C/D from MSW.

Recycling Rate

The T&E Committee received a recycling update from Solid Waste staff on January 12. Some summary information regarding the County’s recycling rate and methodology is provided below.

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). This effort was continued in FY15 and is recommended to continue in FY16 as well.

Table #3 below shows fiscal year recycling rates (under the new methodology) by sector from FY13 actuals through FY21 projections based on the latest projections. 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.

**Table 3:
County Recycling Rate**

Category* (FY16 Projected % of waste generated)	Actual		Projected						
	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21
Single Family (39.1%)	60.4%	63.4%	65.1%	66.1%	67.6%	69.0%	69.3%	70.5%	70.5%
Multi-Family (8.9%)	24.9%	25.8%	24.6%	24.9%	25.4%	25.7%	25.8%	26.3%	26.3%
Non-Residential (52.0%)	52.9%	54.5%	55.9%	57.7%	59.3%	61.0%	61.9%	64.5%	64.5%
Total Municipal Solid Waste (MSW) Recycled	53.3%	55.6%	56.8%	58.1%	59.5%	60.9%	61.4%	63.2%	63.7%
State Waste Diversion Rate*	58.3%	60.6%	61.8%	63.1%	64.5%	65.9%	66.4%	68.2%	68.7%

* Includes a 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 68.7% by FY21. 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.

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 ©19. 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 was held on 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%), 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.

The County’s mixed paper contract ends in April 2016. Currently, the County pays about \$1.8 million per year for the contractor to truck and process bulk mixed paper. The FY16 Recommended Budget includes \$2.1 million to purchase paper sorting and baling equipment so that the County can sell its mixed paper directly. DEP expects a substantial annual revenue benefit. Below is information provided by DEP staff:

The mixed paper contract is up for renewal in April 2016. The County Executive’s Recommended Budget includes approximately \$2.090 million for DEP to work with Maryland Environmental Service (MES) to modify the Recycling Center and install basic paper sorting and baling equipment so we can sort and bale mixed paper and cardboard as two separate commodities. Our intention is to have MES market these commodities for us as they do for baled plastics and metals, so we would not enter into another long-term contract for the principal management of mixed paper. However, we may execute a contingency contract for hauling and selling bulk mixed paper as a back-up if our equipment goes down for more than a day or so. While there will be some up front capital costs, there will be substantial long-term revenue benefits to the County by baling and selling the paper ourselves. The approximately \$1.8 million per year being spent with Office Paper Systems for trucking and processing bulk mixed paper will be discontinued, per the County Executive’s Recommended Budget. Depending upon market prices, and after covering initial start-up costs, the County may earn about \$4.6 million in net revenue.

Council Staff is supportive of the FY16 recommended expenditures for new capital equipment related to the County moving to have MES prepare and directly market and sell mixed paper and cardboard. The County stands to net a substantial amount of revenue (and cost savings) from this approach (potential annual revenue of \$4.6 million and annual contract cost savings of \$1.8 million).

Compost Facility

Compost Facility Tonnage for FY16: 70,352 tons (an increase of 616 tons or 0.9 percent) from the latest FY15 projection of 69,736 tons. However, at this time last year, FY15 tonnage was expected to be 65,637 tons (or 4,099 tons lower than currently projected). Similarly, the FY16 projection is also now up from last year’s FY16 projection (by 4,020 tons). Fluctuations in compost facility tonnages can happen as a result of weather, storms, and the economy. DEP attributes these changes to increases in materials delivered by landscapers as a result of an improving economy.

The operating limit (based on an agreement with the Sugarloaf Citizens Association) is 77,000 tons per year. Four years ago, commercial yard trim tipping fees were increased (from \$40 to \$46) to slow the curve of any tonnage increases by encouraging more “grasscycling”. That fee was modified last year to apply to all yard trim (residential or commercial) in excess of 500 pounds per load, with no charge for any loads weighing less.

Program costs are also up for the Compost Facility because equipment replacement costs in FY16 are about \$737,000 higher than in FY15 and because of mandatory contractual increases.

SOLID WASTE COLLECTION FUND EXPENDITURES

The Solid Waste Services budget is divided into two Enterprise funds: Collection and Disposal. These are non-tax-supported funds for which revenues and expenditures are directly connected. Additions to or subtractions from the DSWS budget may change solid waste charges, but will not affect General Fund resources.

Summary tables for each of the funds follow, along with some major highlights.

**Table #4
DPW&T-Solid Waste Services (Collection)**

	Actual FY14	Approved FY15	Estimated FY15	Rec FY16	Change from FY15 \$\$\$	%
Personnel Costs	1,167,050	1,252,597	1,256,627	1,331,993	79,396	6.3%
Operating Expenses	4,708,589	5,162,238	5,032,238	5,145,946	(16,292)	-0.3%
Capital Outlay	-	-	-	-	-	#DIV/0!
Total	5,875,639	6,414,835	6,288,865	6,477,939	63,104	1.0%
Full-Time Positions	4	4	4	4	-	0.0%
Part-Time Positions	-	-	-	-	-	n/a
Workyears/FTEs	10.43	10.59	10.59	11.09	0.5	4.7%

The bulk of costs in this fund are for residential refuse collection within Subdistrict A.¹ DSWS currently has 3 contractors serving the five service areas in Subdistrict A at an estimated cost of \$4.8 million in FY16 (about the same cost as in FY15).

Solid Waste Collection Fund expenditures are recommended to increase by 1.0 percent (\$63,104). All of the changes noted in the FY16 Recommended Budget are technical in nature (with no service impacts). The biggest changes are: the transfer of a portion of a permit inspector’s costs from

¹ The collection district is divided into two collection subdistricts for residential trash collection. In Subdistrict A, trash collection for single-family residences and multi-family residences with six or fewer units is managed by the County, which contracts with haulers. In Subdistrict B, haulers contract directly with residents.

the Disposal Fund to the Residential Refuse Collection Program in the Collection Fund (\$41,447 and .5 FTE) and the FY16 compensation adjustment (\$39,399). Other miscellaneous changes (both up and down) involve benefits, risk management, personnel cost annualizations, motor pool, and refuse collection contract adjustments. All of these changes are presented on ©9.

Council Staff recommends approval of the Executive’s Recommended Budget for the Solid Waste Collection Fund.

SOLID WASTE DISPOSAL FUND EXPENDITURES

**Table #5
DPW&T-Solid Waste Services (Disposal)**

	Actual FY14	Approved FY15	Estimated FY15	Rec FY16	Change from FY15	
					\$\$\$	%
Personnel Costs	9,033,072	9,572,010	9,487,763	9,912,464	340,454	3.6%
Operating Expenses	83,311,302	91,696,045	91,248,721	91,552,993	(143,052)	-0.2%
Capital Outlay	-	1,857,206	-	3,946,457	2,089,251	112.5%
Total	92,344,374	103,125,261	100,736,484	105,411,914	2,286,653	2.2%
Full-Time Positions	75	75	75	75	-	0.0%
Part-Time Positions	-	1	1	1	-	n/a
Workyears/FTEs	91.78	92.42	92.42	91.92	(0.5)	-0.5%

Solid Waste Disposal Fund expenditures are recommended to increase by 2.2 percent (\$2.3 million). There are a number of cost changes (both increases and decreases) recommended in the Solid Waste Disposal Fund. None are assumed to have service impacts. These items are individually listed on ©9 (see the “FY16 Recommended Changes” section from the Executive’s Recommended Operating Budget.)

There are a number of technical adjustments common to other County Government budgets (such as compensation changes, benefits, and annualizations; and printing and mail adjustments). In addition, the Disposal Fund has a number of other items that often appear, including: contractual cost changes in various areas and equipment replacement costs. One-time items from FY15 (mainly for equipment replacements and studies) are also removed. The biggest added item for FY16 is new capital equipment at the recycling center (\$3.9 million). The biggest decrease is in program costs at the Resource Recovery Facility (RRF) (-\$2.6 million). These and other items are discussed in more detail by program below.

Resource Recovery Facility & Related Waste Transfer

This is the biggest program in the Solid Waste budget (38 percent of the total). The following chart breaks out the major cost changes in this program. Overall, program expenditures are down \$2.5 million or about 5.7 percent.

**Table #6
RRF Program Costs**

	FY15	FY16	
	Approved	Rec	Change
NEA Direct Costs and Fees	281,281	237,825	(43,456)
Net Debt Service	25,945,775	21,407,450	(4,538,325)
Operating Contract	26,846,560	27,108,301	261,741
Non-Processible Waste	19,896	168,214	148,318
Waste Processed >558,450 tons	603,075	934,034	330,959
Rail Engine Service Fee and Refunds	3,078,131	3,776,000	697,869
Air: Emission Reagents, Testing, Fees	2,867,147	3,012,956	145,809
Ash Handling and Testing	(770,469)	(826,000)	(55,531)
Insurance, Utilities, Sales & Prop Tax	1,049,846	1,046,423	(3,423)
Miscellaneous O&M	1,102,981	1,234,845	131,864
Electric Sales Revenue	(16,308,318)	(15,980,935)	327,383
Recycled Ferrous Revenue	(706,172)	(708,885)	(2,713)
Operating Contract Total	44,009,733	41,410,228	(2,599,505)
			-
Charges from Risk Management	744,963	807,117	62,154
Other Miscellaneous	271,533	259,273	(12,260)
Totals	45,026,229	42,476,618	(2,549,611)

Some highlights of these changes include:

- Debt service costs are based on a set amortization schedule. Based on this schedule, debt service will drop substantially in FY16 (by \$4.5 million), which will be the final year of debt service payments. All debt service payments will end after March 2016.
- The RRF throughput is projected to increase from 578,000 in FY15 to 590,000 tons in FY16. Because the County pays some additional costs per ton above 558,450 tons (consistent with the County's service contract for the RRF), this cost item is projected to increase (by \$330,959) up to \$934,034.
- The rail engine service fee is increasing by \$697,869, based on higher projected costs under a new contract under negotiation now.
- Non-processible waste costs are up substantially, based on increased projected RRF tonnages. As tonnages reach certain thresholds, stepped up costs take effect.
- Electric sales revenue is projected to be down slightly as a result of an unusually high degree of uncertainty in the market, and therefore fixed prices are not yet established. Therefore, for FY16, DEP is using pricing assumptions provided by its consultant. *NOTE: Electric sales revenue is reflected as a negative (an offset to expenditures) in this program.*
- Most other expense categories are seeing only slight increases or decreases from FY16.

Residential Collection

This program is the second largest program in the Solid Waste budget (behind the RRF) with a recommended total of \$26.5 million (an increase of \$502,536 or 1.9% from FY15), mostly due to

mandatory contractual cost increases for recycling collection as well as increased contract costs for recycling bin deliveries and also the one-time capital cost for a delivery truck.

A portion of this program is for residential refuse collection (discussed earlier) within the Solid Waste Collection Fund. However, most of these costs fall within the Solid Waste Disposal Fund and cover DSWS contracts with haulers to provide curbside recycling collection for all unincorporated areas of the County (both in Subdistricts A and B). For FY16, \$17.9 million is budgeted for contracts with three haulers. Costs are up about \$200,000 (or 1.1 percent) from FY15.

Gude Landfill

For background on this issue, DSWS staff prepared a slide presentation (attached on ©26-39). The County has spent approximately \$1.3 million on this effort since 2009 for work on Gude's Waste Delineation, the Nature and Extent study, and the Assessment of Corrective Measures report.

Remediation planning in coordination with the Maryland Department of the Environment (MDE) is ongoing. DEP submitted an assessment of corrective measures report to MDE in January of 2014 and recommended bioremediation as DEP's preferred approach. The remediation work is intended to address widespread low level Volatile Organic Compound (VOC) contamination in groundwater, gas migration, and leachate seeps into surface water runoff.

In March 2015, MDE provided comments to DEP and asked for some additional information that will require further field testing and sampling (taking another 6 to 12 months). Therefore, remediation work is not expected to begin until FY17.

Last year, based on the ACM report, DEP expected costs of about \$746,000 in FY16 and about \$3.8 million through FY20 (see ©39 for cost and schedule details). With regard to total remaining costs, DSWS staff noted:

“Based on a probability analysis performed by the consulting engineer that helped DEP produce the report, in accordance with the requirements of a Consent Order between the County and MDE, the County's probable Gude remediation costs over a 20-year period would total \$28.5 million.”

The scope of work and costs could change based on the additional study to be done and MDE's ultimate approval for the remediation work. However the above costs are included in the current Solid Waste Disposal Fund fiscal plan.

Council Staff recommends approval of the Executive's Recommended Budget for the Solid Waste Disposal Fund.

SOLID WASTE CHARGES

The County's solid waste programs are primarily supported by various solid waste charges that support the dedicated Enterprise funds (see ©15 for descriptions of the different charges). Solid waste charges are established through an annual Council resolution (introduced on March 31 and attached on ©22-24). The Council is tentatively scheduled to take action on the solid waste charges on May 13.

Refuse collection charges (i.e., for Subdistrict A where the County contracts directly with haulers) support the Solid Waste Collection Fund and are set with a policy goal of keeping retained earnings at a level of 10 percent to 15 percent of resources across the six-year fiscal period. See ©13.

The Solid Waste Disposal Charges are developed through a complex rate model (see summary document on ©20-21). DSWS calculates the necessary rates for each sector to cover both base and incremental costs. Rate smoothing with available fund balance is also done across a six-year projection period, both at the macro level and within each sector. The policy goal is to have positive cash balances over reserve and liability requirements in the Disposal Fund.

The FY15 approved and FY16 County Executive recommended charges are presented below:

**Table #7
Solid Waste Charges (FY15 and FY16)**

Charge	Approved FY15	CE Rec. FY16	Percent Change
SINGLE FAMILY			
Base Systems Benefit Charge	\$38.11	\$30.68	-19.5%
Incremental Systems Benefit Charge	\$128.37	\$125.68	-2.1%
Disposal Fee	\$47.27	\$48.75	3.1%
Leaf Vacuuming Charge	\$88.91	\$88.91	0.0%
Refuse Collection Charge	\$66.00	\$70.00	6.1%
Total Charges, Households Receiving:			
Recycling Collection Only	\$213.75	\$205.11	-4.0%
Recycling and Leaf Collection	\$302.66	\$294.02	-2.9%
Recycling and Refuse Collection	\$279.75	\$275.11	-1.7%
Recycling, Leaf and Refuse Collection	\$368.66	\$364.02	-1.3%
MULTI-FAMILY			
Base Systems Benefit Charge	\$8.80	\$6.47	-26.5%
Incremental Systems Benefit Charge	\$7.93	\$9.59	20.9%
Leaf Vacuuming Charge	\$3.54	\$3.54	0.0%
Total Charges			
Units inside Leaf Vacuuming District	\$20.27	\$19.60	-3.3%
Units outside Leaf Vacuuming District	\$16.73	\$16.06	-4.0%
NONRESIDENTIAL			
(by waste generation category per 2,000 sq. feet of gross floor area)			
Low	\$124.24	\$119.23	-4.0%
Medium Low	\$372.72	\$357.67	-4.0%
Medium	\$621.21	\$596.13	-4.0%
Medium High	\$869.69	\$834.57	-4.0%
High	\$1,118.18	\$1,073.02	-4.0%
TIPPING FEES			
Refuse (weighing >500 lbs per load)	\$56.00	\$56.00	0.0%
Refuse (weighing 500 lbs per load or less)	\$0.00	\$0.00	n/a
Refuse in Open Top Containers	\$66.00	\$66.00	0.0%
All Yard Trim (weighing >500 lbs per load)	\$46.00	\$46.00	0.0%
All Yard Trim (weighing 500 lbs per load or less)	\$0.00	\$0.00	n/a
Other Recyclables	\$0.00	\$0.00	n/a

1. System Benefit Charges

Base System Benefit Charges cover the cost of general solid waste system infrastructure and administration and are allocated among the single-family residential, multi-family residential, and non-residential sectors in proportion to each sector's estimated waste generation. For FY16, base system costs are estimated at \$51.4 million (a decrease of \$5.5 million from the FY15 approved amount of \$56.9 million) and are allocated to single-family, multi-family, and non-residential properties based on waste generation assumptions for each sector. These charges appear on all property tax bills (residential and non-residential properties, both within and outside municipalities).

The Incremental System Benefit Charge (ISBC) is assessed on the different sectors based on actual services received (mostly related to curbside recycling and composting services). For FY16, incremental systems benefit costs are estimated at \$34.99 million (an increase of \$3.5 million from the FY15 approved amount of \$31.4 million). These charges are also adjusted from year to year, partly as a result of increased costs in recycling and composting, but also because DSWS works to smooth overall impacts within the different rate categories (single-family, multi-family, and non-residential) across the six-year fiscal plan period. This stabilization effort is accomplished by the different categories either borrowing or paying back the fund balance reserve in different years over the six-year period. The net change over the six-year period is zero, but changes can be substantial in a given year and can result in the charge going up or down in the different sectors.

For purposes of considering the total impact on ratepayers, one needs to look at the "Total Charges" lines in the chart. DSWS' goal is to try to smooth increases and decreases in these overall charges over time.

For FY16, single-family properties and multi-family properties are recommended to be charged lower rates than in FY15 (decreases range from 1.3 to 4 percent, depending on the services received).

2. Non-Residential (Commercial) Charges

The charges for the non-residential sector are comprised of the Base System Benefit Charges (BSBC) and the Incremental System Benefit Charges (ISBC). These charges are computed based on Gross Floor Area Unit (GFAU) data from the State Department of Assessments and Taxation (SDAT) records. These charges are recommended to be reduced by 4.0 percent from FY15 rates. In addition to some positive revenue trends affecting all three sectors, the non-residential share of waste generation for FY16 is also down (from 53.9% to 52%), which means slightly lower base system benefit costs are assigned to the non-residential sector and rates can be lowered.

3. Refuse Disposal Tip Fees

The tip fee is the per ton fee charged businesses, institutions, and residents that dispose of refuse at the County's Transfer Station. No change is assumed in the standard refuse tipping fee (\$56 per ton for weights exceeding 500 pounds). Loads weighing less than 500 pounds are still free.

Tipping fees for both the refuse “in open top containers”² and commercial yard trim were increased four years ago (from \$60 to \$66 per ton and \$40 to \$46 per ton respectively). No increases were approved in FY13, FY14, or FY15 and no increases are being sought this year.

However, in FY15, the Executive recommended (and the Council approved) modifying how yard trim is charged. This change was made to **simplify the enforcement of the yard trim drop-off process at the transfer station**. Previously, there was no charge at the Transfer Station for residential yard trim drop-offs (no matter the total weight). Commercial yard trim (with no minimum weight) was charged at \$46 per ton. Now (similar to the current practice for refuse) there is no charge for yard trim loads below 500 pounds and a \$46 per ton charge for both residential and commercial loads greater than 500 pounds.

4. Recycling Tip Fees

The Executive continues to recommend no fee for source separated recyclable materials dropped off at the recycling drop-off area of the Transfer Station.

5. Refuse Collection Charge

The Executive recommends an increase in this charge of \$4.00 (from \$66 to \$70). The charge was last adjusted in FY13 (when it was reduced from \$70 to \$66). This fee is paid by homeowners in Subdistrict A for once weekly refuse collection service by County contractors.

DEP Staff provided the following information regarding the increase in this charge:

“The Refuse Collection charge is increasing in FY16 because during FY15, this fund incurred an additional charge of \$ 421,000 to help pay for the new CNG fueling station site. Rates were not increased in FY15 to cover this additional cost. In FY16, it was determined in order for the Refuse Collection fund to maintain a net asset amount between 10%-15%, rates had to be increased. This increase of \$4.00 in the Refuse Collection charge allows sufficient reserve (cash) for coverage of any unforeseen operating contingencies.”

While this charge is going up, decreases in the base and incremental systems benefit charges more than offset this increase.

6. Leaf Vacuuming Charge

This program is managed by the Department of Transportation (DOT). A leaf vacuuming fund covers the costs for the program (two scheduled leaf vacuuming pickups) through fees paid by residents in the leaf vacuuming district (via property tax bills). The Leaf Vacuuming Fund is charged for a portion of its costs associated with the composting of leaves collected by leaf vacuuming services.

For FY16, the charge is recommended to remain unchanged for both single-family homes and multi-family properties in the leaf vacuuming district. However, the recommended six-year fiscal plan (see ©17) projects a significant increase in FY17 for single-family households in the leaf collection district (from \$88.91 to \$101.10 or 13.7 percent) and an increase of \$0.47 for multi-family households (from \$3.54 to \$4.01 or 13.3 percent). Additional rate increases (albeit lower percentages) are assumed

² Open top containers tend to contain construction and demolition (C/D) debris, some of which can be processed at the RRF and some of which must be sent to other facilities for processing.

in FY18 and beyond. An alternative to this large jump from FY17 to FY18 would be to smooth the rate increase by increasing the rate in FY16, which would allow for a lower increase in FY17.

Council Staff asked DOT staff to consider this rate smoothing approach and DOT provided a rate smoothing alternative (see ©17a). In the T&E Committee's DOT General Fund Budget review on April 20, Council Staff presented this alternative rate schedule.

Under this alternative:

- In FY16 - the single-family charge would be \$93 (instead of \$88.91) and the multi-family charge would be \$3.70 instead of \$3.54.
- In FY17 – the single-family charge would be \$97.02 (instead of \$101.10) and the multi-family charge would be \$3.85 instead of \$4.01.
- In FY18 – the charges and fund balance would be the same under both options.

Council Staff recommends approval of the rate smoothing scenario.

Summary

Overall, the Executive is recommending slight decreases in what Solid Waste customers are currently paying, which is reflective of an FY16 Solid Waste budget request that includes modest incremental changes. According to DEP staff, three main factors have aided in making reduced rates possible for all sectors in FY16: 1) the Disposal Fund had an increase in cash of approximately \$9 million from FY13 to FY14; 2) the revenue projections for FY15 have increased over budgeted amounts; and 3) a projected decrease in expenses for FY17-FY21.

With the exception of the recommended leaf vacuuming charge, Council Staff supports the FY16 Solid Waste charges as recommended by the Executive. NOTE: A resolution approving FY16 Solid Waste charges is tentatively scheduled for Council action on May 13.

NOTE: In tandem with the Solid Waste charges resolution, the Executive transmits an Executive Regulation (ER) each year, setting residential waste estimates. The current regulation (ER 7-15) for FY16 has been advertised in the April register and will be acted upon by the Council in mid-May.

Summary of Council Staff Recommendations

- **Approve the Division of Solid Waste Services FY16 Budget as recommended by the County Executive.**
- **Approve the FY16 Solid Waste Charges as recommended by the County Executive with the exception of the leaf vacuuming charge where Council Staff recommends the rate smoothing scenario described earlier.**

Attachments

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Solid Waste Services

MISSION STATEMENT

Provide world-class solid waste management for the people living and working in Montgomery County, in an environmentally progressive and economically sound manner, striving to reduce and recycle 70 percent of our waste. Vision: We aspire to provide the best solid waste services in the nation and meet the needs of our diverse community.

BUDGET OVERVIEW

The total recommended FY16 Operating Budget for the Division of Solid Waste Services is \$111,889,853, an increase of \$2,349,757 or 2.1 percent from the FY15 Approved Budget of \$109,540,096. Personnel Costs comprise 10.0 percent of the budget for 99 full-time positions and one part-time position, and a total of 103.01 FTEs. Total FTEs may include seasonal or temporary positions and may also reflect workforce charged to or from other departments or funds. Operating Expenses and Capital Outlay account for the remaining 90.0 percent of the FY16 budget.

LINKAGE TO COUNTY RESULT AREAS

While this program area supports all eight of the County Result Areas, the following are emphasized:

- ❖ ***A Responsive, Accountable County Government***
- ❖ ***Healthy and Sustainable Neighborhoods***

DEPARTMENT PERFORMANCE MEASURES

Performance measures for this department are included below, with multi-program measures displayed at the front of this section and program-specific measures shown with the relevant program. The FY15 estimates reflect funding based on the FY15 approved budget. The FY16 and FY17 figures are performance targets based on the FY16 recommended budget and funding for comparable service levels in FY17.

ACCOMPLISHMENTS AND INITIATIVES

- ❖ ***The FY16 budget includes a 4.0% rate decrease in solid waste charges across the single-family, multi-family, and non-residential sectors, thereby providing relief to ratepayers in these sectors.***
- ❖ ***At the conclusion of the current processing contract for mixed paper in FY16, the Division of Solid Waste Services will begin selling sorted and bound mixed paper as a commodity. The budget includes the initial capital investment of \$2.1 million for this purpose, which will be recovered in the first year of operation and will generate net revenue of \$4.6 million per year.***
- ❖ ***DSWS received Maryland Department of the Environment approval to include the County's Municipal Solid Waste (MSW) incinerator ash recycled as Alternate Daily Cover in the County's Maryland Recycling Act (MRA) Recycling Tonnages.***
- ❖ ***Continued the food scrap recycling demonstration project in the Wellbeing Café in the Executive Office Building. Since inception of the project on November 1, 2011 through June 30, 2014, a total of 45.2 tons of pre-consumer food scraps have been collected and diverted for recycling. Training and educational materials are being provided to businesses implementing food scrap recycling collection programs at their workplace.***
- ❖ ***The County's Yard Trim Composting Facility won the 2014 Silver Award from the Solid Waste Association of North America (SWANA) and the National Association of Counties (NACo) Award; and passed its first annual independent audit to maintain its International Organization for Standardization (ISO) 14001 (Environmental Management System) certification. The Resource Recovery Facility (RRF) won the 2014 USEPA Environmental Excellence Award.***
- ❖ ***Developed a broad-based multi-media education campaign to highlight the County's 70 percent recycling goal and motivate everyone living, working, and visiting in the County to recycle more materials. Participated in several public affairs programs to discuss the County's goal to reduce waste and recycle 70 percent by 2020.***

- ❖ **Through the contractor training initiative and high level of performance, and staff training, the number of missed collections and complaints were reduced, and contamination of paper in the commingled stream at the Materials Recovery Facility (MRF) were reduced.**
- ❖ **In FY14, conducted seven confidential paper shredding/recycling and reusable clothing/household item donation collection events throughout the County, serving 5,205 vehicles. About 108.1 tons of confidential paper and cardboard were collected for shredding and recycling, and four box trucks were nearly filled with donated clothing and household items for reuse distribution through a variety of charitable organizations in Montgomery County.**
- ❖ **According to Maryland Department of the Environment (MDE), the County's Calendar Year 2012 recycling rate is 54.81 percent. Achieved the maximum allowable 5 percent source reduction credit awarded by MDE. The County's Calendar Year 2012 Waste Diversion Rate is 59.81 percent, the highest in the state for the 2nd consecutive year.**
- ❖ **Productivity Improvements**
 - **During FY14, onsite diesel fuel usage by Dickerson Yard Trim Composting Facility equipment was reduced by approximately 16% (7,172 gallons), a savings of \$22,349, compared to FY13. This was achieved despite a 7.6% (4,869 tons) increase in leaves and grass processed at the facility.**
 - **Monitor contractor performance to maintain high level of service and customer satisfaction. Continue to deliver recycling bins and carts in a timely manner, despite a 30% increase in requests.**
 - **Continue efforts to coordinate and integrate the execution and completion of recycling outreach, education, training, and evaluation projects to increase cost efficiencies and effectiveness, and ensure that the maximum amount of recycling is achieved. The majority of artwork and other educational materials was developed internally. Estimated savings for FY14 was approximately \$118,239.**

PROGRAM CONTACTS

Contact Scott McClure of the Division of Solid Waste Services at 240.777.6436 or Matt Schaeffer of the Office of Management and Budget at 240.777.2751 for more information regarding this department's operating budget.

PROGRAM DESCRIPTIONS

Administration and Support

This program provides budget management, program and management analysis, contract administration, and administrative support; manages enterprise fund business processes and supports solid waste policy issues through system evaluation and analyses which includes rate setting and fiscal health management; performs financial analysis of enterprise funds, revenue forecasting and enhancement, ratepayer database management, hauler billing processing, and system-wide tonnage tracking and reporting; maintain statistical waste generation data, headline performance measures, and County Stat data; provide for the overall operation and maintenance of existing computer equipment, as well as the purchase of any new automation equipment and technology to support effective and efficient achievement of the Division's mission.

Program Performance Measures	Actual FY13	Actual FY14	Estimated FY15	Target FY16	Target FY17
Single-Family Solid Waste Charge: System Benefit Charge, covers the portion of the County costs of providing basic solid waste services for single-family waste not covered by disposal and tipping fees (dollars per household) ¹	214	214	214	205	204

¹ Denotes the System Benefit Charge – Charges assessed to improved properties that help cover the costs of basic programs and facilities to manage all County solid waste generation.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	3,615,194	23.58
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-20,418	0.00
FY16 CE Recommended	3,594,776	23.58

Commercial Recycling and Waste Reduction

This program provides for mandatory commercial sector recycling and waste reduction for all businesses, as well as the review of recycling and waste reduction plans and annual reports from all large and medium-sized businesses, as well as targeted small businesses. Through this program, technical support, assistance, education, outreach, and training is provided to the commercial sector in the areas of recycling, reuse, buying recycled products, and waste reduction. This program also provides for enforcement of the County's recycling regulations and other requirements of the County Code as they apply to non-residential waste generators. All

program initiatives and services apply to businesses, not-for-profit organizations, as well as federal, state and local government facilities.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	2,045,850	11.00
Increase Cost: Continuation of 70% Recycling Goal Media Campaign	155,000	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-219,538	0.00
FY16 CE Recommended	1,981,312	11.00

Dickerson Compost Facility

This program includes all processing, transporting, composting, and marketing of yard trim received by the County, including leaves received from the County's Leaf Vacuuming Program. Processing includes grinding brush to produce mulch at the Transfer Station. Transportation included is for hauling leaves and grass from the Transfer Station, located in Derwood, MD to the Composting Facility, located in Dickerson, MD. Composting of all leaves and grass produces a high-quality soil amendment, sold wholesale as LeafGro in bulk and bagged forms. The budget is net of wholesale receipts.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	4,575,256	1.15
Increase Cost: Compost Facility - mandatory contractual Increases	381,806	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	743,433	0.00
FY16 CE Recommended	5,700,495	1.15

Dickerson Master Plan Implementation

This program provides for the implementation of the Dickerson Solid Waste Facilities Master Plan. This plan identifies the environmental, community, and operational effects of solid waste facilities in the Dickerson area (the RRF, the Site 2 Landfill, and the Compost Facility) and outlines policies and actions to mitigate those effects.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	94,052	0.57
Decrease Cost: Dickerson Master Plan - Dickerson study costs	-2,052	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	2,683	0.00
FY16 CE Recommended	94,683	0.57

Gude Landfill

The purpose of this program is to monitor air and water quality around the landfill, maintain stormwater management and erosion control structures, maintain site roads, and manage the landfill gas through collection, flaring, and gas-to-energy systems. In addition, it encompasses all operational functions necessary to maintain the Gude Landfill, which closed in 1982, in an environmentally sound and cost-effective manner. In addition, planning for further remediation mandated by the Maryland Department of the Environment to minimize potentially adverse environmental impacts and the design of post-closure uses for the site that serve the community are part of this program.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	928,075	1.31
Increase Cost: Gude Landfill - mandatory contractual increases and changes in landfill-to-gas project revenue	489,547	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	25,385	0.00
FY16 CE Recommended	1,443,007	1.31

Household and Small Quantity Household Hazardous Materials

This program funds a contractor to receive, sort, pack, ship, and properly dispose of household hazardous waste such as flammable products, insecticides, mercury, and reactive and corrosive chemicals. These products are brought in by residents and processed at State and Federally-approved hazardous waste treatment, storage, and disposal facilities. This program also includes outreach to educate residents regarding the potential dangers of certain household products and to reduce generation of hazardous waste; it also provides assistance to businesses that qualify as small-quantity generators of hazardous waste by providing them with an economical and environmentally safe disposal option. The materials are handled through the County's hazardous waste contractor and permitted

hazardous waste management facilities.

<i>FY16 Recommended Changes</i>	<i>Expenditures</i>	<i>FTEs</i>
FY15 Approved	1,029,507	0.00
Increase Cost: Household Waste Detoxification - mandatory contractual increases	19,656	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-1	0.00
FY16 CE Recommended	1,049,162	0.00

Housing and Environmental Permit Enforcement

Enforcement provided by the Department of Housing and Community Affairs under this program consists of six related components. Staff respond to resident complaints dealing with: storage and removal of solid waste; illegal solid waste dumping activities in the County; storage of unregistered vehicles on private property throughout the County; storage of inoperable vehicles on private property; improper screening of dumpsters, particularly those in shopping areas; and control and regulation of weeds throughout the County. The program includes a "Clean and Lien" component, which provides for the removal of dangerous or unsightly trash, perimeter grass, and weeds on properties which the owners have failed to maintain as required. Also under this program, the Department of Environmental Protection provides surface and subsurface environmental compliance monitoring at all County solid waste facilities, and reviews reports of air monitoring of the Resource Recovery Facility (RRF).

<i>FY16 Recommended Changes</i>	<i>Expenditures</i>	<i>FTEs</i>
FY15 Approved	1,164,926	9.93
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	64,409	0.00
FY16 CE Recommended	1,229,335	9.93

Oaks Landfill

This program maintains the closed Oaks Landfill in an environmentally sound and cost-effective manner in accordance with applicable State and Federal regulations. Mandated duties under this program include maintaining monitoring wells for landfill gas and water quality around the landfill; managing landfill gas through collection, flaring, and gas-to-energy systems; maintaining leachate storage and pre-treatment facilities; and performing other required site maintenance. This program also provides for the acceptance and treatment of waste generated by the cleanout of storm water oil/grit separators.

<i>FY16 Recommended Changes</i>	<i>Expenditures</i>	<i>FTEs</i>
FY15 Approved	1,529,902	1.52
Increase Cost: Oaks Landfill - monitoring activities	190,127	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-15,533	0.00
FY16 CE Recommended	1,704,496	1.52

Out-of-County Refuse Disposal

This program provides for the rail shipment of ash residue that is designated for recycling or disposal from the Resource Recovery Facility (RRF) to Fulton Rail Yard near Richmond, Virginia, where it is unloaded and transported by truck to a contracted landfill facility where the ash is processed for further metals removal and recycling. Ash may be beneficially reused as alternate daily cover and road base within the lined areas of modern landfill facilities owned by Republic Services. The dedicated landfill in Brunswick County, Virginia is still available for ash or other materials that cannot be recycled. This program also provides for the shipment of nonprocessable waste, such as construction material and, if necessary, bypass waste, from the Transfer Station to either recycling facilities or the contracted landfill in Brunswick County.

<i>FY16 Recommended Changes</i>	<i>Expenditures</i>	<i>FTEs</i>
FY15 Approved	9,483,037	1.00
Increase Cost: Out-of-County Haul - Increase in tonnage of hauled material	927,882	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	3,292	0.00
FY16 CE Recommended	10,414,211	1.00

Recycling & Waste Reduction - Multi-Family Dwellings

This program provides for mandatory recycling and waste reduction for multi-family properties. Program efforts include technical support, assistance, education, outreach and training about recycling, reuse, buying recycled products, and waste reduction, in

addition to the review and monitoring of waste reduction and recycling plans and annual reports. This program also provides for enforcement of the County's recycling regulations and other requirements of the County Code, as they apply to multi-family waste generators.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	830,889	4.00
Increase Cost: Multifamily Recycling Program - mandatory contractual increases	28,228	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	5,395	0.00
FY16 CE Recommended	864,512	4.00

Recycling Center

This program provides for the separation, processing, and marketing of recyclable materials (glass, metal, and plastic). The Recycling Center also serves as a transfer point for shipping residential mixed paper for processing. The Recycling Center receives recyclable material collected under the County curbside collection program, as well as from municipalities and multi-family properties which have established similar types of programs. The materials are then sorted and shipped to markets for recycling. This program also provides for the management of the County's residential mixed paper. Residential mixed paper includes newspaper, corrugated containers, kraft paper bags, magazines, telephone directories, and unwanted mail.

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	6,747,010	3.00
Increase Cost: Disposal Fund Capital Items	3,905,757	0.00
Increase Cost: Recycling Center Program - mandatory contractual increases	197,009	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-2,257,257	0.00
FY16 CE Recommended	8,592,519	3.00

Recycling Outreach & Education

This program provides for broadly educating everyone living and working in the County about recycling, reuse, buying recycled products, composting, grasscycling, waste reduction, mandates and requirements, and the need to comply with applicable County laws. Public education is an important effort which supports solid waste program goals and ensures the success of recycling initiatives and working to achieve the County's recycling goal.

Program Performance Measures	Actual FY13	Actual FY14	Estimated FY15	Target FY16	Target FY17
Multi-Family Recycling (tonnages) ¹	25,058	25,771	26,844	27,928	29,061
Non-Residential Recycling (tonnages) ²	306,098	323,726	336,456	350,846	365,886
Number of Site Visits to Provide Recycling Assistance to Businesses ³	10,987	10,014	12,000	12,000	12,000
Percent of Total Municipal Solid Waste Recycled ⁴	60%	61%	63%	64%	66%
Single-Family Recycling (tonnages) ⁵	277,995	288,413	297,054	305,408	314,069
Total Recycling (tonnage) ⁶	609,151	637,909	660,354	684,183	709,016

¹ CY14 data is an estimate

² CY14 data is an estimate

³ FY14 performance is despite staffing vacancies

⁴ Adopted the State of Maryland methodology for measuring the County's recycling rate; beginning with CY12 this measure is the Waste Diversion Rate (Recycling Rate + Source Reduction Credit). The reporting is performed on a calendar year basis. CY14 data is an estimate

⁵ CY14 data is an estimate

⁶ CY14 is an estimate

FY16 Recommended Changes	Expenditures	FTEs
FY15 Approved	614,667	2.00
Increase Cost: Outreach and Education campaign - for print and other advertising related to Bill 41-14	90,000	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-51,004	0.00
FY16 CE Recommended	653,663	2.00

Residential Collection

This program provides for securing, administering, monitoring, and enforcing countywide contracts with private collectors for collection of residential refuse and recyclables, and responding to the service needs of residents. Staff processes service requests from MC311 to ensure timely fulfillment by collection contractors. This program also provides for enforcement of the County's recycling regulations as they apply to single-family waste generators, and enforcement of relevant parts of Chapter 48 of the County Code. Staff maintains the database of households served and administers the billing of that service.

Solid Waste Services

<i>Program Performance Measures</i>	Actual FY13	Actual FY14	Estimated FY15	Target FY16	Target FY17
Average number of recycling collections missed per week, not picked up within 24 hours	5.0	7.0	6.5	6.5	6.5
Average number of refuse collections missed per week, not picked up within 24 hours	3.0	6.0	3.6	3.6	3.6
Single-family Solid Waste Charge: Refuse Collection Fee, charged for once per week curbside collection including on-call bulk pickups (dollars per household) ¹	66	66	66	70	74

¹ Denotes the Refuse Collection Charge – Fees charged to provide the refuse collection service

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	25,950,923	22.00
Increase Cost: Residential Recycling - mandatory contractual increases and recycling bin purchases	428,407	0.00
Increase Cost: Contract services for recycling bin delivery (includes one-time capital cost for delivery truck)	116,357	0.00
Shift: Transfer a portion of Permitting Inspector from the Disposal Fund to Residential Refuse Collection Program	41,447	0.50
Decrease Cost: Residential Refuse Collection program - contract adjustment	-12,709	0.00
Shift: Transfer portion of Permitting Inspector to the Refuse Collection program	-41,447	0.50
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-29,519	0.00
FY16 CE Recommended	26,453,459	23.00

Resource Recovery Facility & Related Waste Transfer

This program provides for the operation of the Montgomery County Resource Recovery Facility (RRF). The RRF serves as the primary disposal facility for non-recycled waste generated in the County. Renewable energy in the form of electricity is generated by the combustion of municipal solid waste and is sold into the competitive energy market. Ferrous metals are recovered and recycled. Extensive environmental and operational monitoring is conducted, to meet contractual obligations and all applicable regulatory standards. This program also includes costs for related operations at the Transfer Station and for transportation of waste from the Transfer Station to the RRF.

<i>Program Performance Measures</i>	Actual FY13	Actual FY14	Estimated FY15	Target FY16	Target FY17
Percent of Total Municipal Solid Waste Sent to Landfill	15.5%	12.6%	13.9%	13.7%	13.0%

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	45,026,231	1.25
Decrease Cost: Resource Recovery Facility (RRF) program costs	-2,557,939	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	8,328	0.00
FY16 CE Recommended	42,476,620	1.25

Satellite Site

This program provides for the operation of a satellite drop-off site at the Poolesville Highway Services Depot. Residents can bring bulky materials to this site. The site, which operates only on weekends, provides drop-off for trash items as a convenience to County residents and reduces the incidence of roadside dumping. The material that is collected is then transported to the Transfer Station in Rockville.

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	227,309	1.70
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	4,737	0.00
FY16 CE Recommended	232,046	1.70

Site 2

This program provides for the management of properties acquired for a potential future landfill. All properties are leased and/or used by private residents. Management activities include the inspection, evaluation, and maintenance of leased agricultural land, single-family dwellings, and agricultural buildings. Activities are coordinated with the Department of General Services as needed.

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	143,181	0.40
Increase Cost: Site 2 Landfill - Maintenance of Chiswell House Historical Site	11,320	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	2,013	0.00
FY16 CE Recommended	156,514	0.40

Solid Waste Transfer Station

The purpose of this program is to provide a receiving, processing, and shipping facility for municipal solid waste generated within the County. Waste that is handled or recycled includes scrap metal, oil and anti-freeze, textiles, car batteries, and construction material. County staff operates the scale-house and oversees general operations, while contractors provide for the receipt and transfer of waste and operate the public unloading facility and recycling drop-off areas. This program includes enforcement of the County's ban on delivery of recyclables mixed with trash delivered for disposal and the inspection and licensing of waste collection vehicles; and it provides for the regulation and enforcement of certain provisions of Chapter 48 of the County Code, including licensing requirements for refuse and recycling commercial collectors, and haulers of solid waste and recyclables.

<i>Program Performance Measures</i>	Actual FY13	Actual FY14	Estimated FY15	Target FY16	Target FY17
Number of Customers Dropping Off Household Hazardous Waste at the Transfer Station	65,452	78,292	78,500	78,800	79,000

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	4,984,492	16.00
Increase Cost: Transfer Station - mandatory annual contractual increases	51,165	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-374,252	-1.00
FY16 CE Recommended	4,661,405	15.00

Support for Recycling Volunteers

The mission of this program is to recruit and retain resident volunteers to augment available staff resources to educate the general public and thereby improve participation in waste reduction, recycling, and buying recycled programs. This resident-to-resident and peer-to-peer contact is very effective in motivating people living and working in the County to actively participate more in recycling.

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	136,649	0.00
FY16 CE Recommended	136,649	0.00

Waste System Planning

This program supports the planning and development of solid waste programs in accordance with the mandates of the County's Ten Year Comprehensive Solid Waste Management Plan. This may include evaluating existing source reduction, recycling, composting, collection, and disposal programs and policies with the intent of achieving solid waste program goals.

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	332,593	2.60
Increase Cost: Recycling incentives study	20,000	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	18,043	0.00
FY16 CE Recommended	370,636	2.60

Yard Trim Reduction Program

The purpose of this program is to provide education and training to residents, multi-family properties, and businesses to reduce the amount of yard trim materials (grass, leaves, and brush) generated and also to manage what is generated on-site through- both grasscycling and composting, thus reducing the amount of yard trim materials that must be collected, transported, and managed at the County's Compost Facility in Dickerson or at private compost facilities.

<i>FY16 Recommended Changes</i>	Expenditures	FTEs
FY15 Approved	80,353	0.00
FY16 CE Recommended	80,353	0.00

BUDGET SUMMARY

	Actual FY14	Budget FY15	Estimated FY15	Recommended FY16	% Chg Bud/Rec
SOLID WASTE COLLECTION					
EXPENDITURES					
Salaries and Wages	879,176	928,157	932,183	993,833	7.1%
Employee Benefits	287,874	324,440	324,444	338,160	4.2%
Solid Waste Collection Personnel Costs	1,167,050	1,252,597	1,256,627	1,331,993	6.3%
Operating Expenses	4,708,589	5,162,238	5,032,238	5,145,946	-0.3%
Capital Outlay	0	0	0	0	—
Solid Waste Collection Expenditures	5,875,639	6,414,835	6,288,865	6,477,939	1.0%
PERSONNEL					
Full-Time	4	4	4	4	—
Part-Time	0	0	0	0	—
FTEs	10.43	10.59	10.59	11.09	4.7%
REVENUES					
Investment Income	2,293	1,220	4,220	16,410	1245.1%
Systems Benefit Charge	6,029,414	6,052,200	6,040,948	6,428,730	6.2%
Other Charges/Fees	11,299	0	0	0	—
Solid Waste Collection Revenues	6,043,006	6,053,420	6,045,168	6,445,140	6.5%
SOLID WASTE DISPOSAL					
EXPENDITURES					
Salaries and Wages	6,702,918	7,035,656	6,981,453	7,255,672	3.1%
Employee Benefits	2,330,154	2,536,354	2,506,310	2,656,792	4.7%
Solid Waste Disposal Personnel Costs	9,033,072	9,572,010	9,487,763	9,912,464	3.6%
Operating Expenses	83,311,302	91,696,045	91,248,721	91,552,993	-0.2%
Capital Outlay	0	1,857,206	0	3,946,457	112.5%
Solid Waste Disposal Expenditures	92,344,374	103,125,261	100,736,484	105,411,914	2.2%
PERSONNEL					
Full-Time	75	75	75	75	—
Part-Time	0	1	1	1	—
FTEs	91.78	92.42	92.42	91.92	-0.5%
REVENUES					
Investment Income	40,553	140,260	74,580	289,990	106.8%
Miscellaneous Revenues	80,347	5,013,514	6,053,034	5,736,474	14.4%
Property Rentals	0	0	43,000	39,719	—
Sale of Recycled Materials	4,271,232	4,445,436	4,250,436	5,232,584	17.7%
Solid Waste Disposal Fees/Operating Revenues	20,998,946	27,509,320	28,261,174	28,480,257	3.5%
Systems Benefit Charge	68,900,752	59,061,380	58,903,640	56,240,992	-4.8%
Other Charges/Fees	237,918	0	195,000	238,628	—
Other Fines/Forfeitures	56,934	22,000	22,000	56,934	158.8%
Other Licenses/Permits	13,145	15,000	15,000	13,145	-12.4%
Solid Waste Disposal Revenues	94,599,827	96,206,910	97,817,864	96,328,723	0.1%
DEPARTMENT TOTALS					
Total Expenditures	98,220,013	109,540,096	107,025,349	111,889,853	2.1%
Total Full-Time Positions	79	79	79	79	—
Total Part-Time Positions	0	1	1	1	—
Total FTEs	102.21	103.01	103.01	103.01	—
Total Revenues	100,642,833	102,260,330	103,863,032	102,773,863	0.5%

FY16 RECOMMENDED CHANGES

	Expenditures	FTEs
SOLID WASTE COLLECTION		
FY15 ORIGINAL APPROPRIATION	6,414,835	10.59
<u>Other Adjustments (with no service impacts)</u>		
Shift: Transfer a portion of Permitting Inspector from the Disposal Fund to Residential Refuse Collection Program [Residential Collection]	41,447	0.50
Increase Cost: FY16 Compensation Adjustment	39,399	0.00
Increase Cost: Retirement Adjustment	9,403	0.00
Increase Cost: Risk Management Adjustment	6,750	0.00
Increase Cost: Group Insurance Adjustment	3,128	0.00
Increase Cost: Retiree Health Insurance Pre-funding Adjustment	1,860	0.00
Decrease Cost: Printing and Mail	-7,443	0.00
Decrease Cost: Annualization of FY15 Personnel Costs	-8,251	0.00
Decrease Cost: Motor Pool Rate Adjustment	-10,480	0.00
Decrease Cost: Residential Refuse Collection program - contract adjustment [Residential Collection]	-12,709	0.00
FY16 RECOMMENDED:	6,477,939	11.09
SOLID WASTE DISPOSAL		
FY15 ORIGINAL APPROPRIATION	103,125,261	92.42
<u>Other Adjustments (with no service impacts)</u>		
Increase Cost: Disposal Fund Capital Items [Recycling Center]	3,905,757	0.00
Increase Cost: Out-of-County Haul - Increase in tonnage of hauled material [Out-of-County Refuse Disposal]	927,882	0.00
Increase Cost: Gude Landfill - mandatory contractual increases and changes in landfill-to-gas project revenue [Gude Landfill]	489,547	0.00
Increase Cost: Residential Recycling - mandatory contractual increases and recycling bin purchases [Residential Collection]	428,407	0.00
Increase Cost: Compost Facility - mandatory contractual Increases [Dickerson Compost Facility]	381,806	0.00
Increase Cost: FY16 Compensation Adjustment	320,490	0.00
Increase Cost: Recycling Center Program - mandatory contractual increases [Recycling Center]	197,009	0.00
Increase Cost: Oaks Landfill - monitoring activities [Oaks Landfill]	190,127	0.00
Increase Cost: Continuation of 70% Recycling Goal Media Campaign [Commercial Recycling and Waste Reduction]	155,000	0.00
Increase Cost: Contract services for recycling bin delivery (includes one-time capital cost for delivery truck) [Residential Collection]	116,357	0.00
Increase Cost: Outreach and Education campaign - for print and other advertising related to Bill 41-14 [Recycling Outreach & Education]	90,000	0.00
Increase Cost: Risk Management Adjustment	73,230	0.00
Increase Cost: Retirement Adjustment	73,103	0.00
Increase Cost: Transfer Station - mandatory annual contractual increases [Solid Waste Transfer Station]	51,165	0.00
Increase Cost: Retiree Health Insurance Pre-funding Adjustment	40,260	0.00
Increase Cost: Charges from other departments	38,406	0.00
Increase Cost: Multifamily Recycling Program - mandatory contractual increases [Recycling & Waste Reduction - Multi-Family Dwellings]	28,228	0.00
Increase Cost: Group Insurance Adjustment	25,328	0.00
Increase Cost: Recycling incentives study [Waste System Planning]	20,000	0.00
Increase Cost: Household Waste Detoxification - mandatory contractual increases [Household and Small Quantity Household Hazardous Materials]	19,656	0.00
Increase Cost: Site 2 Landfill - Maintenance of Chiswell House Historical Site [Site 2]	11,320	0.00
Decrease Cost: Printing and Mail	-397	0.00
Decrease Cost: Dickerson Master Plan - Dickerson study costs [Dickerson Master Plan Implementation]	-2,052	0.00
Shift: Transfer portion of Permitting Inspector to the Refuse Collection program [Residential Collection]	-41,447	0.50
Decrease Cost: Annualization of FY15 Personnel Costs	-63,966	-1.00
Decrease Cost: Elimination of One-Time Items Approved in FY15	-773,418	0.00
Decrease Cost: Elimination of One-Time Items Approved in FY15 - Capital	-1,857,206	0.00
Decrease Cost: Resource Recovery Facility (RRF) program costs [Resource Recovery Facility & Related Waste Transfer]	-2,557,939	0.00
FY16 RECOMMENDED:	105,411,914	91.92

PROGRAM SUMMARY

Program Name	FY15 Approved		FY16 Recommended	
	Expenditures	FTEs	Expenditures	FTEs
Administration and Support	3,615,194	23.58	3,594,776	23.58
Commercial Recycling and Waste Reduction	2,045,850	11.00	1,981,312	11.00
Dickerson Compost Facility	4,575,256	1.15	5,700,495	1.15
Dickerson Master Plan Implementation	94,052	0.57	94,683	0.57
Gude Landfill	928,075	1.31	1,443,007	1.31
Household and Small Quantity Household Hazardous Materials	1,029,507	0.00	1,049,162	0.00
Housing and Environmental Permit Enforcement	1,164,926	9.93	1,229,335	9.93
Oaks Landfill	1,529,902	1.52	1,704,496	1.52
Out-of-County Refuse Disposal	9,483,037	1.00	10,414,211	1.00
Recycling & Waste Reduction - Multi-Family Dwellings	830,889	4.00	864,512	4.00
Recycling Center	6,747,010	3.00	8,592,519	3.00
Recycling Outreach & Education	614,667	2.00	653,663	2.00
Residential Collection	25,950,923	22.00	26,453,459	23.00
Resource Recovery Facility & Related Waste Transfer	45,026,231	1.25	42,476,620	1.25
Satellite Site	227,309	1.70	232,046	1.70
Site 2	143,181	0.40	156,514	0.40
Solid Waste Transfer Station	4,984,492	16.00	4,661,405	15.00
Support for Recycling Volunteers	136,649	0.00	136,649	0.00
Waste System Planning	332,593	2.60	370,636	2.60
Yard Trim Reduction Program	80,353	0.00	80,353	0.00
Total	109,540,096	103.01	111,889,853	103.01

CHARGES TO OTHER DEPARTMENTS

Charged Department	Charged Fund	FY15		FY16	
		Total\$	FTEs	Total\$	FTEs
SOLID WASTE DISPOSAL					
General Services	County General Fund	276,438	0.00	266,476	0.00
Liquor Control	Liquor Control	20,574	0.00	20,276	0.00
Parking District Services	Bethesda Parking District	73,697	0.00	71,777	0.00
Parking District Services	Montgomery Hills Parking District	2,303	0.00	2,243	0.00
Parking District Services	Silver Spring Parking District	140,484	0.00	136,825	0.00
Parking District Services	Wheaton Parking District	13,818	0.00	13,458	0.00
Total		527,314	0.00	511,055	0.00

FUTURE FISCAL IMPACTS

Title	CE REC.			(S000's)		
	FY16	FY17	FY18	FY19	FY20	FY21
This table is intended to present significant future fiscal impacts of the department's programs.						
SOLID WASTE COLLECTION						
Expenditures						
FY16 Recommended	6,478	6,478	6,478	6,478	6,478	6,478
No inflation or compensation change is included in outyear projections.						
Labor Contracts	0	6	6	6	6	6
These figures represent the estimated annualized cost of general wage adjustments, service increments, and associated benefits.						
Retiree Health Insurance Pre-funding	0	0	-1	-2	-2	-2
These figures represent the estimated cost of pre-funding retiree health insurance costs for the County's workforce.						
Subtotal Expenditures	6,478	6,484	6,483	6,482	6,482	6,482
SOLID WASTE DISPOSAL						
Expenditures						
FY16 Recommended	105,412	105,412	105,412	105,412	105,412	105,412
No inflation or compensation change is included in outyear projections.						
Elimination of One-Time Items Recommended in FY16	0	-318	-318	-318	-318	-318
Items approved for one-time funding in FY16 - including continuation of 70% recycling goal media campaign (\$155,000); outreach and education for polystyrene ban (\$90,000); Capital costs for delivery truck for blue recycling bins (\$52,857); and small study for recycling incentives (\$20,000).						
Labor Contracts	0	57	57	57	57	57
These figures represent the estimated annualized cost of general wage adjustments, service increments, and associated benefits.						

Title	CE REC.			(\$000's)		
	FY16	FY17	FY18	FY19	FY20	FY21
Equipment Replacement Purchase Schedule	0	204	-173	-1,577	-3,712	-2,170
This item outlines known capital equipment purchases based on the current replacement schedule through FY20. FY16 replacement schedule includes \$2.362 million for the compost facility, \$0.098 million for the transfer station, \$0.091 million for the recycling center, and \$0.055 million for information technology infrastructure costs.						
Resource Recovery Facility (RRF) Debt Service Schedule	0	-21,407	-21,407	-21,407	-21,407	-21,407
Debt restructuring and debt payoff at the end of FY16.						
Retiree Health Insurance Pre-funding	0	0	-14	-29	-37	-45
These figures represent the estimated cost of pre-funding retiree health insurance costs for the County's workforce.						
Subtotal Expenditures	105,412	83,948	83,558	82,138	79,995	81,528

SOLID WASTE ENTERPRISE FUND
RATES AND FISCAL PROJECTIONS FOR FY16-21

Assumptions:

- Refuse collection services are maintained at their current level, with the annual household collection charge increasing \$4.00 (6.1%) from \$66.00 in FY15 to \$70.00 in FY16.
- The disposal fee for municipal solid waste received at the Transfer Station (known as the “Tipping Fee”) is unchanged at \$56.00 per ton.
- Solid waste system service charges are adjusted to ensure the fiscal health of the fund (i.e., positive cash and retained earnings). In FY16, the County Executive is recommending a 4.0% reduction in solid waste rates across all sectors. This reduction equates to the following impact on rates:

	Current Rate	Reduction (4.0%)	Revised Rate for FY16
Single-Family:	\$213.75	(\$8.64)	\$205.11
Multi-Family:	\$16.73	(\$0.67)	\$16.06
Non-Residential (medium category):	\$621.21	(\$25.08)	\$596.13

- Expenditures for certain programs, such as the Resource Recovery Facility, Out-of-County Haul, and Mixed Paper Recycling, are calculated based on waste generation, disposal, and recycling estimates, as well as inflation. Other expenditures are increased by inflation, except where contract or scheduled costs apply.
- At the conclusion of the current processing contract for mixed paper in FY16, the Division of Solid Waste Services will begin selling sorted and bound mixed paper as a commodity. The budget includes the initial capital investment of \$2.1 million for this purpose, which will be recovered in the first year of operation and will generate net revenue of \$4.6 million per year.

FY16-21 PUBLIC SERVICES PROGRAM: FISCAL PLAN

Solid Waste Collection

FISCAL PROJECTIONS	FY15 ESTIMATE	FY16 REC	FY17 PROJECTION	FY18 PROJECTION	FY19 PROJECTION	FY20 PROJECTION	FY21 PROJECTION
ASSUMPTIONS							
Indirect Cost Rate	15.87%	15.98%	15.98%	15.98%	15.98%	15.98%	15.98%
CPI (Fiscal Year)	1.7%	2.0%	2.2%	2.3%	2.5%	2.8%	3.1%
Investment Income Yield	0.17%	0.65%	1.25%	1.75%	2.25%	2.75%	3.50%
Number of Households	91,454	91,839	92,225	92,611	92,997	93,383	93,660
Charge per Household (once-weekly refuse collection)	\$66.00	\$70.00	\$74.00	\$78.00	\$84.00	\$89.00	\$92.00
BEGINNING FUND BALANCE	2,330,824	1,462,184	1,211,535	946,287	755,814	786,099	804,287
REVENUES							
Charges For Services	6,040,948	6,428,730	6,570,162	6,814,247	7,223,345	7,425,359	7,678,162
Miscellaneous	4,220	16,410	31,560	44,180	56,800	69,420	88,350
Subtotal Revenues	6,045,168	6,445,140	6,601,722	6,858,427	7,280,145	7,494,779	7,766,512
INTERFUND TRANSFERS (Net Non-CIP)							
Transfers To The General Fund	(203,943)	(217,850)	(213,820)	(213,820)	(213,820)	(213,820)	(213,820)
Indirect Costs	(188,619)	(212,850)	(213,820)	(213,820)	(213,820)	(213,820)	(213,820)
Technology Modernization CIP	(10,324)	0	0	0	0	0	0
Desktop Computer Modernization	(5,000)	(5,000)	0	0	0	0	0
TOTAL RESOURCES	8,172,049	7,669,474	7,599,437	7,590,894	7,822,139	8,067,057	8,356,979
CIP CURRENT REVENUE APPROP.							
	(421,000)	0	0	0	0	0	0
PSP OPER. BUDGET APPROP/ EXPS.							
Operating Budget	(6,288,865)	(6,477,939)	(6,647,089)	(6,829,729)	(7,031,489)	(7,258,639)	(7,517,559)
Labor Agreement	n/a	0	(6,061)	(6,061)	(6,061)	(6,061)	(6,061)
Retiree Health Insurance Pre-Funding	0	0	0	710	1,510	1,930	2,370
Subtotal PSP Oper Budget Approp / Exps	(6,288,865)	(6,477,939)	(6,653,150)	(6,835,080)	(7,036,040)	(7,262,770)	(7,521,250)
TOTAL USE OF RESOURCES	(6,709,865)	(6,477,939)	(6,653,150)	(6,835,080)	(7,036,040)	(7,262,770)	(7,521,250)
YEAR END FUND BALANCE	1,462,184	1,211,535	946,287	755,814	786,099	804,287	835,729
END-OF-YEAR RESERVES AS A							
PERCENT OF RESOURCES	17.9%	15.8%	12.5%	10.0%	10.0%	10.0%	10.0%

Assumptions:

1. Refuse collection charges are adjusted to achieve cost recovery.

Notes:

1. The refuse collection charge is adjusted annually to fund the approved service program and to maintain an ending net asset balance between 10% and 15% of resources at the end of the six-year planning period.
2. These projections are based on the Executive's Recommended budget and include the revenue and resource assumptions of that budget. The projected future expenditures, revenues, and fund balances may vary based on changes not assumed here.

FY16-21 DIVISION OF SOLID WASTE SERVICES

FISCAL PROJECTIONS	ESTIMATED FY15	PROJECTED FY16	PROJECTED FY17	PROJECTED FY18	PROJECTED FY19	PROJECTED FY20	PROJECTED FY21
Single-Family Charges (\$/Household)	213.75	205.11	203.85	193.30	183.90	179.41	176.36
% change in rate from previous year	0.0%	-4.0%	-0.6%	-5.2%	-4.9%	-2.4%	-1.7%
Multi-Family Charges (\$/Dwelling Unit)	16.73	16.06	15.68	15.30	14.40	13.90	12.04
% change in rate from previous year	0.0%	-4.0%	-2.4%	-2.4%	-5.9%	-3.5%	-13.4%
Nonresidential Charges (medium "category" charge)	621.21	596.13	590.45	508.90	398.99	319.38	253.23
% change in rate from previous year	0.0%	-4.0%	-1.0%	-13.8%	-21.6%	-20.0%	-20.7%
Nonresidential Charges (average \$/2000 sq. ft.)	239.72	226.61	224.46	193.46	151.67	121.41	96.26
OPERATIONS CALCULATION							
REVENUES							
Disposal Fees	28,261,174	28,480,257	29,062,657	29,656,963	30,309,815	30,976,387	31,656,250
Charges for Services/SBC	58,903,639	56,240,992	56,433,121	51,866,851	46,110,014	42,934,223	39,932,313
Miscellaneous	10,578,471	11,317,464	14,783,768	14,824,536	14,860,820	14,897,214	14,934,223
Investment Income	74,580	289,990	557,870	780,740	1,003,810	1,226,880	1,561,480
Subtotal Revenues	97,817,864	96,328,723	100,837,216	97,129,090	92,284,459	90,034,704	88,084,266
INTERFUND TRANSFERS	834,305	683,994	981,333	858,848	819,808	346,465	415,580
EXPENDITURES							
Personnel Costs	(9,487,763)	(9,912,464)	(10,360,507)	(10,840,198)	(11,320,419)	(11,804,933)	(12,310,184)
Operating Expenses	(89,391,515)	(91,552,993)	(74,031,655)	(76,810,488)	(77,556,038)	(80,960,785)	(83,975,652)
Capital Outlay	(1,857,206)	(3,946,457)	(4,150,450)	(3,773,955)	(2,369,541)	(234,148)	(1,776,079)
Other Expenditure Restrictions Raised in Prior Years)							
Subtotal Expenditures	(100,736,464)	(105,411,914)	(68,542,612)	(91,424,641)	(91,245,998)	(92,999,866)	(98,061,915)
CURRENT RECEIPTS TO CIP	(718,000)						
POTENTIAL FUTURE EXPENDITURE (Guide Remediation)			(766,000)	(1,090,000)	(732,000)	(484,000)	(941,000)
PAYOUT OF GUDE REMEDIATION		746,000	756,000	1,090,000	732,000	484,000	941,000
PAYOUT OF CLOSURE COSTS (Non-CIP)	1,494,904	1,689,495	1,714,994	1,763,682	1,810,289	1,855,479	1,901,867
CY ACCRUED CLOSURE COSTS	(30,422)	(36,426)	(45,500)	(48,688)	(46,607)	(45,190)	(46,368)
NET CHANGE	(1,337,833)	(6,020,128)	14,945,431	8,278,291	3,821,951	(808,388)	(7,706,590)
CASH POSITION							
ENDING CASH & INVESTMENTS							
Unrestricted Cash	29,796,442	27,460,461	38,488,350	41,372,119	40,958,412	38,069,185	32,645,345
Restricted Cash	32,947,033	28,009,046	31,428,808	32,354,028	34,539,364	35,134,245	31,157,215
Subtotal Cash & Investments	62,743,475	55,469,507	67,917,158	73,726,147	75,497,776	73,203,430	63,802,560
RESERVE & LIABILITY REQUIREMENTS							
Management Reserve	(26,352,978)	(22,135,653)	(22,856,160)	(22,811,499)	(23,249,967)	(24,515,479)	(24,764,484)
Debt Service Reserve	-	-	-	-	-	-	-
Future System Contingency Reserve	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)
Research & Development Reserve	(298,080)	(298,080)	(298,080)	(298,080)	(298,080)	(298,080)	(298,080)
Renewal & Replacement Reserve	(3,986,806)	(4,075,313)	(4,178,011)	(4,287,892)	(4,392,088)	(4,492,228)	(4,594,651)
Stability Reserve	(1,309,169)	(500,000)	(3,096,557)	(3,956,557)	(5,599,229)	(4,828,458)	(500,000)
Subtotal Reserve Requirements	(32,947,033)	(28,009,046)	(31,428,808)	(32,354,028)	(34,539,364)	(35,134,245)	(31,157,215)
Closure/Postclosure Liability	(13,582,659)	(11,949,590)	(10,280,096)	(8,565,101)	(6,801,419)	(4,991,131)	(3,135,652)
Guide Remediation Liability	(28,500,000)	(27,754,000)	(26,998,000)	(25,908,000)	(25,176,000)	(24,692,000)	(23,751,000)
Current Liabilities Not Including Debt/Closure							
Subtotal Reserve & Liability Requirements	(75,029,692)	(67,712,636)	(68,706,904)	(66,827,129)	(66,516,783)	(64,817,376)	(58,043,867)
CASH & INVESTMENTS OVER/(UNDER) RESERVE & LIABILITY REQUIREMENTS	(12,286,217)	(12,243,129)	(789,746)	6,899,018	8,980,993	8,386,054	5,758,693
Net Assets							
ENDING NET ASSETS							
Less: Reserve Requirements	56,074,550	53,729,540	72,229,521	84,529,503	90,984,984	90,910,544	86,436,127
	(32,947,033)	(28,009,046)	(31,428,808)	(32,354,028)	(34,539,364)	(35,134,245)	(31,157,215)
NET ASSETS OVER/(UNDER)							
RESERVE REQUIREMENTS	23,127,517	25,720,494	40,800,713	52,175,475	56,445,620	55,776,299	55,278,912

FY16 Solid Waste Service Charges

1. **Purpose** - To fund solid waste management services provided to residents and businesses in Montgomery County through service charges to all entities that benefit from such services.
2. **Classification of Service Charges** - There are five basic categories of service charges:

Base Systems Benefit Charge - Paid by all entities to cover costs of system administration, historical debt service, waste reduction, and "stand-by" disposal capacity.

Incremental Systems Benefit Charge - Paid by entities based on sector-specific services they receive (single-family homeowners pay for curbside recycling collection and processing, businesses pay for the commercial recycling program, etc.)

Disposal Charges - Paid as a service charge via the tax bill or at the Transfer Station by all entities who deliver solid waste to Montgomery County for disposal. At the Solid Waste Transfer Station, this charge is referred to as the "Tipping Fee" for accepting municipal solid waste for disposal.

Leaf Vacuuming Charge - Covers the cost of leaf vacuuming service provided in the Leaf Vacuuming District.

Refuse Collection Charge - Paid by homeowners who receive once weekly refuse collection service by County contractors.

3. **Implementation of Service Charges** - Service charges are collected from the various sectors in the following manner:

	Base Systems Benefit Charge	Incremental Systems Benefit Charge	Disposal Charge	Leaf Vacuuming Charge	Refuse Collection Charge
Unincorporated Single-Family	Via tax bill	Via tax bill	Via tax bill	Via tax bill to those serviced	Via tax bill to those serviced
Incorporated Single-Family	Via tax bill	Not applicable	Charged at Transfer Station	Not applicable	Not applicable
Unincorporated Multi-family	Via tax bill	Via tax bill	Charged at Transfer Station	Via tax bill to those serviced	Not applicable
Incorporated Multi-family	Via tax bill	Via tax bill	Charged at Transfer Station	Not applicable	Not applicable
Unincorporated Non-Residential	Via tax bill	Via tax bill	Charged at Transfer Station	Not applicable	Not applicable
Incorporated Non-Residential	Via tax bill	Via tax bill	Charged at Transfer Station	Not applicable	Not applicable

FY16 RECOMMENDED SOLID WASTE SERVICE CHARGES TO BE COLLECTED VIA REAL PROPERTY ACCOUNT BILLING

Code Reference	Base Charge (\$/ton) 48-32(a)(1)	x	Billing Rate (tons/HH) 48-32(c)(2)	=	Disposal Charge 48-32(c)(2)	+	Base Systems Benefit Charge 48-8A(b)(2)(A)	+	Incremental Systems Benefit Charge 48-8A(b)(2)(B)	+	Refuse Collection Charge 48-29	+	Leaf Vacuuming Charge 48-47	=	Total Bill
SUBDISTRICT A (Refuse Collection District)*															
Inside Leaf Vacuuming District	\$ 56.00		0.87054	\$ 48.75	\$ 30.68	\$ 125.68	\$ 70.00	\$ 88.91							\$ 364.02
Outside Leaf Vacuuming District Incorporated	\$ 56.00		0.87054	\$ 48.75	\$ 30.68	\$ 125.68	\$ 70.00								\$ 275.11
					\$ 30.68										\$ 30.68
SUBDISTRICT B SINGLE-FAMILY**															
Incorporated					\$ 30.68										\$ 30.68
Inside Leaf Vacuuming District Unincorporated	\$ 56.00		0.87054	\$ 48.75	\$ 30.68	\$ 125.68		\$ 88.91							\$ 294.02
Outside Leaf Vacuuming District Unincorporated	\$ 56.00		0.87054	\$ 48.75	\$ 30.68	\$ 125.68									\$ 205.11
MULTI-FAMILY RESIDENTIAL**															
Incorporated					\$ 6.47	\$ 9.59									\$ 16.06
Unincorporated					\$ 6.47	\$ 9.59									\$ 16.06
Outside Leaf Vacuuming District					\$ 6.47	\$ 9.59									\$ 16.06
Inside Leaf Vacuuming District					\$ 6.47	\$ 9.59		\$ 3.54							\$ 19.60
NONRESIDENTIAL - \$/2,000 SQ. FT. ***															
Code Reference															
Waste Generation Categories															
Low					\$ 78.48	\$ 40.75									\$ 119.23
Medium Low					\$ 235.42	\$ 122.25									\$ 357.67
Medium					\$ 392.37	\$ 203.76									\$ 596.13
Medium High					\$ 549.31	\$ 285.26									\$ 834.57
High					\$ 706.26	\$ 366.76									\$ 1,073.02
OTHER RECOMMENDED FY 16 SOLID WASTE FEES															
Base Solid Waste Charge under Section 48-32(a)(1):															
(This is known as the "Tipping Fee") \$56.00 /disposal ton															
Waste delivered for disposal <500 lb loads in privately owned and operated vehicles or trailers < 1,000 capacity per Section 48-32(c)(2): \$0.00/disposal ton															
Solid Waste Service Charges (Section 48-32(a)(2)):															
Paper and Commingled Containers \$0.00 /ton															
Solid Waste Service Charges (Section 48-32(b)(2)):															
All Yard Trim received at the Transfer Station (weighing > 500 pounds/load) \$46.00 /ton															
Waste delivered in open-top roll-off box \$66.00 /disposal ton															
Miscellaneous (48-31(f)): Compost Bins \$0.00 each															

* Note: Base System Benefit Charges are set to cover County Base System Costs net of Disposal Charges.

** With respect to Base and Incremental System Benefit Charges, this category includes dwellings in buildings of six or fewer households.

*** The Nonresidential rate multiplied by the total number of 2,000 square foot units of enclosed area equals the nonresidential charge.

FY16-21 PUBLIC SERVICES PROGRAM: FISCAL PLAN

Vacuum Leaf Collection

FISCAL PROJECTIONS	FY16 ESTIMATE	FY16 REC	FY17 PROJECTION	FY18 PROJECTION	FY19 PROJECTION	FY20 PROJECTION	FY21 PROJECTION
ASSUMPTIONS							
Indirect Cost Rate	15.57%	15.98%	15.98%	15.98%	15.98%	15.98%	15.98%
CPI (Fiscal Year)	1.7%	2.0%	2.2%	2.3%	2.5%	2.8%	3.1%
Investment Income Yield	0.17%	0.65%	1.25%	1.75%	2.25%	2.75%	3.50%
Charge per single-family household	\$ 88.91	\$ 88.91	\$ 101.10	\$ 103.15	\$ 106.55	\$ 104.38	\$ 110.02
Charge per multi-family unit and townhome unit	\$ 3.54	\$ 3.54	\$ 4.01	\$ 4.09	\$ 4.22	\$ 4.14	\$ 4.36
Single-family households in leaf collection district	71,382	71,472	71,472	71,472	71,472	71,472	71,472
Multi-family households in leaf collection district	50,253	51,083	51,083	51,083	51,083	51,083	51,083
% of leaves attributed to single-family households	97.2%	97.2%	97.2%	97.2%	97.2%	97.2%	97.2%
% of leaves attributed to multi-family units and townhome	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
BEGINNING FUND BALANCE	1,299,279	968,830	548,481	500,000	500,000	500,000	500,000
REVENUES							
Charges For Services	6,528,485	6,535,000	7,430,406	7,581,122	7,820,972	7,672,019	8,086,194
Miscellaneous	2,260	8,790	16,900	28,660	30,420	37,180	47,320
Subtotal Revenues	6,530,745	6,543,790	7,447,306	7,609,782	7,861,392	7,709,199	8,133,514
INTERFUND TRANSFERS (Net Non-CIP)							
Transfers To The General Fund	(1,636,561)	(1,546,544)	(1,879,433)	(1,793,808)	(1,536,278)	(1,445,576)	(1,600,710)
Indirect Costs	(473,290)	(494,320)	(497,150)	(497,150)	(497,150)	(497,150)	(497,150)
Technology Modernization CIP	(30,517)	0	0	0	0	0	0
Transfers To Special Fnd: Non-Tax + ISF To Solid Waste Disposal	(1,132,744)	(1,052,224)	(1,382,283)	(1,296,358)	(1,339,128)	(948,425)	(1,103,560)
TOTAL RESOURCES	4,193,473	5,965,076	6,116,354	6,311,274	6,525,114	6,763,624	7,032,804
PSP OPER BUDGET APPROP/ EXP'S							
Operating Budget	(5,224,643)	(5,417,595)	(5,598,645)	(5,793,565)	(6,007,405)	(6,245,915)	(6,515,095)
Labor Agreement	n/a	0	(17,709)	(17,709)	(17,709)	(17,709)	(17,709)
Subtotal PSP Oper Budget Approp / Exp's	(5,224,643)	(5,417,595)	(5,616,354)	(5,811,274)	(6,025,114)	(6,263,624)	(6,532,804)
TOTAL USE OF RESOURCES	(5,224,643)	(5,417,595)	(5,616,354)	(5,811,274)	(6,025,114)	(6,263,624)	(6,532,804)
YEAR END FUND BALANCE	968,830	548,481	500,000	500,000	500,000	500,000	500,000
END-OF-YEAR RESERVES AS A PERCENT OF RESOURCES	15.6%	9.2%	8.2%	7.9%	7.7%	7.4%	7.1%

Assumptions:

1. Leaf vacuuming rates are adjusted to achieve cost recovery.
2. The Vacuum Leaf Collection fund balance policy target is \$500,000. In future years, rates will be adjusted annually to fund the approved service program and maintain the appropriate ending balance.

Council Staff
DOT General Fund
Memo Excerpt

A. Vacuum Leaf Collection Fund

This fund pays for two vacuum leaf collections during the late fall/early winter each year. The Executive's recommended budget of \$5,417,595 reflects an increase of \$192,952 (+3.7%). There is no change in the workforce. The charges in FY15 would remain the same as in FY14: \$88.91 for each single-family unit and \$3.54 for each townhouse and multi-family unit.

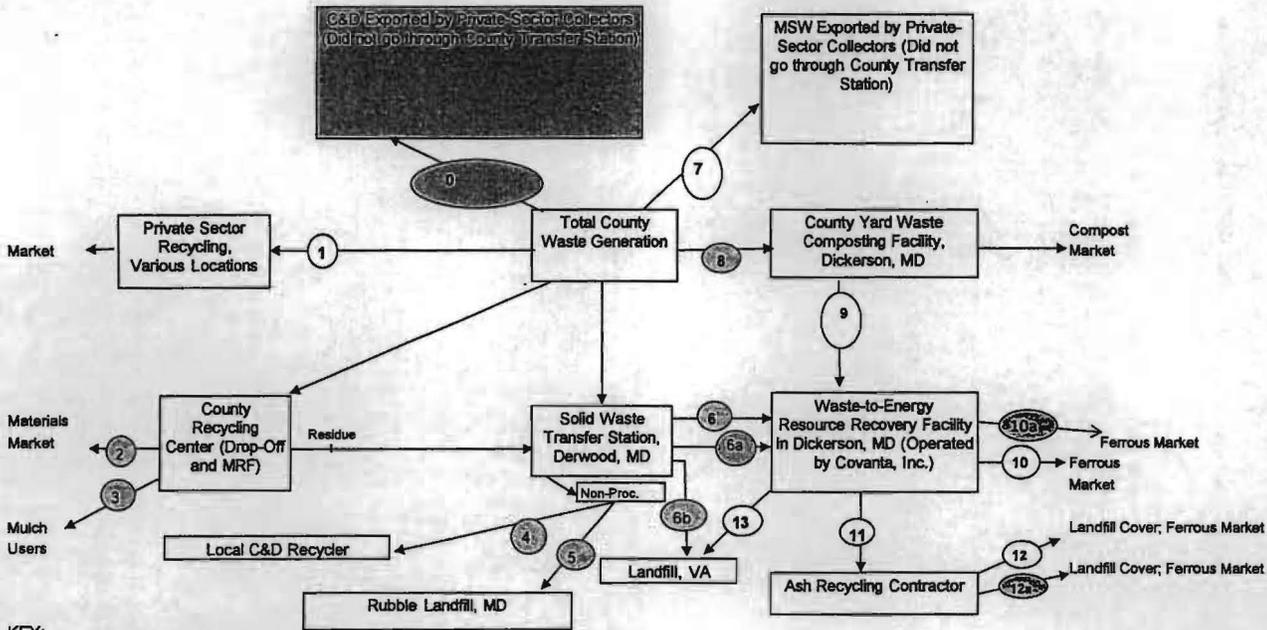
The fund balance policy has recently been raised to \$500,000 for this fund, but the actual reserves have been much higher: as recently as FY14 it was nearly \$1.3 million. The per-unit charges have been remained unchanged for a few years, and has costs have increased the balance has declined. The proposed Fiscal Plan calls for a 13.7% increase in the rates (+\$12.19 for single-family units in FY17) followed by smaller annual increases in most years thereafter, with the balance dropping to \$500,000 by FY18.

Rather than planning such a large jump in rates in FY17—a year when the Executive has suggested that property taxes may have to rise significantly—it may be more prudent to have small increases in the Leaf Collection rate in FY16 and FY17, reaching the same rate by FY18. The chart below highlights the difference between the Executive's and Council staff's recommendations:

Executive's Recommendation	FY15	FY16	FY17	FY18
Single-family charge/unit	\$88.91	\$88.91	\$101.10	\$103.15
Multi-family charge/unit	\$3.54	\$3.54	\$4.01	\$4.09
Year-end fund balance	\$968,830	\$548,481	\$500,000	\$500,000

Council Staff Recommendation	FY15	FY16	FY17	FY18
Single-family charge/unit	\$88.91	\$93.00	\$97.02	\$103.15
Multi-family charge/unit	\$3.54	\$3.70	\$3.85	\$4.09
Year-end fund balance	\$968,830	\$848,481	\$500,000	\$500,000

MATERIAL FLOW DIAGRAM Calendar Year 2013



KEY:

- 1, 7 Audited or otherwise documented. Often based on truck scales of others.
- 2 Data is from State-certified County truck scales Owned by County.
- 3 Data is from State-certified truck scales, privately operated under contract to County.
- 4 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	1,350,182
County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6a + 6b + 7 + 8	1,214,507
MSW Generated (above less streams 4, 5 and 6a)	1,103,958

Stream No.	Material Description	Sources of Data	Total (tons/yr)	Comments
0	Construction & Demo Debris Private Export (Recycled & Landfilled)	Licensed Collector Reports under ER 92-59	135,675	Not County-managed, includes both disposed and recycled C & D
1	Recycled via non-County Facilities	Collector, Processor, Business & Self-Hauler Rpts.	273,644	Filtered to avoid double-counting
2	County Recycling Facility Material Sales	County TS & MRF Scales, Outbound	81,421	Outgoing to market from County Recycling Center
3	Mulch Loaded Out From TS	County Transfer Station (TS) Scale Records	37,095	Scaled out as taken to County Mulch Contractor & Preserve Locations
4	Non-Processibles Recycled**	County TS Scale Out Records	37,365	Not included in MRA recycling calculation
5	Non-Processibles Landfilled**	County Trans. Station & Covanta Scale Records	4,411	Not included in MRA recycling calculation
6	Loaded on Rail to RRF (MSW burned)	Covanta Scales as Loaded	489,411	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	68,773	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	153,571	Private Sector MSW Collection not delivered to County TS
8	All Incoming Leaves and Grass	Compost Facility & TS Scale Records	68,816	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	8,757	Recovered from ash at County Facility
10a	Ferrous recovered at RRF (C&D Residue)	Internal Calculation	1,230	Not included in MRA recycling calculation
11	Ash Loaded to Ash Recycling Contractor	Allied Monthly Report	159,010	Total ash (includes 12, 12a, 13, and 13a)
12	Ash outgoing from Ash Recycler	Allied Monthly Report	139,418	Included in MRA recycling calculation
12a	Ash outgoing from Ash Recycler (C&D Residue)	Internal Calculation	19,591	Not included in MRA recycling calculation
13	All Ash not recycled	Covanta Scale Records	-	

Montgomery County Recycling Rate and Waste Diversion Rate Calculations (MRA Method)		Numerator	Denominator	Rate
Recycling Rate	$(1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (CMW - 4 - 5 - 6a)$	609,151	1,103,958	55.18%
Waste Diversion Rate	$((1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (CMW - 4 - 5 - 6a)) + 5.0\%$	609,151	1,103,958	60.18% ***

- 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 = Recycle 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

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			
		Single-Family			Multi-Family			Non-Residential			Disposed by Sector (tons)			Currently Disposed (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	185,567	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						
TOTAL	409,914	254,119	62.0%	94,298	24,928	26.4%	576,131	313,101	54.3%	145,502	60,300	231,738	437,641	

*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.

Solid Waste System Disposal Fund, Rate Setting Methodology

Item	Amount	Notes
Total Budgetary Operating Costs for the Year	\$ 105,568,579	a
CIP Expen. (Current Receipts, Non-Closure)	-	b
Contingency Funds	-	c
Closed landfill Expenses (inflation only)	36,426	d
Material Sales Revenue	(5,497,399)	e
Miscellaneous Revenues	(5,820,085)	f
Investment Income	(289,990)	g
Sector-Specific Stability Fund Contributions (Draw)	1,555,800	h
Fund Balance Adjusting Contribution (Draw)	(11,089,051)	i
Transfer to Disposal Fund From Leaf Vacuuming Fund	(1,052,224)	j
Fund Contribution for Small Loads (e.g. <500 lbs)	3,016,849	k
Net Revenues Required from Service Charges	\$ 86,428,906	
Incremental Systems Benefit Charges	\$ (34,986,941)	l
BASE SYSTEM COSTS	51,441,965	

BASE SYSTEM BENEFIT CHARGES	Single-Family		Multi-Family		Non-Residential	
	m	n	m	n	m	n
Service Sector						
Proportion of Total Waste Generation	39.1%	n	8.9%	n	52.0%	n
Sector Share of Base Costs	\$ 20,125,252	o	\$ 4,568,564	o	\$ 28,748,149	o
Offsets from Refuse Disposal Fees Tipping Fees	(12,352,529)	p	(3,753,926)	p	(13,831,731)	p
Base Costs to Collect on Property Levy	\$ 7,772,723		\$ 814,637		\$ 12,916,418	
Households (HH) or Commercial Gross Floor Area Units (GFAU)	253,375	q	125,927	q	86,593	r
Base System Benefit Charge on Property Levy (\$/HH, \$/GFAU)	\$ 30.68 /HH		\$ 6.47 /HH		\$ 149.16 /GFAU	

INCREMENTAL SYSTEM BENEFIT CHARGES (ISBC)	Single-Family		Multi-Family		Non-Residential	
	m	n	m	n	m	n
Recycling	\$ 26,911,590	s	\$ 1,035,321	t	\$ 2,351,009	u
Satellite Sites	243,738		5,690			
Studies Specifics to the Nonresidential Sector						
Stabilization	(2,177,000)	v	134,000	v	3,598,800	v
Composting	2,094,180	w	32,624	w	756,989	w
Total	\$ 27,072,508		\$ 1,207,635		\$ 6,706,798	
Households (HH) or Commercial Gross Floor Area Units (GFAU)	215,405	x	125,927	q	86,593	r
ISCB to be Charged on Property Levy	\$ 125.68 /HH		\$ 9.59 /HH		\$ 77.45 /GFAU	

DISPOSAL FEES (Charged on Property Levy (In-Lieu of Tipping Fee))	Single-Family		Multi-Family		Non-Residential	
	m	n	m	n	m	n
Tons of Refuse Disposed by Subdistrict A & B Households	187,526	tons	NA		NA	
Single-Family Households in Sub-Districts A & B (Non-Municipal)	215,405	HH	NA		NA	
Disposal Tons Per Household	0.8706	ton/HH	NA		NA	
County Tipping Fee for Accepting Refuse at its Transfer Station	\$ 56.00	\$/ton	NA		NA	
Disposal Fee Levied on Subdistrict A & B Households on Tax Bill	\$ 48.75	/HH	NA		NA	

Total System Benefit Charges Levied on Tax Bill	Single-Family		Multi-Family		Non-Residential	
	m	n	m	n	m	n
Non-Municipal Single-Family Homes	\$ 205.11	/HH				
Municipal Single-Family Homes	\$ 30.68	/HH				
Multi-Family Dwellings			\$ 16.06	/HH		
					\$ 226.61	/GFAU

- a Does not include cost of maintaining closed landfill, which costs are paid from Landfill Post Closure Reserves (GASB18)
- b Current Receipts to fund solid waste projects financed by County's Long Term Capital Improvements Program (CIP)
- c Toward unplanned research and capital needs contingencies
- d Amount that GASB 18 does not permit to be reserved for landfill post closure costs (inflation).
- e Revenue from recyclables materials sold into secondary markets
- f From fees charged to accept yard trim, waste delivered in open top roll-off boxes, licence fees & rent, and misc. revenue
- g Pooled and non-pooled investment income as determined by the County Department of Finance
- h Sum of sector-specific rate stabilization contributions (see also note v)
- i Non-sector-specific contribution to (draw) to adjust overall fund balance
- j To pay for composting leaves collected by leaf vacuuming services (separate sub-fund)
- k Charge to fund balance to account for non-chargable refuse deliveries (e.g. <500 lb loads per SS 48-32(c)(2) & MRF residue)
- l Revenue from Incremental System Benefit Charges
- m Single-family detached, townhouse, and multifamily dwellings in buildings comprised of 6 or fewer dwellings
- n Based on County's annual materials flow analysis.
- o (n) x (BASE SYSTEM COSTS)
- p Off-Sets Against Sector's Share of System Base Costs

	Single-Family	Multi-Family	Non-Residential
Disposed into County System (open-top roll off tons not included)	241,657	71,819	275,007
Non-Charged Loads (<500 lbs, PUF, Beauty-Spots, MRF Residue)	(21,076)	(4,784)	(28,012)
Off-Setting Tonnage	220,581	67,034	246,995
Tipping Fee	\$ 56.00 / ton	\$ 56.00 / ton	\$ 56.00 / ton
Sector Off-Sets for Refuse Disposal Fees and Tipping Fees	\$ 12,352,529	\$ 3,753,926	\$ 13,831,731

- q County tax account database, growth trends reconciled to Md. National Capital Park & Planning Commission (MNCPPC) projections.
- r 1 GAU = 2000 sq. ft. improved property. NA for < \$5,000 improvement. State tax account data, inflated by MNCPPC employment.
- s Curbside recycling collection & processing costs net of material sales, outreach, household haz. waste, and recycling volunteers.
- t Recyclable Materials processing costs net of material sales revenue, outreach and education.
- u Recyclable Materials processing costs net of material sales revenue, outreach and education, commercial hazardous waste disposal.
- v Sector-specific contribution to (draw from) the rate Stabilization Reserve.
- w Sector share (tonnage proportional) of the yard waste composting facility operation, net of revenue.
- x Same as g, but without municipal households

- a Does not include cost of maintaining closed landfill, which costs are paid from Landfill Post Closure Reserves (GASB18)
- b Current Receipts to fund solid waste projects financed by County's Long Term Capital Improvements Program (CIP)
- c Toward unplanned research and capital needs contingencies
- d Amount that GASB 18 does not permit to be reserved for landfill post closure costs (inflation).
- e Revenue from recyclables materials sold into secondary markets
- f From fees charged to accept yard trim, waste delivered in open top roll-off boxes, licence fees & rent, and misc. revenue
- g Pooled and non-pooled investment income as determined by the County Department of Finance
- h Sum of sector-specific rate stabilization contributions (see also note v)
- i Non-sector-specific contribution to (draw) to adjust overall fund balance
- j To pay for composting leaves collected by leaf vacuuming services (separate sub-fund)
- k Charge to fund balance to account for non-chargeable refuse deliveries (e.g. <500 lb loads per SS 48-32(c)(2) & MRF residue)

l Revenue from Incremental System Benefit Charges

m Single-family detached, townhouse, and multifamily dwellings in buildings comprised of 6 or fewer dwellings

n Based on County's annual materials flow analysis.

o (n) x (BASE SYSTEM COSTS)

p Projected amount of tipping fee revenues to offset calculated bases costs.

q County tax account database, growth trends reconciled to Md. National Capital Park & Planning Commission (MNCPPC) projections.

r 1 GAFU = 2000 sq. ft. improved property. NA for < \$5,000 improvement. State tax account data, inflated by MNCPPC employment.

s Curbside recycling collection & processing costs net of material sales, outreach, household haz. waste, and recycling volunteers.

t Recyclable Materials processing costs net of material sales revenue, outreach and education.

u Recyclable Materials processing costs net of material sales revenue, outreach and education, commercial hazardous waste disposal.

v Sector-specific contribution to (draw from) the rate Stabilization Reserve.

w Sector share (tonnage proportional) of the yard waste composting facility operation, net of revenue.

x Same as g, but without municipal households

653,480	Non-Residential Waste Generated (tons)
(26,787)	Open-top (C&D) portion of above (not considered MSW, which BSBC must cover)
626,693	
12,916,418	
20.61	

FY16 Full-Cost Recovery Tipping Fee (e.g. as may be applied to Out-of-Jurisdiction Waste)

51,441,965	BASE SYSTEM COSTS (to be recovered by Tipping and Disposal Fees Disposal and Base System Benefit Charges)
(3,016,849)	Fund Contribution for Small Loads (e.g. <500 lbs) Not charged Tipping Fees
48,425,115	Base System Costs net of Scheduled Fund Contribution for small loads
597,309	Tons for which Tipping Fees or Disposal Fees will be Charged

Resolution No.: _____
Introduced: _____
Adopted: _____

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: Council President at the request of the County Executive

SUBJECT: Solid Waste Service Charges

Background

1. Under County Code Section 48-31, each fiscal year the County Council must, by resolution, set the base solid waste charges, the residential system benefit charges, and the nonresidential system benefits charges and all other solid waste service, collection, and disposal charges and fees.
2. Under County Code Section 48-8A(b)(1), the County Council must set, each fiscal year by resolution, the rates for the residential and nonresidential systems benefit charges.
3. Under County Code Section 48-47(c)(1) and (2), the County has established a Leaf Recycling Service Area in which special fees are charged for leaf recycling services.
4. On March 16, 2015, the County Executive recommended, effective July 1, 2015, solid waste charges including residential Base Systems Benefit Charges which, when multiplied by the generation rates (set by Executive Regulation 7-15), yield household charges for FY 2016:

Refuse Collection Charge:

For single-family households and dwellings in buildings with six or fewer dwelling units located within Sub-district A, the Solid Waste Refuse Collection District:

Once weekly refuse collection charge \$70.00 / Household

Disposal Fee (Applies to All Single-Family Households and Dwellings in Buildings Comprised of Six or Fewer Dwelling Units Outside of Municipalities)

Disposal fee (tip fee * tons disposed per household) $\$56.00 \times 0.87054 =$
 $\$48.75 / \text{Household}$

Systems Benefit Charges for Single-Family Households and Dwellings in Buildings Comprised of Six or Fewer Dwelling Units:

Base Systems Benefit Charges =

Base costs / Ton x Generation / Household - Offset from Disposal Fees:
 $\$40.933 / \text{Ton} \times 1.9405 \text{ Ton} / \text{Household (ER 7-15)} - \$48.75 / \text{Household} =$
 $\$30.68 / \text{Household}$

Incremental Systems Benefit Charges =

Charge Rate (\$ / Ton Waste Generated) x Generation / Household:
 $\$64.7668 \times 1.9405 = \$125.68 / \text{Household}$

Systems Benefit Charges for Multi-Family Properties in Buildings Comprised of Seven or Greater Dwelling Units (Charge per Dwelling Unit):

Base Systems Benefit Charges =

Base Cost / Ton x Tons Generated / Dwelling - Tip Fee Offsets
 $\$40.933 / \text{Ton} \times 0.8863 \text{ Ton} / \text{Dwelling (ER 3-13)} - \$29.81 / \text{Dwelling} =$
 $\$6.47 / \text{Dwelling}$

Incremental Systems Benefit Charges =

Charge Rate (\$/Ton Waste Generated) x Generation / Dwelling:
 $\$10.8203 \times 0.8863 = \$9.59 / \text{Dwelling}$

Total multi-family Systems Benefit Charges on property bill \$ 16.06 / Dwelling

Nonresidential Properties:

Base and Incremental System Benefit Charge rates by waste generation category per billable unit of 2,000 square feet of gross floor area of property improvement on real property as reported by the State Department of Assessments and Taxation:

<u>Generator Category</u>	<u>Base (\$/GFA Unit)</u>	<u>Incremental (\$/GFA Unit)</u>	<u>Total (\$/GFA Unit)</u>
Low	\$ 78.48	\$ 40.75	\$ 119.23
Medium Low	\$ 235.42	\$ 122.25	\$ 357.67
Medium	\$ 392.37	\$ 203.76	\$ 596.13
Medium High	\$ 549.31	\$ 285.26	\$ 834.57
High	\$ 706.26	\$ 366.76	\$1,073.02

Base Solid Waste Charges per ton for solid waste:

Refuse received at the Transfer Station (weighing > 500 pounds/load)	\$ 56.00
Refuse received at the Transfer Station (weighing 500 pounds/load or less)	\$ 0.00
Materials delivered for disposal in open-top roll-off boxes	\$ 66.00
Yard Trim received at the Transfer Station (weighing >500 pounds/load)	\$ 46.00
Yard Trim received at the Transfer Station (weighing 500 pounds/load or less)	\$ 0.00
Scrap metal delivered to the Transfer Station	\$ 0.00
Recyclable paper received at the County's Recycling Center	\$ 0.00
Commingled containers received at the County's Recycling Center	\$ 0.00
Source separated recyclable materials dropped off at the recycling drop-off area of the Transfer Station	\$ 0.00

Leaf Vacuuming charge in the Leaf Recycling Service Area:

Single-family Household	\$ 88.91
Multi-family Residential Unit	\$ 3.54

Action

The County Council approves the above solid waste charges, effective July 1, 2014.

This is a correct copy of Council action.

Linda M. Lauer, Clerk of the Council

Env. + Energy



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CC
SOF
LL

2015 APR -3 AM 8:45

SOLID WASTE ADVISORY COMMITTEE

March 27, 2015

RECEIVED
MONTGOMERY COUNTY
COUNCIL

The Honorable George Leventhal
President
Montgomery County Council
100 Maryland Avenue
Rockville, Maryland 20850

Dear Mr. Leventhal:

The Montgomery County Solid Waste Advisory Committee appreciates this opportunity to comment on the County Executive's Recommended FY16 Operating Budget for the Department of Environmental Protection's Division of Solid Waste Services.

We acknowledge that the County Council again faces some tough choices, but urge you to approve the County Executive's request for funding of the Division of Solid Waste Services. As you know, the Division has exceeded the County's former goal of recycling 50% of the total waste stream, and is approaching 60%. The Division is now working toward achieving the County's new goal of 70 % by 2020 through a combination of raising recycling rates in the multi-family and business sectors through targeted outreach and finding ways to safely and economically recycle additional materials. For example, food waste represents an opportunity to increase the recycling rate significantly. In 2013, the Division determined that food waste, at 141,000 tons per year, made up over one-third of the waste stream. The Division is currently running a successful pilot program to bring food composting to Montgomery County.

In sum, we urge the County Council to approve the County Executive's Recommended FY16 Operating Budget for the Division of Solid Waste Services as submitted. The Solid Waste Advisory Committee believes that in doing so the County creates the conditions for sustainable growth necessary to meet the increasing need and demand for solid waste services.

Sincerely,

Paula Jenson (initials)

Paula Jenson
Chair, Solid Waste Advisory Committee

cc: Isiah Leggett, County Executive
Lisa Feldt, Director, DEP
Daniel Locke, Division Chief, DSWS

ATTACHMENT A

Gude Landfill Remediation



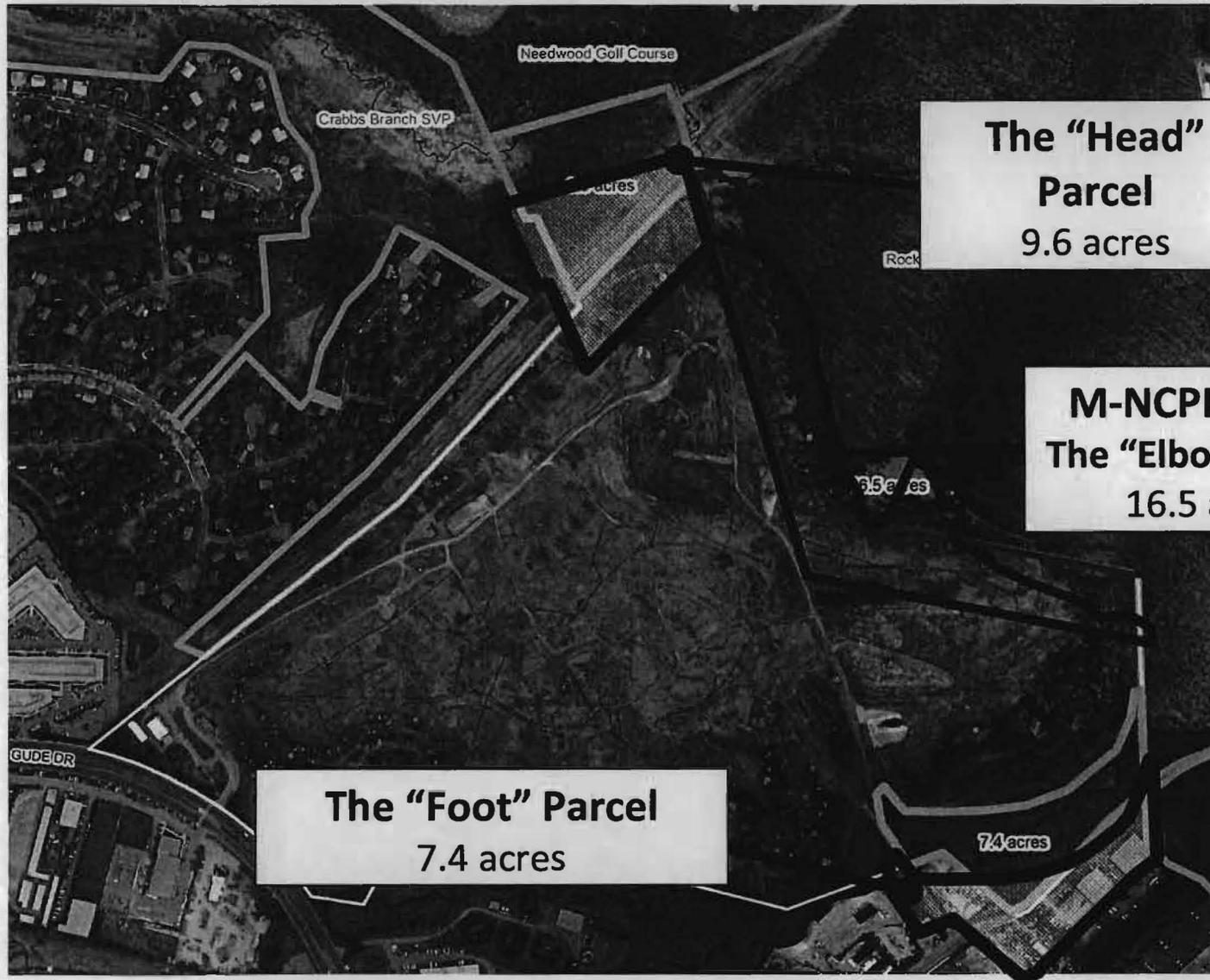
Gude Landfill Background

- Landfill active from: 1964-1982, encompasses 120 acres with approximately 4.8 million tons of waste
- Landfill was closed under an Emergency Health Order: 1977-1984
- DEP performs Post-Closure Care Maintenance: 1984-present
 - Water quality monitoring, landfill gas management/monitoring, stormwater management and other site inspections
- WSSC supplies potable water for adjacent property owners
- Original Landfill Gas to Energy Plant operated 1985 – 2005
- Ground Flares were installed in 2005 to manage gas after original power plant closed
- In 2008, the State (i.e. MDE) directed DEP to perform a Nature and Extent Study to characterize groundwater and other environmental contamination at the site
- New Smaller Landfill Gas-to-Energy Plant - 2009 to present
- Waste Delineation Study – 2009-2010
 - Waste found approx. 250 feet beyond Landfill boundary
 - Land exchange with M-NCPPC for ~ 17 acre transfer
- Nature and Extent Investigation (NEI) completed in 2011 indicated that while there is low level environmental contamination, there are no public health concerns, i.e., there are no complete exposure pathways that present a risk to public health

Gude Landfill Background (continued)

- **Consent Order signed with MDE requiring remediation of environmental contamination in 2013**
- **The County Executive met with the Gude Landfill Concerned Citizens (GLCC) and DEP in December 2013 and developed a remediation recommendation consistent with the GLCC recommendation**
- **Land swap approved in 2014 with M-NCPPC to obtain land where trash was placed beyond the County property**
- **DEP submitted the Assessment of Corrective Measures report to MDE in January 2014 outlining remediation options and making a recommendation**
- **MDE provided comments to DEP on the ACM report in March 2015**
- **Remediation will address widespread low level Volatile Organic Compound (VOC) contamination in groundwater, gas migration and leachate seeps into surface water runoff**
- **Remediation 2017 – 2037 (projected timeline)**

Land Swap with M-NCPPC



The "Head" Parcel
9.6 acres

M-NCPPC Land
The "Elbow" Parcel
16.5 acres

The "Foot" Parcel
7.4 acres

Remedial Action Objectives:

- **Groundwater:** EPA's drinking water maximum contaminant levels (MCLs) will not be exceeded in the groundwater at the Gude Landfill property boundary
- **Landfill Gas (LFG):** Methane will not exceed lower explosive limit (LEL) at the Gude Landfill property boundary
- **Leachate:** No non-storm water discharges (leachate) will occur to waters of the State



Potential Corrective Measure Alternatives Considered in the ACM Report

- Waste Relocation
- Phytoremediation
- Bioremediation
- Monitored Natural Attenuation (MNA)
- Landfill Capping
- In-situ Permeable Barriers
- Impermeable Barriers
- Pump and Treat

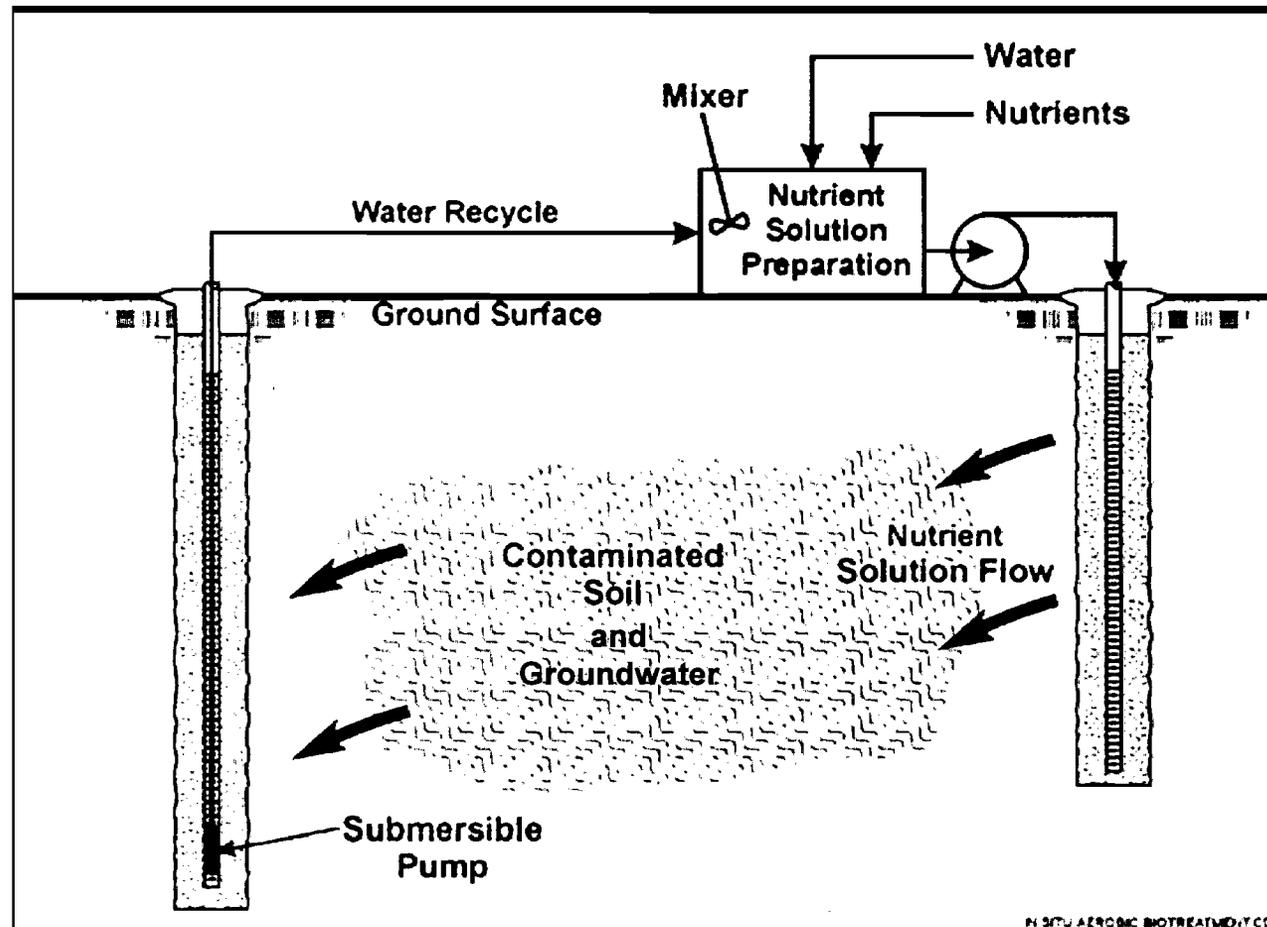
The Complete Recommended Approach to Remediation at Gude Landfill

- **Enhanced Bioremediation – to meet groundwater RAO**
- **Cover System Improvements – to meet leachate RAO**
- **Additional Landfill Gas Collection – to meet LFG RAO**

Recommended Alternative 5 - Bioremediation

- **Underground injection of nutrients and/or electron donors/acceptors to stimulate microorganism activity to degrade and reduce contaminants**
 - **Food-grade substrate: vegetable oil, sodium lactate or molasses**
- **Effective for chlorinated compounds such as PCE, TCE, DCE and VC found at Gude Landfill**

What is Bioremediation?

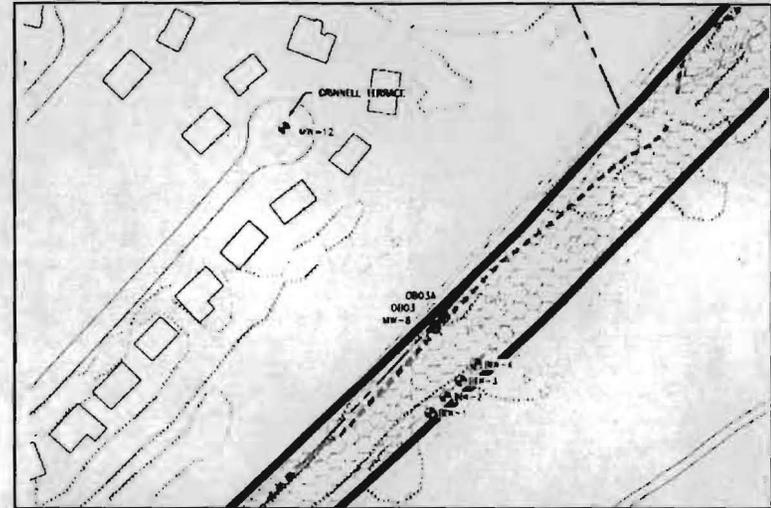


How does bioremediation apply to the Gude Landfill?

- **Injection of nutrients and/or electron donors/acceptors along the property boundary and other areas of the site could reduce concentrations of chlorinated compounds to less than the MCL**

Injection Wells

- Installation of injection wells through waste.
- The proposed injection well spacing is estimated to be 30 feet. The wells will be installed approximately 100 feet from the property boundary.
- Final spacing will be determined after site investigations and pilot testing.



MDE's March 2015 Comments on the ACM Report

- **MDE would like further investigations into the presence of metals using improved sampling methods. If metals are still present above MCLs, MDE will require that they be addressed in the ACM report.**
- **MDE would like the County to further substantiate the assumption in the ACM report that waste is in contact with groundwater.**
- **MDE would like the County to demonstrate that there is positive drainage off all surface areas of the landfill.**
- **MDE would like the County to include a more specific contingency plan in the ACM report.**
- **Note: MDE requested revisions to the ACM report could take 6-12 months to complete due to requirements for additional field work and sampling.**

Gude Landfill ACM Alternative 5 Anticipated Implementation Schedule¹

Project Phase	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8				Year 9				Year 10				Year 11				Year 12			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Procurement/Contracting Activities for Phase I	[Shaded]																																															
Phase I: Enhanced Bioremediation Small Scale Approach	[Shaded]																																															
Step 1 - Field Investigations in NW Portion	[Shaded]																																															
Step 2 - Bioremediation Design and Installation in NW Portion	[Shaded]																																															
Step 3 - Operation, Maintenance, and Monitoring in NW Portion	[Shaded]																																															
Cover System Improvements and Landfill Gas Collection	[Shaded]																																															
Procurement/Contracting Activities for Phase II	[Shaded]																																															
Phase II: Enhanced Bioremediation Full Scale Approach	[Shaded]																																															
Enhanced Bioremediation South Portion	[Shaded]																																															
Enhanced Bioremediation SW Portion	[Shaded]																																															
Enhanced Bioremediation West Portion	[Shaded]																																															
Enhanced Bioremediation SE Portion	[Shaded]																																															
Enhanced Bioremediation Operation and Maintenance ²	[Shaded]																																															

Gude Landfill ACM Alternative 5 Estimated Project Costs³

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Enhanced Bioremediation - Phase I (Small Scale)⁴	\$548,000	\$469,000	\$186,000	\$186,000	\$186,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Cost	\$548,000	\$322,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operation and Maintenance Cost	\$0	\$147,000	\$186,000	\$186,000	\$186,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Enhanced Bioremediation - Phase II (Full Scale)⁵	\$0	\$0	\$0	\$0	\$298,000	\$941,000	\$1,350,000	\$2,009,000	\$2,596,000	\$2,600,000	\$2,450,000	\$2,378,000
Capital Cost	\$0	\$0	\$0	\$0	\$298,000	\$755,000	\$1,038,000	\$1,329,000	\$1,585,000	\$991,000	\$243,000	\$0
Operation and Maintenance Cost	\$0	\$0	\$0	\$0	\$0	\$186,000	\$312,000	\$680,000	\$1,011,000	\$1,609,000	\$2,207,000	\$2,378,000
Cover System Improvements	\$198,000	\$175,000	\$690,000	\$394,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Cost	\$198,000	\$175,000	\$690,000	\$394,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operation and Maintenance Cost ⁶	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Landfill Gas Collection	\$0	\$112,000	\$214,000	\$152,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Cost	\$0	\$112,000	\$214,000	\$152,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operation and Maintenance Cost ⁶	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Cost	\$746,000	\$609,000	\$904,000	\$546,000	\$298,000	\$755,000	\$1,038,000	\$1,329,000	\$1,585,000	\$991,000	\$243,000	\$0
Total Operation and Maintenance Cost	\$0	\$147,000	\$186,000	\$186,000	\$186,000	\$186,000	\$312,000	\$680,000	\$1,011,000	\$1,609,000	\$2,207,000	\$2,378,000
Total Annual Cost	\$746,000	\$756,000	\$1,090,000	\$732,000	\$484,000	\$941,000	\$1,350,000	\$2,009,000	\$2,596,000	\$2,600,000	\$2,450,000	\$2,378,000

¹Based on expected project schedule at this time, Year 1 is likely to be the County's Fiscal Year 2016.

²Operation and maintenance (O&M) for enhanced bioremediation will last until the RAO for groundwater is met (likely beyond Year 12).

³All costs are shown in 2013 dollars.

⁴Costs to design and implement enhanced bioremediation on a small scale (pilot study) on the NW portion of the Landfill.

⁵Costs to design and implement enhanced bioremediation on a full scale on the NW, South, SW, West and SE portions of the Landfill.

⁶O&M costs for Landfill Gas Collection and Cover System Improvements beyond current O&M activities at the Landfill are expected to be minimal and are therefore not included in this cost estimate.

(39)