

T&E Committee #2
April 29, 2014

Worksession

MEMORANDUM

April 25, 2014

TO: Transportation, Infrastructure, Energy & Environment Committee

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY15 Operating Budget:** Department of Environmental Protection (DEP)-Division of Solid Waste Services Operating Budget and FY15 Solid Waste Charges

Budget Summary

- The CE recommends that overall Solid Waste charges for single-family, multi-family, and non-residential property owners remain unchanged from FY14.
- The CE recommends keeping Transfer Station Tipping Fees at FY14 levels. Note: the yard trim fee structure is recommended to change (see Solid Waste Charges section of this memorandum for details).
- The Solid Waste Collection Fund Budget is recommended to increase by 3.8 percent, mostly due to increases in refuse collection contract costs.
- The Solid Waste Disposal Fund Budget is recommended to increase by 8.3 percent. The largest increases are for RRF debt service, equipment replacement, contract cost increases, and technical adjustments.

Council Staff Recommendation:

- Approve the DEP-Division of Solid Waste Services FY15 Operating Budget as recommended by the County Executive.
- Approve the FY15 Solid Waste charges as recommended by the County Executive. NOTE: The net impact of the various changes in charges is that overall rates for customers remain unchanged.

Attachments to this memorandum include:

- DSWS Excerpt from the County Executive's FY14 Recommended Budget (©1-17)
- Material Flow Diagram Fiscal Year 2013 (©18)
- FY13 Waste Composition Study Summary Table: Waste Recycling by Material Type (©19)
- Solid Waste System Disposal Fund, Rate Setting Methodology (FY15) (©20-21)
- Resolution to Approve FY15 Solid Waste Service Charges (©22-25)
- Solid Waste Advisory Committee Comments on the FY15 Recommended Budget (©26)
- Gude Drive Landfill Remediation Presentation (©27-41)

The following Executive Staff are expected to attend the Committee worksession:

- Bob Hoyt, Director, DEP
- Kathleen Boucher, Chief Operating Officer, DEP
- Dan Locke, Chief, Division of Solid Waste Services (DSWS)
- 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)
- Matt Schaeffer, Management and Budget Specialist, OMB

OVERVIEW

Expenditure Summary

For FY15, the Executive recommends total expenditures of \$109.5 million for the Division of Solid Waste Services, an \$8.2 million increase (8.1%) from the FY14 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 FY13	Approved FY14	Rec FY15	Change from FY14	
				\$\$\$	%
Personnel Costs	10,177,210	10,366,175	10,824,607	458,432	4.4%
Operating Expenses	94,284,890	90,567,567	96,858,283	6,290,716	6.9%
Capital Outlay	-	428,829	1,857,206	1,428,377	333.1%
Total	104,462,100	101,362,571	109,540,096	8,177,525	8.1%
Full-Time Positions	79	79	79	-	0.0%
Part-Time Positions	-	-	1	1	n/a
Workyears/FTEs	103.4	102.2	103.0	0.8	0.8%

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 FY15, DSWS' recommended position complement is 79 full time positions and one part time position (a change of .8 FTEs from FY14 (one part-time position)).

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.

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 and have been slow to return to pre-downturn conditions.

The most recent (FY13 actual) Materials Flow Diagram 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 FY15: 578,000 tons (an increase of about 28,000 tons over what is projected for FY14). 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, and tonnages have not returned to prior levels yet. Table 2 (below) shows the RRF tonnage throughput calculation from the FY12 actual through the FY15 projection.

Table #2
Resource Recovery Facility (RRF) Throughput Assumptions

	FY12 Actual		FY13 Actual		FY14 Projected		FY15 Projected	
	% of MSW	Tons	% of MSW	Tons	% of MSW	Tons	% of MSW	Tons
Total Municipal Solid Waste (MSW) (in tons)*		1,066,674		1,095,149		1,117,362		1,128,979
Recycling Rate/Tons	42.7%	455,761	41.0%	449,374	44.2%	494,225	45.5%	513,761
Exportation Rate/Tons	14.8%	158,337	15.6%	171,171	13.1%	146,786	9.9%	111,391
Processible Waste to RRF	42.4%	452,439	43.3%	474,604	42.6%	476,351	44.6%	503,827
addback metals from ash (counted in recycling)	1.3%	13,463	0.8%	8,695	0.9%	10,285	1.0%	10,809
Total RRF MSW Burned	43.7%	465,902	44.1%	483,299	43.6%	486,635	45.6%	514,636
Construction/Demotion Debris (C/D) Burned		74,742		63,364		63,364		63,364
Total RRF Throughput (MSW+C/D)		540,644		546,663		549,999		578,000
% of permit level (permit level = 657,000)		82.3%		83.2%		83.7%		88.0%

*MSW actuals do not include C/D. FY14 and beyond numbers do not break out C/D from MSW.

Recycling Rate

The County’s long-time recycling goal for many years had been to recycle 50 percent of our municipal solid waste by 2010. While that goal was not achieved, the County’s recycling numbers stack 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 recycling 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 RRF that is ultimately recycled is now included in the recycling rate.

- The County had previously used estimates of source reduction, but is now using the State's percentage credit (up to 5%) and includes this credit in the overall recycling rate calculation, making the County's recycling rate consistent with the State's waste diversion rate.

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

Table #3 below shows recycling rates (under the new methodology) by sector from FY12 actuals through FY20 projections. The recent economic downturn resulted in reduced trash volumes and recycled materials volumes and also in a reduction in the demand and price for recycled materials.

**Table #3
County Recycling Rate**

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

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

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

DSWS estimates that under current strategies, the diversion rate (including ash and the source reduction credit) will rise to about 70.5% by 2020.

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. A summary chart from this study is attached on ©19. Non-residential recycling and food waste recycling continue to be two areas of opportunity for increasing the recycling rate.

DSWS implemented a one-year food waste composting pilot project at the Executive Office Building in November 2011 and has continued the program beyond the initial pilot period. DSWS estimates that, each month, approximately 1.3 tons of food waste is diverted from the waste stream (a total of 39 tons of pre-consumer food scraps have been diverted since the project began). DSWS plans to continue this effort in FY15, noting:

“As a result of conducting this program, we have gained valuable first-hand expertise, developed best practices, and created educational materials. We have used the demonstration project to showcase what a successful food scrap recycling program entails and looks like to other businesses and organizations, so that they can emulate this success as well. We plan to continue the demonstration project in FY15, and broaden our efforts to assist an additional 150 – 200 businesses and organizations in their efforts to start food scrap recycling programs to facilitate the implementation of food scraps recycling programs. Based on the County Executive's recommendation, DEP will continue to search

for regional food waste composting facilities that could accept material from Montgomery County.”

DSWS is requesting \$61,500 for FY15 to provide “food waste starter kits.” DSWS noted that this will:

“provide food scrap recycling bins/containers/carts in a variety of capacity sizes and shapes, matching lids for all bins/containers, casters/wheels/racks with wheels and/or dollies, as well as compostable bags to use as food scrap container liners to 150 – 200 businesses that we will assist to set-up a successful food scrap recycling program. We expect those larger generators to need larger quantities of the containers in the larger sizes and in greater variety of sizes, along with matching caster/wheels/racks, biodegradable liners, etc.”

One major issue that must be addressed before there can be a major expansion in food waste recycling is the general lack of capacity of acceptance facilities in the State of Maryland for food waste. DSWS cannot utilize its existing compost facility because the facility was not designed or permitted to handle food waste and is nearly at capacity for its yard trim composting. Therefore, the County’s food waste must go elsewhere. Currently the food waste is sent to a facility in Prince William County, Virginia. DSWS continues to work with the Maryland Department of the Environment (which is developing food waste acceptance facility regulations) as well as the Metropolitan Washington Council of Governments on the broader issue of regional capacity for food waste recycling.

The Solid Waste Advisory Committee’s (SWAC) comments on the FY14 Recommended Budget are attached on ©26. SWAC is supportive of the FY15 Solid Waste budget, especially with regard to the DSWS food waste recycling pilot, which it notes resulted in 35 tons of material taken out of the waste stream.

Compost Facility

Compost Facility Tonnage for FY15: 65,637 tons (a significant decrease from the original FY14 tonnage projection from last year of 72,827 tons). However, FY14 tonnage is down substantially from the original projection (now expected to be 64,936).

The operating limit (based on an agreement with the Sugarloaf Citizens Association) is 77,000 tons per year. Three 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.”

The yard trim tipping fee is recommended to remain unchanged at \$46 per ton for FY15, although the County Executive is recommending changing the yard trim fee structure, charging all yard trim loads in excess of 500 pounds (whether residential or commercial) the \$46 per ton fee and not charging for any yard trim loads (whether residential or commercial) under 500 pounds. (See discussion later in this memorandum).

Although tonnages are down, the Compost Facility program itself is increasing substantially (about \$1.1 million or 32 percent). However, most of this increase results from a net increase in

equipment replacement purchase costs in FY15 compared to FY14, mandatory contract cost increases, and technical adjustments.

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 FY13	Approved FY14	Rec FY15	Change from FY14 \$\$\$	%
Personnel Costs	1,232,029	1,200,024	1,252,597	52,573	4.4%
Operating Expenses	4,671,140	4,979,950	5,162,238	182,288	3.7%
Capital Outlay			-	-	
Total	5,903,169	6,179,974	6,414,835	234,861	3.8%
Full-Time Positions	74	4	4	-	0.0%
Part-Time Positions				-	n/a
Workyears/FTEs	92.20	10.43	10.59	0.16	1.5%

The bulk of costs in this fund are for residential refuse collection within Subdistrict A.¹ DSWS currently has 3 contractors under eight contracts (one for each service area in Subdistrict A) at an estimated cost of \$4.8 million in FY15.

Solid Waste Collection Fund expenditures are recommended to increase by 3.8 percent (\$234,861). Most of the cost increase (\$200,673) is related to increases in refuse collection contract costs (related to anticipated CPI increases in contracts and house counts).² The rest of the increases are technical adjustments (including compensation and benefit adjustments and chargeback costs). All of these changes are presented on ©10. No changes in service levels are assumed. The slight FTE increase results from technical adjustments.

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

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.

² The issue of employees of some haulers seeking health insurance coverage from their employer does not affect the Solid Waste budget at this time, since the haulers are all under long-term contracts of 7 years with option years. The oldest contract is only two years old. The contract provisions allow for CPI type adjustments, but not adjustments for other cost increases a hauler may experience (such as new health insurance costs for employees of haulers).

SOLID WASTE DISPOSAL FUND EXPENDITURES

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

	Actual FY13	Approved FY14	Rec FY15	Change from FY14 \$\$\$	%
Personnel Costs	8,945,181	9,166,151	9,572,010	405,859	4.4%
Operating Expenses	89,613,750	85,587,617	91,696,045	6,108,428	7.1%
Capital Outlay	-	428,829	1,857,206	1,428,377	-
Total	98,558,931	95,182,597	103,125,261	7,942,664	8.3%
Full-Time Positions	5	75	75	-	0.0%
Part-Time Positions	0	0	1	1	n/a
Workyears/FTEs	11.19	91.78	92.42	0.64	0.7%

Solid Waste Disposal Fund expenditures are recommended to increase by 8.3 percent (\$7.9 million). This increase comes after a decrease in FY14 of 6.9 percent (\$7.06 million) from FY13. 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 ©10-11 (see the “FY15 Recommended Changes” section from the Executive’s Recommended Operating Budget.) Some of the major items are discussed below.

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 (mainly for equipment replacements and studies) are also removed.

Resource Recovery Facility & Related Waste Transfer

This is the biggest program in the Solid Waste budget (over 40 percent of the total). The following chart breaks out the major cost changes in this program. Overall, program expenditures are up about \$4 million from FY14.

**Table #6
RRF Program Costs**

	FY14 Approved	Rec FY15	Change
NEA Direct Costs and Fees	444,607	281,281	(163,326)
Net Debt Service	22,889,834	25,945,775	3,055,941
Operating Contract	26,806,185	26,846,560	40,375
Non-Processible Waste	57,469	19,896	(37,573)
Waste Processed >558,450 tons	-	603,075	603,075
Rail Engine Service Fee and Refunds	2,942,439	3,078,131	135,692
Air: Emission Reagents, Testing, Fees	2,735,084	2,867,147	132,063
Ash Handling and Testing	(759,000)	(770,469)	(11,469)
Insurance, Utilities, Sales & Prop Tax	666,558	1,049,846	383,288
Miscellaneous O&M	1,085,431	1,102,981	17,550
Electric Sales Revenue	(16,273,189)	(16,308,318)	(35,129)
Recycled Ferrous Revenue	(545,105)	(706,172)	(161,067)
Operating Contract Total	40,050,313	44,009,733	3,959,420
			-
Charges from Risk Management	727,503	744,963	17,460
Other Miscellaneous	264,394	271,533	7,139
Totals	41,042,210	45,026,229	3,984,019

Some highlights of these changes include:

- Debt service costs are based on a set amortization schedule. Based on this schedule, debt service dropped substantially in FY14 (by \$3.2 million) and will increase in FY15 by \$3.1 million, and then decline again (by \$4.5 million) in FY16. All debt service payments will end after March 2016.
- Because waste volumes in FY15 are expected to exceed 558,340 tons, the County will pay some additional costs per ton above that threshold (total of \$603,075 projected), consistent with the County's service contract for the RRF.
- Most other expense categories are seeing only slight increases or decreases from FY14.
- NOTE: Electric sales revenue is reflected as a negative (an offset to expenditures) in this program.

Residential Recycling Collection

DSWS contracts with haulers to provide curbside recycling collection for all unincorporated areas of the County (both in Subdistricts A and B). This program is the second largest program in the Solid Waste budget (behind the RRF). For FY15, \$17.7 million is budgeted for contracts with three haulers. Costs are up about \$570,000 over FY14 contracts due to house counts and CPI adjustments.

Gude Landfill

For background on this issue, DSWS staff prepared a slide presentation attached on ©27-41. The County has spent approximately \$1.3 million on this effort since 2009.

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 and expects to begin remediation work in FY16. 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.

Costs are expected to be \$746,000 in FY16 and about \$3.8 million through FY20. 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.”

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 ©16 for descriptions of the different charges). Solid waste charges are established through an annual Council resolution (introduced on April 1 and attached on ©22-25). The Council is tentatively scheduled to take action on the solid waste charges on May 14.

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 ©14.

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 FY14 approved and FY15 recommended charges are presented below:

**Table #7
Solid Waste Charges (FY14 and FY15)**

Charge	Approved FY14	CE Rec. FY15	Percent Change
SINGLE FAMILY			
Base Systems Benefit Charge	\$37.41	\$38.11	1.9%
Incremental Systems Benefit Charge	\$129.39	\$128.37	-0.8%
Disposal Fee	\$46.95	\$47.27	0.7%
Leaf Vacuuming Charge	\$88.91	\$88.91	0.0%
Refuse Collection Charge	\$66.00	\$66.00	0.0%
Total Charges, Households Receiving:			
Recycling Collection Only	\$213.75	\$213.75	0.0%
Recycling and Leaf Collection	\$302.66	\$302.66	0.0%
Recycling and Refuse Collection	\$279.75	\$279.75	0.0%
Recycling, Leaf and Refuse Collection	\$368.66	\$368.66	0.0%
MULTI-FAMILY			
Base Systems Benefit Charge	\$18.31	\$8.80	-51.9%
Incremental Systems Benefit Charge	-\$1.580	\$7.93	-601.9%
Leaf Vacuuming Charge	\$3.54	\$3.54	0.0%
Total Charges			
Units inside Leaf Vacuuming District	\$20.27	\$20.27	0.0%
Units outside Leaf Vacuuming District	\$16.73	\$16.73	0.0%
NONRESIDENTIAL			
(by waste generation category per 2,000 sq. feet of gross floor area)			
Low	\$124.24	\$124.24	0.0%
Medium Low	\$372.72	\$372.72	0.0%
Medium	\$621.21	\$621.21	0.0%
Medium High	\$869.69	\$869.69	0.0%
High	\$1,118.18	\$1,118.18	0.0%
TIPPING FEES			
Refuse (weighing >500 lbs per load)	\$56.00	\$56.00	0.0%
Refuse (weighing <500 lbs per load)	\$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)	\$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 FY15, base system costs are estimated at \$56.9 million (an increase of \$0.8 million from the FY14 approved amount of \$56.1 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 FY15, incremental systems benefit costs are estimated at \$31.4 million (an increase of \$2.3 million from the FY14 approved amount of \$29.1 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 FY15, single-family properties and multi-family properties are recommended to be charged the same overall rates as in FY14.

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 remain unchanged from FY14. Last year, these charges were increased by 5.3 percent for FY14, primarily because of the increased share of waste generation assumed for the non-residential sector (from 52 percent to 53.2 percent). The non-residential share is going up again for FY15 (from 53.2 percent to 53.9 percent), although less than the increase last year. However, Solid Waste's rate model shows that, while base system benefit charges are going up to cover costs, the incremental system benefit charges are going down and fully offset that increase.

3. Refuse Disposal Tip Fees

The tip fee is the per ton fee charged businesses, institutions, and residents that dispose 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” and commercial yard trim were increased three years ago (from \$60 to \$66 per ton and \$40 to \$46 per ton respectively). No increases were approved in FY13 or FY14. 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.

For FY15, the Executive is not recommending any increase or decrease in the tip fees. However, the Executive is recommending modifying how yard trim is to be charged. Currently, residential yard trim (no matter the total weight) is free. Commercial yard trim (with no minimum weight) is charged at \$46 per ton. The Executive is recommending (similar to the current practice for refuse) 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.

DSWS provided the following rationale for the recommended change:

“Currently, for Commercial Yard Trim there is a charge of \$46.00 per ton for yard trim delivered to the Transfer Station; and for Residential Yard Trim the County provides curbside recycling services (this includes yard trim pick-up) to all non-municipal single-family properties. This service is part of the incremental systems benefit charge, paid by all sectors via the tax bill. There are other services included in this charge. Residents can also bring yard trim to the Transfer Station and not be charged (\$0 charge).

We are requesting the ability to charge \$46.00 per ton for all loads over 500 pounds of yard trim delivered to the Transfer Station (both Commercial and Residential). Charging for all loads over 500 pounds is a more equitable approach to businesses and residents, and helps with the enforcement of commercial landscapers presenting commercial yard trim loads as self-hauled residential loads. Over a two week sampling period – we averaged about three loads a day of residential yard trim being delivered to the Transfer Station weighing over 500lbs. We believe this change would affect approximately 1,000 residents annually. DEP offers curbside collection of yard waste, so really the only reason for residents to directly haul their material to the Transfer Station is if they have large diameter wood or long limbs too heavy and too difficult to prepare for curbside collection. The following may weigh over 500lbs: 30 bags of yard waste, or 20 craft bags, or a large bundle of six inch logs. This change will reduce confusion in distinguishing between commercial loads and residential loads and reduce the potential for the misrepresentation of the source of yard trim. There will be no minimum commercial yard waste charge, so commercial loads less than 500 lbs. which are currently charged a minimum fee will not be charged, but all loads over 500 lbs. will be charged. Furthermore, since charges are determined solely by the scale weights, implementing this policy will reduce confrontations between customers and scale house personnel.”

Council Staff believes the change is reasonable and should simplify the enforcement of the yard trim drop-off process at the transfer station.

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 proposes the same charge (\$66.00) as approved in FY13 and FY14. The FY13 charge reflected a \$4.00 decrease from FY12. This fee is paid by homeowners in Subdistrict A for once weekly refuse collection service by County contractors.

6. Leaf Vacuuming Charge

This program is managed by the Department of Transportation. 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 FY15, the charge is recommended to remain unchanged for both single-family homes and multi-family properties in the leaf vacuuming district.

Overall, the Executive is recommending no changes in what Solid Waste customers are currently paying, which is reflective of an FY15 Solid Waste budget request that includes modest incremental changes. Council Staff supports the FY15 Solid Waste charges as recommended by the Executive.

NOTE: In tandem with the Solid Waste charges resolution, the Executive transmits an Executive Regulation each year, setting residential waste estimates. The current regulation for FY15 was 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 FY15 Budget as recommended by the County Executive.**
- **Approve the FY15 Solid Waste Charges as recommended by the County Executive.**

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 FY15 Operating Budget for the Division of Solid Waste Services is \$109,540,096, an increase of \$8,177,525 or 8.1 percent from the FY14 Approved Budget of \$101,362,571. Personnel Costs comprise 9.9 percent of the budget for 79 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 90.1 percent of the FY15 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 FY14 estimates reflect funding based on the FY14 approved budget. The FY15 and FY16 figures are performance targets based on the FY15 recommended budget and funding for comparable service levels in FY16.

ACCOMPLISHMENTS AND INITIATIVES

- ◆ *Continue the multi-media program begun in FY14 to increase awareness of the County's recycling program and the updated County recycling goal of recycling 70% of materials in the waste stream.*
- ◆ *Continue supporting the County's food waste program by providing food waste starter kits to customers.*
- ◆ *Increase awareness of the County's scrap metal recycling program and other Solid Waste initiatives by installing additional signage on Collection trucks.*
- ◆ *Managed over 700,000 tons of materials in FY13 in accordance with safety and environmental requirements.*
- ◆ *Served approximately 2,000 customers per day delivering waste and recyclable materials to our facilities for proper recycling or disposal.*
- ◆ *Worked with Transfer Station and Recycling staff to launch an anti-litter campaign, identifying and assisting customers who transport refuse without a tarping cover.*
- ◆ *Continued to work with multiple non-profits to provide computers, bicycles, building supplies, books and other items to residents recommended through social service agencies, educational institutions, and people in need.*
- ◆ *In FY13, conducted seven (7) confidential paper shredding/recycling collection events throughout the County, serving 4,027 vehicles. A total of 101.6 tons of confidential paper and cardboard was collected for shredding and recycling on-site.*
- ◆ *Productivity Improvements*

- **Certification of the Dickerson Composting Facility's (DCF), Environmental Management System (EMS) as compliant with International Organization for Standardization (ISO) 14001. Reducing fossil fuel consumption is one of the program objectives of the DCF. Reduced diesel fuel use by approximately 9,000 gallons during FY13.**
- **Executive Regulation 7-12 sets a recycling goal for the County to recycle 70 percent of waste generated by 2020. The County has adopted the State of Maryland methodology per the Maryland Recycling Act to measure the County's recycling, and will include the Source Reduction Credit used to calculate the Waste Diversion Rate. According to Maryland Department of the Environment (MDE), the County's CY 2012 recycling rate is 54.81 percent. Solid Waste achieved the maximum allowable 5 percent source reduction credit awarded by MDE. The County's CY 2012 Waste Diversion Rate is 59.81 percent, the highest in the state.**
- **The Recycling Center now separates bulky rigid plastics and PET thermoform plastics. We have officially accepted bulky rigid plastics since September 2013 and PET thermoform plastics since June 2012. DEP anticipates approximately \$20,000 per year in revenue from bulky rigid plastics and \$28,000 per year in revenue from PET thermoform plastics.**
- **Continue efforts to coordinate and integrate whenever feasible the execution and completion of recycling outreach, education, training, and evaluation tasks to ensure that the maximum amount of recycling is achieved. Designed the majority of all artwork and other educational materials internally using InDesign software. Estimated savings for FY14 is approximately \$66,330.**
- **Identified markets through Maryland Environmental Service for used batteries, textiles, vegetable oil and bulky plastics which may increase commodity revenues by approximately \$100,000 per year.**

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 FY12	Actual FY13	Estimated FY14	Target FY15	Target FY16
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)	214	214	214	214	214

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	3,104,106	16.98
Increase Cost: FY15 Compensation Adjustment	375,008	0.00
Increase Cost: Retirement Adjustment	31,041	0.00
Increase Cost: General Office Support - Project Search Intern	27,685	0.50
Increase Cost: Group Insurance Adjustment	16,633	0.00
Increase Cost: Annualization of FY14 Personnel Costs	10,214	0.24
Decrease Cost: Miscellaneous operating expenses	-1,720	0.00
Decrease Cost: SWD Automation - computer repair expenses	-30,000	0.00
Decrease Cost: Charges from other departments	-53,682	-0.10
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	135,909	5.96
FY15 CE Recommended	3,615,194	23.58

Commercial Recycling and Waste Reduction

This program provides for mandatory commercial sector recycling and waste reduction and 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 not-for-profit organizations, as well as federal, state and local government facilities.

<i>FY15 Recommended Changes</i>	Expenditures	FTEs
FY14 Approved	2,002,080	10.50
Increase Cost: Food Waste Program - food waste starter kits	61,500	0.00
Decrease Cost: Commercial Recycling - general office expenses	-10,424	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.	-7,306	0.50
FY15 CE Recommended	2,045,850	11.00

Dickerson Compost Facility

This program includes all processing, transporting, composting, and marketing of yard trim received by the County, including leaves received via the Leaf Vacuuming Program. Processing includes grinding brush to produce mulch at the Transfer Station, as well as composting all leaves and grass at the County's Composting Facility in Dickerson. Transportation includes all shipping into and out of the Compost Facility. Leaves and grass, after processing at Dickerson, are sold as high-quality compost soil amendment in bulk and bags.

<i>FY15 Recommended Changes</i>	Expenditures	FTEs
FY14 Approved	3,494,789	1.15
Increase Cost: Equipment Replacement purchases	1,857,206	0.00
Increase Cost: Compost Facility - mandatory contractual increase	382,031	0.00
Increase Cost: Risk Management Adjustment	116,150	0.00
Decrease Cost: Elimination of One-Time Items Approved in FY14	-936,075	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.	-338,845	0.00
FY15 CE Recommended	4,575,256	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.

<i>FY15 Recommended Changes</i>	Expenditures	FTEs
FY14 Approved	92,356	0.57
Decrease Cost: Dickerson Master Plan - program expenses	-3,244	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.	4,940	0.00
FY15 CE Recommended	94,052	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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	1,263,412	1.31
Decrease Cost: Gude Landfill - remediation plan costs	-326,540	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.	-8,797	0.00
FY15 CE Recommended	928,075	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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	1,005,002	0.00
Increase Cost: Household Waste - contract cost	25,105	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.	-600	0.00
FY15 CE Recommended	1,029,507	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 or 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).

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	1,134,309	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.	30,617	0.00
FY15 CE Recommended	1,164,926	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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	1,467,256	1.52
Increase Cost: Oaks Landfill - increase cost of groundwater monitoring activities	28,757	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.	33,889	0.00
FY15 CE Recommended	1,529,902	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 Petersburg, 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 available for ash or other materials that cannot be recycled. This program also provides for the shipment of nonprocessible 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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	8,850,424	1.00
Increase Cost: Out-of-County Haul - contract increase due to increased tonnage	612,335	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.	20,278	0.00
FY15 CE Recommended	9,483,037	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 on 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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	881,675	4.50
Decrease Cost: Multi-Family Recycling - reduced printing costs	-8,829	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.	-41,957	-0.50
FY15 CE Recommended	830,889	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; 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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	6,148,301	3.00
Increase Cost: Recycle Center - contract cost	120,902	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.	477,807	0.00
FY15 CE Recommended	6,747,010	3.00

Recycling Outreach & Education

This program provides for broadly educating the general public about recycling, reuse, buying recycled products, composting, grasscycling, and waste reduction, and the need to comply with applicable County laws. Public education is an important tool supporting solid waste program goals and ensuring the success of recycling initiatives and working to achieve the County's recycling goal.

Program Performance Measures	Actual FY12	Actual FY13	Estimated FY14	Target FY15	Target FY16
Percent of Total Municipal Solid Waste Recycled ¹	**60%	**61%	**62%	**63%	**64%
Percent of Multi-family Municipal Solid Waste Recycled ²	**28%	**27%	**27%	**28%	**29%
Percent of Single-family Municipal Solid Waste Recycled ³	**66%	**65%	**66%	**67%	**68%
Percent of Non-residential Municipal Solid Waste Recycled ⁴	**57%	**59%	**60%	**61%	**63%
Multi-Family Recycling (tonnages)	24,989	29,6592	29,810	31,108	32,395
Non-Residential Recycling (tonnages)	297,202	326,959	336,733	349,487	363,942
Number of Site Visits to Provide Recycling Assistance to Businesses	8,896	10,987	11,000	12,000	12,000
Single-Family Recycling (tonnages)	264,026	266,901	273,362	281,809	289,993
Tons Recycled Overall	586,217	623,452	639,905	662,404	686,330

¹ **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)

² **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)

³ **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)

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)

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	667,091	2.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	-52,424	0.00
FY15 CE Recommended	614,667	2.00

Residential Collection

This program provides for securing, administering, monitoring, and enforcing countywide contracts with private collectors for collection of residential refuse and responding to the service needs of residents. Staff processes service requests from MC311 to ensure timely fulfillment by collection contracts. 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.

Program Performance Measures	Actual FY12	Actual FY13	Estimated FY14	Target FY15	Target FY16
Average number of recycling collections missed per week, not picked up within 24 hours	7	5	6	6	6
Average number of refuse collections missed per week, not picked up within 24 hours	3	3	3	3	3
Single-family Solid Waste Charge: Refuse Collection Fee, charged for once per week curbside collection including on-call bulk pickups (dollars per household)	70	66	66	66	72

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	25,251,740	26.80
Increase Cost: Residential Recycling - contract increase due to increased house counts	572,061	0.00
Increase Cost: Multi-media recycling education campaign	310,000	0.00
Increase Cost: Non-Residential Rate Study	224,929	0.00
Increase Cost: Residential Refuse - Collection contracts	200,673	0.00
Increase Cost: Recycling Carts - replacement and increased number of households	126,989	0.00
Increase Cost: Recycling program education and outreach - Collection truck signage	50,000	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.	-785,469	-4.80
FY15 CE Recommended	25,950,923	22.00

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. Electricity generated by the combustion of municipal solid waste is sold into the competitive energy market. Extensive environmental and operational monitoring is conducted, to meet contractual obligations and all applicable regulatory standards regarding the facility. This program also includes costs for related operations at the Transfer Station and for transportation of waste from the Transfer Station to the RRF.

Program Performance Measures	Actual FY12	Actual FY13	Estimated FY14	Target FY15	Target FY16
Percent of Total Municipal Solid Waste Sent to Landfill ¹	13.1%	15.5%	14.1%	14.2%	14.2%

¹ The contributing factors: The County's successful recycling program; MSW combustion at the county's waste-to-energy (WTE) facility yielding ash capable of beneficial uses; the County's revised Out-of-County Ash disposal contract, which motivates additional metals recovery from ash and allows for beneficial uses of the remaining residue.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	41,042,210	1.25
Increase Cost: Resource Recovery Facility (RRF) Debt Service	3,055,941	0.00
Increase Cost: RRF - annual contractual increase based on actual net expenses	940,178	0.00
Decrease Cost: RRF - Electricity Sales Revenue	-36,698	0.00

	Expenditures	FTEs
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	24,600	0.00
FY15 CE Recommended	45,026,231	1.25

Satellite Site

This program operates 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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	225,312	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.	1,997	0.00
FY15 CE Recommended	227,309	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 Division of Operations as needed.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	149,398	0.40
Decrease Cost: Site 2 Landfill - site management expenses	-7,500	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.	1,283	0.00
FY15 CE Recommended	143,181	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. Yard waste is also received, processed, and shipped to the Compost Facility, mulch preserves, or other outlets. Other waste is handled or recycled including scrap metal, oil and anti-freeze, textiles, car batteries, and construction material. County staff operate the scale-house and oversee 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.

Program Performance Measures	Actual FY12	Actual FY13	Estimated FY14	Target FY15	Target FY16
Number of Visits Related To Household Hazardous Waste Disposal	80,674	65,452	66,761	68,096	69,458

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	4,052,465	17.00
Increase Cost: Electronics Recycling contract	580,000	0.00
Increase Cost: Transfer Station - cost increases due to changes in price index for collected materials	104,665	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.	247,362	-1.00
FY15 CE Recommended	4,984,492	16.00

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 in recycling.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	136,649	0.00
FY15 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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	313,643	2.60
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	18,950	0.00
FY15 CE Recommended	332,593	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.

FY15 Recommended Changes	Expenditures	FTEs
FY14 Approved	80,353	0.00
FY15 CE Recommended	80,353	0.00

BUDGET SUMMARY

	Actual FY13	Budget FY14	Estimated FY14	Recommended FY15	% Chg Bud/Rec
SOLID WASTE COLLECTION					
EXPENDITURES					
Salaries and Wages	933,367	885,941	889,586	928,157	4.8%
Employee Benefits	298,662	314,083	314,085	324,440	3.3%
Solid Waste Collection Personnel Costs	1,232,029	1,200,024	1,203,671	1,252,597	4.4%
Operating Expenses	4,671,140	4,979,950	4,959,950	5,162,238	3.7%
Capital Outlay	0	0	0	0	—
Solid Waste Collection Expenditures	5,903,169	6,179,974	6,163,621	6,414,835	3.8%
PERSONNEL					
Full-Time	74	4	4	4	—
Part-Time	0	0	0	0	—
FTEs	92.20	10.43	10.43	10.59	1.5%
REVENUES					
Investment Income	503	0	630	1,220	—
Licensing Fee	-1,022	0	0	0	—
Miscellaneous Revenues	30,239	0	5,000	0	—
Systems Benefit Charge	6,019,615	6,039,660	6,029,525	6,052,200	0.2%
Other Charges/Fees	13,107	0	0	0	—
Solid Waste Collection Revenues	6,062,442	6,039,660	6,035,155	6,053,420	0.2%
SOLID WASTE DISPOSAL					
EXPENDITURES					
Salaries and Wages	6,564,197	6,722,643	6,678,406	7,035,656	4.7%
Employee Benefits	2,380,984	2,443,508	2,417,849	2,536,354	3.8%
Solid Waste Disposal Personnel Costs	8,945,181	9,166,151	9,096,255	9,572,010	4.4%
Operating Expenses	89,613,750	85,587,617	83,242,066	91,696,045	7.1%
Capital Outlay	0	428,829	0	1,857,206	333.1%
Solid Waste Disposal Expenditures	98,558,931	95,182,597	92,338,321	103,125,261	8.3%
PERSONNEL					
Full-Time	5	75	75	75	—
Part-Time	0	0	0	1	—
FTEs	11.19	91.78	91.78	92.42	0.7%
REVENUES					
Investment Income	24,239	0	72,280	140,260	—
Miscellaneous Revenues	317,071	6,103,913	4,830,643	5,245,514	-14.1%
Property Rentals	14,838	0	0	0	—
Sale of Recycled Materials	3,475,773	4,676,147	4,676,147	4,250,436	-9.1%
Solid Waste Disposal Fees/Operating Revenues	19,421,829	25,693,030	26,411,060	27,509,320	7.1%
Systems Benefit Charge	68,009,647	58,204,150	58,872,590	59,061,380	1.5%
Other Charges/Fees	293,695	0	0	0	—
Other Fines/Forfeitures	22,464	0	0	0	—
Other Licenses/Permits	18,875	7,500	0	0	—
Solid Waste Disposal Revenues	91,598,431	94,684,740	94,862,720	96,206,910	1.6%
DEPARTMENT TOTALS					
Total Expenditures	104,462,100	101,362,571	98,501,942	109,540,096	8.1%
Total Full-Time Positions	79	79	79	79	—
Total Part-Time Positions	0	0	0	1	—
Total FTEs	103.39	102.21	102.21	103.01	0.8%
Total Revenues	97,660,873	100,724,400	100,897,875	102,260,330	1.5%

FY15 RECOMMENDED CHANGES

	Expenditures	FTEs
SOLID WASTE COLLECTION		
FY14 ORIGINAL APPROPRIATION	6,179,974	10.43
Other Adjustments (with no service impacts)		
Increase Cost: Residential Refuse - Collection contracts [Residential Collection]	200,673	0.00
Increase Cost: FY15 Compensation Adjustment	45,532	0.00
Decrease Cost: Annualization of FY14 Personnel Costs	7,788	0.06
Increase Cost: Risk Management Adjustment	6,490	0.00
Increase Cost: Retirement Adjustment	4,075	0.00
Increase Cost: Printing and Mail	3,112	0.00
Increase Cost: Group Insurance Adjustment	1,947	0.00
Decrease Cost: Miscellaneous operating expenses [Administration and Support]	-1,720	0.00
Decrease Cost: Motor Pool Rate Adjustment	-2,647	0.00
Decrease Cost: Charges from other departments	-6,769	0.10
Decrease Cost: Retiree Health Insurance Pre-Funding Adjustment	-23,620	0.00
FY15 RECOMMENDED:	6,414,835	10.59
SOLID WASTE DISPOSAL		
FY14 ORIGINAL APPROPRIATION	95,182,597	91.78
Other Adjustments (with no service impacts)		
Increase Cost: Resource Recovery Facility (RRF) Debt Service [Resource Recovery Facility & Related Waste Transfer]	3,055,941	0.00
Increase Cost: Equipment Replacement purchases [Dickerson Compost Facility]	1,857,206	0.00
Increase Cost: RRF - annual contractual increase based on actual net expenses [Resource Recovery Facility & Related Waste Transfer]	940,178	0.00
Increase Cost: Out-of-County Haul - contract increase due to increased tonnage [Out-of-County Refuse Disposal]	612,335	0.00
Increase Cost: Electronics Recycling contract [Solid Waste Transfer Station]	580,000	0.00
Increase Cost: Residential Recycling - contract increase due to increased house counts [Residential Collection]	572,061	0.00
Increase Cost: Compost Facility - mandatory contractual increase [Dickerson Compost Facility]	382,031	0.00
Increase Cost: FY15 Compensation Adjustment [Administration and Support]	375,008	0.00
Increase Cost: Multi-media recycling education campaign [Residential Collection]	310,000	0.00
Increase Cost: Non-Residential Rate Study [Residential Collection]	224,929	0.00
Increase Cost: Recycling Carts - replacement and increased number of households [Residential Collection]	126,989	0.00
Increase Cost: Recycle Center - contract cost [Recycling Center]	120,902	0.00
Increase Cost: Risk Management Adjustment [Dickerson Compost Facility]	116,150	0.00
Increase Cost: Transfer Station - cost increases due to changes in price index for collected materials [Solid Waste Transfer Station]	104,665	0.00
Increase Cost: Food Waste Program - food waste starter kits [Commercial Recycling and Waste Reduction]	61,500	0.00
Increase Cost: Recycling program education and outreach - Collection truck signage [Residential Collection]	50,000	0.00
Increase Cost: Retirement Adjustment [Administration and Support]	31,041	0.00
Increase Cost: Oaks Landfill - increase cost of groundwater monitoring activities [Oaks Landfill]	28,757	0.00
Increase Cost: General Office Support - Project Search Intern [Administration and Support]	27,685	0.50
Increase Cost: Household Waste - contract cost [Household and Small Quantity Household Hazardous Materials]	25,105	0.00
Increase Cost: Group Insurance Adjustment [Administration and Support]	16,633	0.00
Increase Cost: Annualization of FY14 Personnel Costs [Administration and Support]	10,214	0.24
Increase Cost: Printing and Mail	166	0.00
Decrease Cost: Dickerson Master Plan - program expenses [Dickerson Master Plan Implementation]	-3,244	0.00
Decrease Cost: Site 2 Landfill - site management expenses [Site 2]	-7,500	0.00
Decrease Cost: Multi-Family Recycling - reduced printing costs [Recycling & Waste Reduction - Multi-Family Dwellings]	-8,829	0.00
Decrease Cost: Commercial Recycling - general office expenses [Commercial Recycling and Waste Reduction]	-10,424	0.00
Decrease Cost: SWD Automation - computer repair expenses [Administration and Support]	-30,000	0.00
Decrease Cost: RRF - Electricity Sales Revenue [Resource Recovery Facility & Related Waste Transfer]	-36,698	0.00
Decrease Cost: Charges from other departments [Administration and Support]	-53,682	-0.10
Decrease Cost: Retiree Health Insurance Pre-Funding Adjustment	-273,840	0.00
Decrease Cost: Gude Landfill - remediation plan costs [Gude Landfill]	-326,540	0.00
Decrease Cost: Elimination of One-Time Items Approved in FY14 [Dickerson Compost Facility]	-936,075	0.00
FY15 RECOMMENDED:	103,125,261	92.42

PROGRAM SUMMARY

Program Name	FY14 Approved		FY15 Recommended	
	Expenditures	FTEs	Expenditures	FTEs
Administration and Support	3,104,106	16.98	3,615,194	23.58
Commercial Recycling and Waste Reduction	2,002,080	10.50	2,045,850	11.00
Dickerson Compost Facility	3,494,789	1.15	4,575,256	1.15
Dickerson Master Plan Implementation	92,356	0.57	94,052	0.57
Gude Landfill	1,263,412	1.31	928,075	1.31
Household and Small Quantity Household Hazardous Materials	1,005,002	0.00	1,029,507	0.00
Housing and Environmental Permit Enforcement	1,134,309	9.93	1,164,926	9.93
Oaks Landfill	1,467,256	1.52	1,529,902	1.52
Out-of-County Refuse Disposal	8,850,424	1.00	9,483,037	1.00
Recycling & Waste Reduction - Multi-Family Dwellings	881,675	4.50	830,889	4.00
Recycling Center	6,148,301	3.00	6,747,010	3.00
Recycling Outreach & Education	667,091	2.00	614,667	2.00
Residential Collection	25,251,740	26.80	25,950,923	22.00
Resource Recovery Facility & Related Waste Transfer	41,042,210	1.25	45,026,231	1.25
Satellite Site	225,312	1.70	227,309	1.70
Site 2	149,398	0.40	143,181	0.40
Solid Waste Transfer Station	4,052,465	17.00	4,984,492	16.00
Support for Recycling Volunteers	136,649	0.00	136,649	0.00
Waste System Planning	313,643	2.60	332,593	2.60
Yard Trim Reduction Program	80,353	0.00	80,353	0.00
Total	101,362,571	102.21	109,540,096	103.01

CHARGES TO OTHER DEPARTMENTS

Charged Department	Charged Fund	FY14		FY15	
		Totals	FTEs	Totals	FTEs
SOLID WASTE DISPOSAL					
General Services	County General Fund	227,957	0.00	276,438	0.00
Liquor Control	Liquor Control	16,934	0.00	20,574	0.00
Parking District Services	Bethesda Parking District	60,665	0.00	73,697	0.00
Parking District Services	Montgomery Hills Parking District	1,893	0.00	2,303	0.00
Parking District Services	Silver Spring Parking District	115,650	0.00	140,484	0.00
Parking District Services	Wheaton Parking District	11,372	0.00	13,818	0.00
Total		434,471	0.00	527,314	0.00

FUTURE FISCAL IMPACTS

Title	CE REC.			(S000's)		
	FY15	FY16	FY17	FY18	FY19	FY20
This table is intended to present significant future fiscal impacts of the department's programs.						
SOLID WASTE COLLECTION						
Expenditures						
FY15 Recommended	6,415	6,415	6,415	6,415	6,415	6,415
No inflation or compensation change is included in outyear projections.						
Labor Contracts	0	13	13	13	13	13
These figures represent the estimated annualized cost of general wage adjustments, service increments, and associated benefits.						
Labor Contracts - Other	0	-1	-1	-1	-1	-1
These figures represent other negotiated items included in the labor agreements.						
Retiree Health Insurance Pre-Funding	0	-1	-2	-3	-4	-5
These figures represent the estimated cost of the multi-year plan to pre-fund retiree health insurance costs for the County's workforce.						
Subtotal Expenditures	6,415	6,426	6,424	6,424	6,422	6,421
SOLID WASTE DISPOSAL						
Expenditures						
FY15 Recommended	103,125	103,125	103,125	103,125	103,125	103,125
No inflation or compensation change is included in outyear projections.						
Elimination of One-Time Items Approved in FY15	0	-773	-773	-773	-773	-773
Items approved for one-time funding in FY15 - including food waste recycling kits (\$61,500); multi-media campaign (\$310,000); collection truck signage (\$50,000); recycling cart replacements (\$126,989); and a non-residential rate study (\$224,929) - will be eliminated from the base in the outyears.						

Title	CE REC.					
	FY15	FY16	FY17	(5000's)		
	FY18	FY19	FY20			
Labor Contracts	0	104	104	104	104	104
These figures represent the estimated annualized cost of general wage adjustments, service increments, and associated benefits.						
Labor Contracts - Other	0	-9	-9	-9	-9	-9
These figures represent other negotiated items included in the labor agreements.						
Resource Recovery Facility (RRF) Debt Service Schedule	0	-1,482	-22,890	-22,890	-22,890	-22,890
Debt restructuring and debt payoff at the end of FY16.						
Retiree Health Insurance Pre-Funding	0	-14	-35	-51	-72	-93
These figures represent the estimated cost of the multi-year plan to pre-fund retiree health insurance costs for the County's workforce.						
Subtotal Expenditures	103,125	100,950	79,522	79,505	79,484	79,464

SOLID WASTE ENTERPRISE FUND

RATES AND FISCAL PROJECTIONS FOR FY15-20

Assumptions:

- Refuse collection services are maintained at their current level, with the annual household collection charge remaining at \$66.00.
- 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). The Executive recommends no change in the single-family service charge of \$213.75.
- 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.
- On January 31, 2014, the Department of Environmental Protection (DEP) delivered its Assessment of Corrective Measures report to the Maryland Department of the Environment (MDE). The report recommended a preferred remediation option that is a multi-year plan to implement remediation measures at the Gude Landfill estimated to cost as much as \$57 million over twenty years. 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 Department of Finance has determined that this amount must be recognized as a liability in the County’s financial statements. Because this is an extraordinary, one-time impact on fund balance, the Executive does not recommend adjusting rates. The Disposal Fund cash position is expected to regain its margin above reserve and liability requirements by FY18.

FY15-20 PUBLIC SERVICES PROGRAM: FISCAL PLAN

Solid Waste Collection

FISCAL PROJECTIONS	FY14 ESTIMATE	FY15 REC	FY16 PROJECTION	FY17 PROJECTION	FY18 PROJECTION	FY19 PROJECTION	FY20 PROJECTION
ASSUMPTIONS							
Indirect Cost Rate	15.69%	15.87%	15.87%	15.87%	15.87%	15.87%	15.87%
CPI (Fiscal Year)	1.6%	2.0%	2.2%	2.5%	2.6%	2.4%	2.3%
Investment Income Yield	0.19%	0.35%	0.95%	1.55%	2.15%	2.85%	3.45%
Number of Households	91,365	91,701	92,088	92,475	92,862	93,249	93,636
Charge per Household (once-weekly refuse collection)	\$66.00	\$66.00	\$71.50	\$77.50	\$79.50	\$83.50	\$86.00
BEGINNING FUND BALANCE	2,366,270	2,034,994	1,048,636	724,963	779,930	843,127	1,126,854
REVENUES							
Charges For Services	6,029,525	6,052,200	6,584,220	7,166,740	7,382,450	7,786,210	8,052,610
Miscellaneous	5,630	1,220	3,490	6,000	8,770	12,250	15,620
Subtotal Revenues	6,035,155	6,053,420	6,587,710	7,172,740	7,391,220	7,798,460	8,068,230
INTERFUND TRANSFERS (Net Non-CIP)							
Transfers To The General Fund	(202,810)	(203,943)	(318,390)	(333,880)	(339,560)	(329,230)	(321,490)
Indirect Costs	(188,280)	(188,619)	(198,790)	(198,790)	(198,790)	(198,790)	(198,790)
Desktop Computer Modernization	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
TOTAL RESOURCES	8,198,615	7,884,471	7,317,956	7,563,823	7,831,598	8,312,357	8,873,994
CIP CURRENT REVENUE APPROP. PSP OPER. BUDGET APPROP/ EXPS.							
Operating Budget	(6,163,621)	(6,414,835)	(6,582,295)	(6,774,285)	(6,979,735)	(7,177,895)	(7,571,365)
Retiree Health Insurance Pre-Funding	n/a	n/a	770	1,860	2,740	3,860	4,950
Labor Contracts	n/a	n/a	(11,468)	(11,468)	(11,468)	(11,468)	(11,468)
Subtotal PSP Oper Budget Approp / Exp's	(6,163,621)	(6,414,835)	(6,592,993)	(6,783,893)	(6,988,463)	(7,185,503)	(7,577,883)
TOTAL USE OF RESOURCES	(6,163,621)	(6,835,835)	(6,592,993)	(6,783,893)	(6,988,463)	(7,185,503)	(7,577,883)
YEAR END FUND BALANCE	2,034,994	1,048,636	724,963	779,930	843,127	1,126,854	1,295,711
END-OF-YEAR RESERVES AS A PERCENT OF RESOURCES	24.8%	13.3%	9.9%	10.3%	10.8%	13.6%	14.6%

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. The fund balance policy for the Collection Fund was approved in August 2004.
2. The 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.

FY15-20 DIVISION OF SOLID WASTE SERVICES

FISCAL PROJECTIONS	ESTIMATED FY14	PROJECTED FY15	PROJECTED FY16	PROJECTED FY17	PROJECTED FY18	PROJECTED FY19	PROJECTED FY20
Single-Family Charges (\$/Household)	213.75	213.75	213.75	213.75	202.27	192.57	191.26
% change in rate from previous year	0.0%	0.0%	0.0%	0.0%	-5.4%	-4.8%	-0.7%
Multi-Family Charges (\$/Dwelling Unit)	16.73	16.73	16.73	16.73	14.57	13.04	11.23
% change in rate from previous year	0.0%	0.0%	0.0%	0.0%	-12.9%	-10.5%	-13.9%
Nonresidential Charges (medium "category" charge)	621.21	621.21	621.21	621.21	547.17	445.92	348.66
% change in rate from previous year	5.5%	0.0%	0.0%	0.0%	-11.9%	-18.5%	-21.8%
Nonresidential Charges (average \$/2000 sq. ft.)	239.72	239.72	239.72	239.72	207.00	168.69	131.90

OPERATIONS CALCULATION

REVENUES							
Disposal Fees	26,411,060	27,509,320	28,075,553	28,653,332	29,242,897	29,895,248	30,561,319
Charges for Services/SBC	58,672,590	59,061,380	59,704,737	60,019,191	55,425,698	49,491,668	46,237,509
Miscellaneous	9,506,790	9,485,950	9,542,281	9,589,330	9,631,347	9,668,322	9,705,423
Investment Income	72,280	140,260	401,030	689,240	1,007,090	1,406,250	1,793,190
Subtotal Revenues	94,862,720	96,206,910	97,723,601	98,951,093	95,307,032	90,461,488	88,297,441
INTERFUND TRANSFERS							
	404,020	834,305	1,241,943	1,046,252	1,142,663	889,418	427,065
EXPENDITURES							
Personnel Costs	(9,086,255)	(9,572,010)	(10,021,894)	(10,543,033)	(11,122,900)	(11,756,905)	(12,427,049)
Operating Expenses	(82,613,237)	(91,696,045)	(88,874,382)	(71,188,964)	(72,448,140)	(75,774,574)	(79,628,101)
Capital Outlay	(428,829)	(1,857,206)	(2,544,858)	(3,694,066)	(2,471,844)	(1,938,888)	(164,148)
Other Expenditure Restrictions Raised in Prior Years							
Subtotal Expenditures	(82,338,321)	(103,125,261)	(101,441,134)	(85,426,063)	(86,042,883)	(89,470,266)	(92,219,298)
CURRENT RECEIPTS TO CIP							
	-	(718,000)	-	-	-	-	-
OTHER CLAIMS ON FUND BALANCE							
POTENTIAL FUTURE EXPENDITURES (Guide Remediation)							
			(746,000)	(756,000)	(1,090,000)	(732,000)	(484,000)
PAYOUT OF GUIDE REMEDIATION							
			746,000	756,000	1,090,000	732,000	484,000
CY GUIDE REMEDIATION							
	(28,500,000)						
PAYOUT OF CLOSURE COSTS (Non-CIP)							
	1,418,834	1,494,903	1,538,505	1,591,128	1,650,386	1,715,214	1,777,081
CY ACCRUED CLOSURE COSTS							
	(32,843)	(37,113)	(43,602)	(52,624)	(59,257)	(64,828)	(67,441)
NET CHANGE	(26,185,590)	(5,344,257)	(980,687)	16,109,787	11,987,940	3,531,025	(1,785,152)

CASH POSITION

ENDING CASH & INVESTMENTS							
Unrestricted Cash	25,962,180	22,504,653	23,733,404	37,386,888	45,788,042	46,768,751	43,395,487
Restricted Cash	33,104,875	31,298,934	27,405,060	27,693,027	28,700,857	29,553,313	29,782,413
Subtotal Cash & Investments	59,067,055	53,803,587	51,138,465	65,079,916	74,488,899	76,322,064	73,177,900
RESERVE & LIABILITY REQUIREMENTS							
Management Reserve	(25,781,315)	(25,360,284)	(21,356,516)	(21,510,721)	(22,367,567)	(23,054,824)	(23,112,615)
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	(368,485)	(368,485)	(368,485)	(368,485)	(368,485)	(368,485)	(368,485)
Renewal & Replacement Reserve	(3,974,771)	(4,070,165)	(4,180,060)	(4,313,822)	(4,464,805)	(4,630,003)	(4,801,313)
Stability Reserve	(1,980,304)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)
Subtotal Reserve Requirements	(33,104,875)	(31,298,934)	(27,405,060)	(27,693,027)	(28,700,857)	(29,553,313)	(29,782,413)
Closure/Postclosure Liability	(15,943,224)	(14,485,434)	(12,990,530)	(11,452,025)	(9,860,897)	(8,210,511)	(6,500,872)
Guide Remediation Liability	(28,500,000)	(28,500,000)	(27,754,000)	(26,998,000)	(25,908,000)	(25,176,000)	(24,692,000)
Current Liabilities Not Including Debt/Closure	-	-	-	-	-	-	-
Subtotal Reserve & Liability Requirements	(77,548,099)	(74,284,368)	(68,149,591)	(66,143,053)	(64,469,754)	(62,939,824)	(60,975,285)
CASH & INVESTMENTS OVER/(UNDER)							
RESERVE & LIABILITY REQUIREMENTS	(18,481,044)	(20,480,781)	(17,011,126)	(1,063,137)	10,019,145	13,382,240	12,202,616

Net Assets

ENDING NET ASSETS							
Less: Reserve Requirements	(33,104,875)	(31,298,934)	(27,405,060)	(27,693,027)	(28,700,857)	(29,553,313)	(29,782,413)
NET ASSETS OVER/(UNDER)	17,046,465	16,064,845	21,341,597	40,372,904	53,751,933	58,773,509	57,331,666
RESERVE REQUIREMENTS							

FY15 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

FY15 RECOMMENDED SOLID WASTE SERVICE CHARGES TO BE COLLECTED VIA REAL PROPERTY ACCOUNT BILLING

Code Reference	Base Charge (\$/ton)	x	Billing Rate (tons/HH)	=	Disposal Charge	+	Base Systems Benefit Charge	+	Incremental Systems Benefit Charge	+	Refuse Collection Charge	+	Leaf Vacuuming Charge	=	Total Bill
	48-32(a)(1)				48-32(c)(2)		48-8A(b)(2)(A)		48-8A(b)(2)(B)		48-29		48-47		
SUBDISTRICT A (Refuse Collection District)*															
Inside Leaf Vacuuming District	\$ 56.00		0.84411		\$ 47.27		\$ 38.11		\$ 128.37		\$ 66.00		\$ 88.91		\$ 368.66
Outside Leaf Vacuuming District	\$ 56.00		0.84411		\$ 47.27		\$ 38.11		\$ 128.37		\$ 66.00				\$ 279.75
Incorporated							\$ 38.11								\$ 38.11
SUBDISTRICT B SINGLE-FAMILY**															
Incorporated							\$ 38.11								\$ 38.11
Inside Leaf Vacuuming District															
Unincorporated	\$ 56.00		0.84411		\$ 47.27		\$ 38.11		\$ 128.37				\$ 88.91		\$ 302.66
Outside Leaf Vacuuming District															
Unincorporated	\$ 56.00		0.84411		\$ 47.27		\$ 38.11		\$ 128.37						\$ 213.75
MULTI-FAMILY RESIDENTIAL**															
Incorporated							\$ 8.80		\$ 7.93						\$ 16.73
Unincorporated															
Outside Leaf Vacuuming District							\$ 8.80		\$ 7.93						\$ 16.73
Inside Leaf Vacuuming District							\$ 8.80		\$ 7.93				\$ 3.54		\$ 20.27

NONRESIDENTIAL - \$/2,000 SQ. FT. ***

Code Reference	Waste Generation Categories	Low	Medium Low	Medium	Medium High	High
	Low		\$ 105.72	\$ 18.52		\$ 124.24
	Medium Low		\$ 317.17	\$ 55.55		\$ 372.72
	Medium		\$ 528.63	\$ 92.58		\$ 621.21
	Medium High		\$ 740.08	\$ 129.61		\$ 869.69
	High		\$ 951.53	\$ 166.65		\$ 1,118.18

OTHER RECOMMENDED FY 15 SOLID WASTE FEES

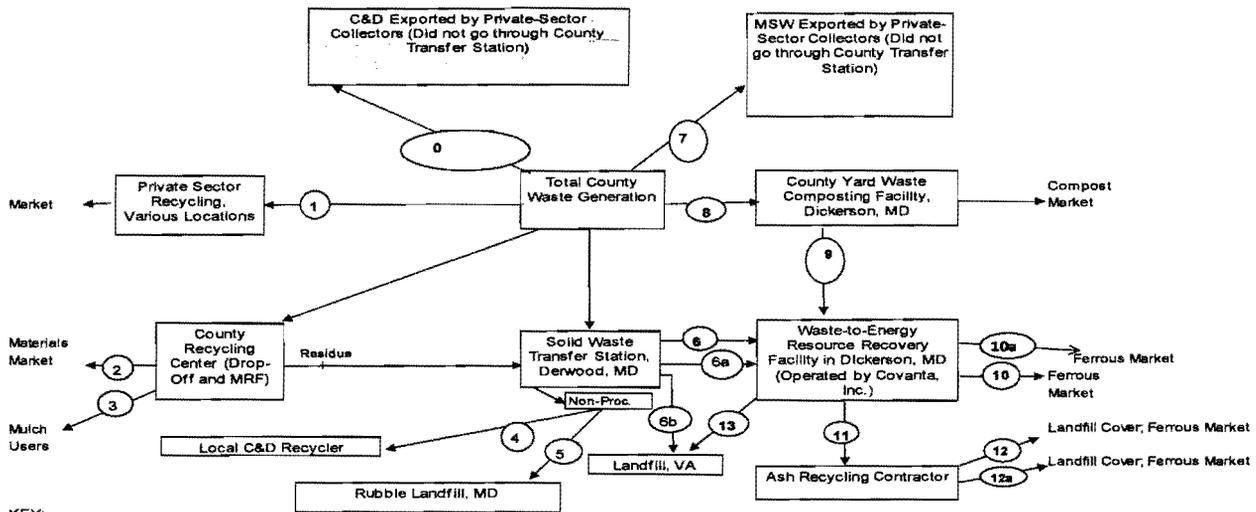
Refuse received at the Transfer Station (weighting >= 500 lb/load): (This is known as the "Tipping Fee")	\$56.00 /disposal ton	
Refuse received at the Transfer Station (weighting <500 lb/load): \$0.00/disposal ton		Solid Waste Service Charges (Section 48-32(a)(2)): Paper and Commingled Containers \$0.00 /ton Solid Waste Service Charges (Section 48-32(b)(2)): All Yard Trim received at the Transfer Station (weighting > 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.

MATERIAL FLOW DIAGRAM Fiscal Year 2013



KEY:

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

Total Waste Generation, Including C&D Exported by Private Sector	1,343,365
County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6a + 6b + 7 + 8	1,197,974
MSW Generated (above less streams 4, 5 and 6a)	1,095,150

Stream No.	Material Description	Sources of Data	Total (tons/yr)	Comments
0	Construction & Demo Debris Private Export*	Licensed Collector Reports under ER 92-59	145,391	Not County-managed, includes both disposed and recycled C & D
1	Recycled via non-County Facilities	Collector, Processor, Business & Self-Hauler Rpts.	261,437	Filtered to avoid double-counting
2	County Recycling Facility Material Sales	County TS & MRF Scales, Outbound	81,457	Outgoing to market from County Recycling Center
3	Mulch Loaded Out From TS	County Transfer Station (TS) Scale Records	33,544	Scaled out as taken to County Mulch Contractor & Preserve Locations
4	Non-Processibles Recycled**	County TS Scale Out Records	34,779	Not included in MRA recycling calculation
5	Non-Processibles Landfilled**	County Trans. Sta'n. & Covanta Scale Records	4,682	Not included in MRA recycling calculation
6	Loaded on Rail to RRF (MSW burned)	Covanta Scales as Loaded	483,300	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	63,364	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	171,171	Private Sector MSW Collection not delivered to County TS
8	All Incoming Leaves and Grass	Compost Facility & TS Scale Records	64,241	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	8,695	Recovered from ash at County Facility
10a	Ferrous recovered at RRF (C&D Residue)	Internal Calculation	1,140	Not included in MRA recycling calculation
11	Ash Loaded to Ash Recycling Contractor	Allied Monthly Report	151,347	Total ash (includes 12, 12a, 13, and 13a)
12	Ash outgoing from Ash Recycler ****	Allied Monthly Report	133,805	Included in MRA recycling calculation
12a	Ash outgoing from Ash Recycler (C&D Residue)****	Internal Calculation	17,543	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 + 4 + 5 + 6a + 6b + 7 + 8)	1,095,150	53.3%
Waste Diversion Rate	((1 + 2 + 3 + 4 + 5 + 6a + 6b + 7 + 8) / (CMW - 4 - 5a)) + 5.0%	1,095,150	58.3% ***

- 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.
 - ** Non-processibles 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
 - **** Waste stream "12" includes 2,965 tons of ferrous metals; and waste stream "12a" includes C&D residue from both ash and metals.

- 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

8. Please summarize your assumptions for your tonnage projections for MSW, recycling rates, yard trim, C&D etc. Please note your growth (economic, participation improvement) assumptions programmatic changes (recycling expansion, food waste, etc.)

The total MSW tonnage projected for FY15 is 1,128,979. This projection is based on residents generating 1.1 lbs./capita/day and nonresidential (businesses) generating 0.01 tons/employee/day. The total county

Waste Recycling by Material Type: Achievement and Opportunity

Basis for composition of disposed waste is the 2012 waste sorts reconciled to system-wide CY12 disposed and recycled tonnages*.		CY12 Actuals									Opportunity			Currently Disposed (Tons)
		Single-Family			Multi-Family			Non-Residential			Disposed by Sector (tons)			
		Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Single-Family	Multi-Family	Non-Residential	
Banned ER15-04	Subtotal Banned Components	239,426	185,587	77.5%	35,324	8,474	24.0%	316,229	227,729	72.0%	60,844	29,868	101,068	
	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%	398	-	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	437,541	

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	\$ 104,195,687	a
CIP Expen. (Current Receipts, Non-Closure)	-	b
Contingency Funds	887,430	c
Closed landfill Expenses (inflation only)	37,113	d
Material Sales Revenue	(4,250,436)	e
Miscellaneous Revenues	(5,245,515)	f
Investment Income	(140,260)	g
Sector-Specific Stability Fund Contributions (Draw)	(869,600)	h
Fund Balance Adjusting Contribution (Draw)	(7,983,120)	i
Transfer to Disposal Fund From Leaf Vacuuming Fund	(1,132,744)	j
Fund Contribution for Small Loads (e.g. <500 lbs)	2,893,695	k
Net Revenues Required from Service Charges	\$ 88,392,250	
Incremental Systems Benefit Charges	\$ (31,449,288)	l
BASE SYSTEM COSTS	56,942,962	

BASE SYSTEM BENEFIT CHARGES	Single-Family	m	Multi-Family	m	Non-Residential	m
Service Sector	37.7%	n	8.4%	n	53.9%	n
Proportion of Total Waste Generation						
Sector Share of Base Costs	\$ 21,488,618	o	\$ 4,758,937	o	\$ 30,695,406	o
Offsets from Refuse Disposal Fees Tipping Fees	(11,895,872)	p	(3,700,979)	p	(13,461,360)	p
Base Costs to Collect on Property Levy	\$ 9,592,746		\$ 1,057,959		\$ 17,234,046	
Households (HH) or Commercial Gross Floor Area Units (GFAU)	251,680	q	120,163	q	86,178	r
Base System Benefit Charge on Property Levy (\$/HH. \$/GFAU)	\$ 38.11 /HH		\$ 8.80 /HH		\$ 202.33 /GFAU	

INCREMENTAL SYSTEM BENEFIT CHARGES (ISBC)	Single-Family	s	Multi-Family	t	Non-Residential	u
Recycling	\$ 26,957,910		\$ 1,047,117		\$ 2,340,538	
Satellite Sites	238,343		5,564			
Studies Specifics to the Nonresidential Sector						
Stabilization	(672,000)	v	(131,000)	v	(86,600)	v
Composting	954,395	w	30,656	w	744,365	w
Total	\$ 27,478,648		\$ 952,337		\$ 3,018,303	
Households (HH) or Commercial Gross Floor Area Units (GFAU)	214,053	x	120,163	q	86,178	r
ISCB to be Charged on Property Levy	\$ 128.37 /HH		\$ 7.93 /HH		\$ 37.38 /GFAU	

DISPOSAL FEES (Charged on Property Levy (In-Lieu of Tipping Fee))	Single-Family	Multi-Family	Non-Residential
Tons of Refuse Disposed by Subdistrict A & B Households	180,668 tons	NA	NA
Single-Family Households in Sub-Districts A & B (Non-Municipal)	214,053 HH	NA	NA
Disposal Tons Per Household	0.8440 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	\$ 47.27 /HH	NA	NA
Total System Benefit Charges Levied on Tax Bill			
Non-Municipal Single-Family Homes	\$ 213.75 /HH		
Municipal Single-Family Homes	\$ 38.11 /HH		
Multi-Family Dwellings		\$ 16.73 /HH	\$ 239.72 /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)	231,926	70,407	268,236
Non-Charged Loads (<500 lbs, PUF, Beauty-Spots, MRF Residue)	(19,500)	(4,319)	(27,855)
Off-Setting Tonnage	212,426	66,089	240,381
Tipping Fee	\$ 56.00 / ton	\$ 56.00 / ton	\$ 56.00 / ton
Sector Off-Sets for Refuse Disposal Fees and Tipping Fees	\$ 11,895,872	\$ 3,700,979	\$ 13,461,360

- q County tax account database, growth trends reconciled to Md. National Capital Park & Planning Commission (MNCPPC) projections.
- r 1 GFAU = 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)
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- 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 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

664,301	Non-Residential Waste Generated (tons)
(25,088)	Open-top (C&D) portion of above (not considered MSW, which BSBC must cover)
639,213	
17,234,046	
26.96	

FY15 Full-Cost Recovery Tipping Fee (e.g. as may be applied to Out-of-Jurisdiction Waste)

56,942,962	BASE SYSTEM COSTS (to be recovered by Tipping and Disposal Fees Disposal and Base System Benefit Charges)
(2,893,695)	Fund Contribution for Small Loads (e.g. <500 lbs) Not charged Tipping Fees
54,049,267	Base System Costs net of Scheduled Fund Contribution for small loads
538,814	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 17, 2014, the County Executive recommended, effective July 1, 2014, solid waste charges including residential Base Systems Benefit Charges which when multiplied by the generation rates (set by Executive Regulation 7-14) yield household charges for FY 2015:

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 \$66.00 / 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) $\$56.00 \times 0.84411 =$
 $\$47.27 / \text{Household}$

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:
 $\$46.202 / \text{Ton} \times 1.8478 \text{ Ton} / \text{Household (ER 7-14)} - \$47.27 / \text{Household} =$
 $\$38.11 / \text{Household}$

Incremental Systems Benefit Charges =

Charge Rate (\$ / Ton Waste Generated) x Generation / Household:
 $\$69.4696 \times 1.8478 = \$128.37 / \text{Household}$

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
 $\$46.202 / \text{Ton} \times 0.8571 \text{ Ton} / \text{Dwelling (ER 7-14)} - \$30.80 / \text{Dwelling} =$
 $\$8.80 / \text{Dwelling}$

Incremental Systems Benefit Charges =

Charge Rate (\$/Ton Waste Generated) x Generation / Dwelling:
 $9.2521 \times 0.8571 = 7.93 / \text{Dwelling}$

Total multi-family Systems Benefit Charges on property bill \$ 16.73 / 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	\$ 105.72	\$ 18.52	\$ 124.24
Medium Low	\$ 317.17	\$ 55.55	\$ 372.72
Medium	\$ 528.63	\$ 92.58	\$ 621.21
Medium High	\$ 740.08	\$ 129.61	\$ 869.69
High	\$ 951.53	\$ 166.65	\$1,118.18

Base Solid Waste Charges per ton for solid waste:

Refuse received at the Transfer Station (weighing > = 500 lb/load)	\$ 56.00
Refuse received at the Transfer Station (weighing < 500 lb/load)	\$ 0.00
Materials delivered for disposal in open-top roll-off boxes	\$ 66.00
All Yard Trim received at the Transfer Station (weighing > 500 pounds/load)	\$ 46.00
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

Resolution - FY15 Solid Waste Service Charges
Page Four

Resolution No.:

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

PH 4/8/14
OP BUD



KL
PC
SBF
LL

SOLID WASTE ADVISORY COMMITTEE

April 9, 2014

The Honorable Craig Rice, President
Montgomery County Council
100 Maryland Avenue
Rockville, Maryland 20850

RECEIVED
MONTGOMERY COUNTY
COMMUNITY DEVELOPMENT

2014 APR 15 AM 8:54

Dear Mr. Rice:

The Montgomery County Solid Waste Advisory Committee appreciates this opportunity to comment on the County Executive's Recommended FY15 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 in this difficult financial climate, 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 percent of the total waste stream, and is approaching 60 percent. The Division is now working toward achieving the County's new goal of 70 percent 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. One exciting initiative is the Division's pilot program for food waste composting. In the two years since its inception, the program has resulted in 35 tons of material taken out of the waste stream. The Division is now using what it learned in the pilot to develop best practices for, and reach out to, food handlers (such as grocery stores and restaurants) County-wide.

In sum, we urge the County Council to approve the County Executive's Recommended FY15 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 Jensen

Chair, Solid Waste Advisory Committee

cc: Isiah Leggett, County Executive
Robert Hoyt, Director, DEP Daniel
Locke, Chief, DSWS

Gude Landfill History & Remediation Plans

**Montgomery County
Department of Environmental Protection**

April 2014

Gude Landfill History

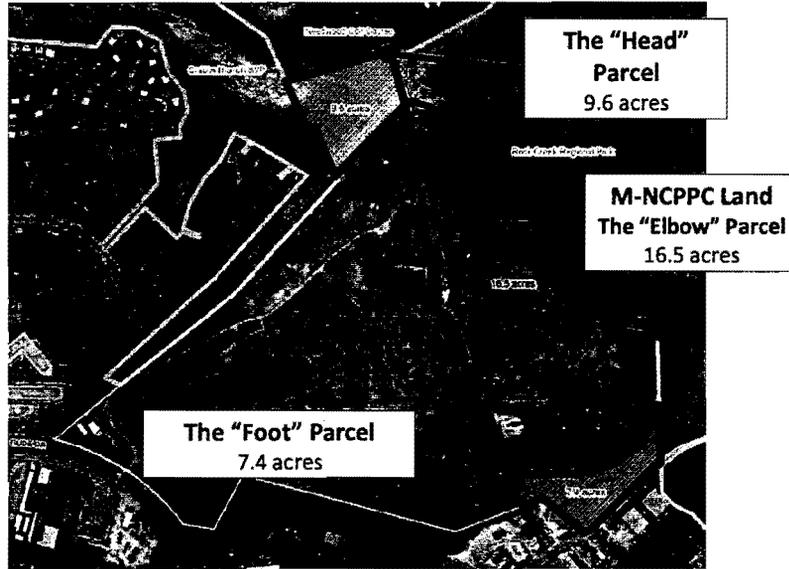
- Located at 600 East Gude Drive, Rockville, Maryland
- Landfill operated from 1964 –1982
- Pre-dated all modern landfill design regulations (RCRA)
- Approximately 4.8 million tons of waste in place
- Sized at approximately 100 acres
- Variable depth of waste at 55 – 100 feet
- Incinerator operated off Southlawn Lane entrance from 1965 – 1975
- Former Landfill Gas to Energy Facility 1985 – 2006
- Ground flare system installed 2005-2006
- New gas to energy facility began operations in 2009
- 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
- Consent Order signed with MDE requiring remediation of environmental contamination in 2013

Gude Landfill History (continued)

- Land swap approved in 2014 with M-NCPPC to obtain land where trash was placed beyond the County property
- 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
- DEP submitted the Assessment of Corrective Measures report to MDE in January 2014 outlining remediation options and making a recommendation
- Remediation will address widespread low level Volatile Organic Compound (VOC) contamination in groundwater, gas migration and leachate seeps into surface water runoff
- Remediation 2016 – 2036 (projected timeline)



Land Swap with M-NCPPC



Introduction

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



Introduction

Potential Corrective Measure Alternatives

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



Bioremediation

What is 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**



Bioremediation

What is Bioremediation?

The diagram illustrates a bioremediation process. Above the ground surface, a 'Mixer' combines 'Water' and 'Nutrients' to create a 'Nutrient Solution'. This solution is pumped into the ground through an injection well. A 'Submersible Pump' is located in a recovery well, which draws 'Contaminated Soil and Groundwater' from the ground. The 'Nutrient Solution Flow' is shown moving from the injection well towards the recovery well. A 'Water Recycle' line returns water from the recovery well back to the 'Mixer'.

EA

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

EA

Recommended Corrective Measures Alternative 5

Presented at GLCC/DEP Meeting No. 33

Date: November 7, 2013





OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

December 19, 2013

TO: Craig Rice, Council President

FROM: Isiah Leggett, County Executive 

SUBJECT: Gude Landfill Remediation Project – Recommended Alternative

The purpose of this memorandum is to provide the County Council with an update on the Gude Landfill Remediation Project and outline my recommended alternative for remediation. Under a Consent Order executed by the County and the Maryland Department of the Environment (MDE) in May 2013, the County is required to perform various investigations and remediation at the Gude Landfill. The next formal step in the process is for the County to submit an assessment of corrective measures report and recommended remediation alternative to MDE by January 31, 2014.

The Gude Landfill Assessment of Corrective Measures (ACM) Report prepared by our technical consultant, EA Engineering, Science and Technology, Inc., outlines a range of remediation options and evaluates five specific alternatives in detail from a technical and cost perspective. I plan to recommend to MDE that the County implement the corrective measures identified as "Alternative 5" in the ACM Report because this approach best meets the County's needs from both a technical and cost perspective and minimizes community impacts. This recommendation has been closely coordinated with members of the Gude Landfill Concerned Citizens (GLCC), which represents the homeowners in Derwood Station South (the community that is adjacent to the Gude Landfill), and MDE, which has been consulted regarding the acceptability of certain technologies and approaches.

Alternative 5 requires implementation of the following measures: (1) enhanced bioremediation to reduce groundwater contaminants; (2) additional landfill gas collection to better control the potential for gas migration; and (3) cover system improvements to decrease the occurrence of leachate seeps on side slopes. I am attaching Section 5.5 of the ACM Report, which provides an overview of Alternative 5, and Appendix G to the ACM Report, which outlines a proposed work plan for implementation of Alternative 5. A copy of the entire ACM Report and all Appendices can be found on the "Gude Landfill Remediation Project" website maintained by the Department of Environmental (DEP) under the link to "MDE Approvals, Plans and Consent Order."



The enhanced bioremediation component of Alternative 5 will be implemented by drilling wells through waste to the soil, bedrock and groundwater below the landfill and injecting a food source for microorganisms to accelerate and enhance their ability to break down pollutants in the groundwater. Typically, bioremediation injection wells are not constructed within the waste footprint (i.e., drilled through the trash). However, because the waste footprint at the Gude Landfill approaches the landfill's property boundary, we hope to use this innovative approach rather than conducting extensive waste relocation. Waste relocation, as outlined in other options, would be expensive and create a significant and lengthy disturbance to the surrounding community related to vehicle traffic, equipment noise, odor and dust.

If MDE approves the implementation of Alternative 5, the County will utilize an adaptive management approach to the remediation. Corrective measures will be initiated, monitored closely and adjusted to ensure that they are improving groundwater quality and reducing gas migration and leachate seeps. While Alternative 5 is based on proven technology, its pace of effectiveness will be determined by the unique characteristics of the Gude Landfill. Enhanced bioremediation will occur in two phases, with Phase 1 conducted in a limited area during the first three to five years and lessons learned during that period applied to remediation plans for the rest of the landfill during the second phase. We will not initiate full-scale remediation for the entire site in Phase 2 until we have fully evaluated the results of enhanced bioremediation in the Phase 1 limited area and are satisfied that the bioremediation program is successfully reducing concentrations of groundwater contaminants.

We estimate that the annual cost of implementing Alternative 5 over the next 20 years will range between \$484,000 and \$2.6 million each year, depending on the implementation plan for each particular year. The estimated total cost over this 20-year period is \$57 million (not including inflation). The estimated expenditures for each of the first 12 years of the project are outlined in Attachment 3. Actual annual expenditures may increase or decrease depending on results obtained throughout our adaptive management of the remediation project. Upon receiving approval from MDE, I will submit a funding plan to Council, along with any related appropriation request or amendment to the Capital Improvement Plan (CIP). We estimate that the MDE review and approval process will take at least 6 months. So, it is not likely that I will submit a funding plan until sometime in FY15 at the earliest.

With regard to potential land reuse options at the Gude Landfill site, the GLCC has expressed a desire for passive recreational uses such as running/walking trails, garden plots, a dog park, a children's play area, a model plane flying area and a picnic area. I agree that some passive uses may be feasible to implement during the first three to five years of remediation as long as the uses can be adjusted to accommodate refinements or changes in the remediation efforts. Once MDE approves the ACM Report and recommended corrective measures, we will work with the community to explore possibilities for design and placement of some of these passive uses to the extent that they are consistent with the planned remediation activities. With



Craig Rice, President
Montgomery County Council
December 19, 2013
Page 3

respect to the long-term reuse of the site, the County has not yet developed long-term plans and I think it is best that we defer those decisions until the first phase of the remediation is complete and decisions have been made regarding remediation of the rest of the landfill. We should then evaluate what we have learned about requirements and impacts during remediation and consider options for long-term reuse.

As mentioned above, the deadline for submitting my recommended remediation alternative to MDE is January 31, 2014. If you have any questions about the ACM Report, my recommended alternative or any other aspect of the Gude Landfill Remediation Project, please contact Bob Hoyt, Director, DEP at 240-777-7781 or Dan Locke, Chief, Division of Solid Waste Services, DEP at 240-777-6402. They will gladly make themselves available to support Council as it considers this matter.

IL:rh

cc: Keith Ligon, Chairman, Gude Landfill Concerned Citizens (GLCC)
Bob Hoyt, Department of Environmental Protection
Jennifer Hughes, Director, Office of Management and Budget
Joseph Beach, Director, Department of Finance
Dan Locke, Chief, Division of Solid Waste Services, Dept. of Environmental Protection

Attachments (3)



Introduction

What is Alternative 5?

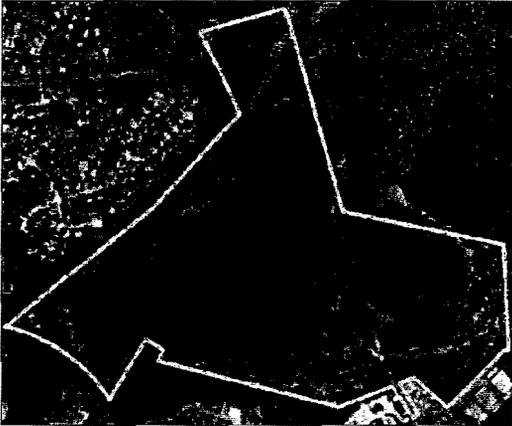
- This approach was recommend by the County Executive and was also the preferred alternative of the community
- Enhanced Bioremediation – to meet groundwater Remedial Action Objective (RAO)
- Cover System Improvements – to meet leachate RAO
- Additional Landfill Gas Collection – to meet LFG RAO



Alternative 5

Access Roads

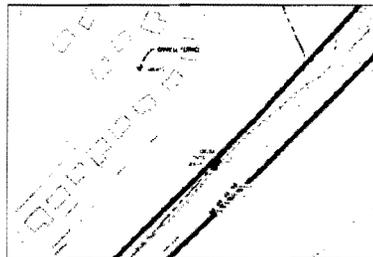
- Required for accessing areas for injection well installation, monitoring, and periodic injections.



Alternative 5

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.



EA

Alternative 5

Enhanced Bioremediation O&M

- Operation and Maintenance Requirements
 - Annual recharge of emulsified vegetable oil (EVO) and pH buffer
 - Molecular analyses and bioaugmentation with commercial *Dehalococcoides* cultures (i.e., KB-1®) if required
 - Semi-annual groundwater monitoring of monitoring wells
- Likely equipment usage during O&M
 - Water truck
 - Generator
 - Temporary tanks/totes
 - Pumps/hoses/piping



EA

Guide 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
Procurement/Contracting Activities for Phase I	[Redacted]																																						
Phase I: Enhanced Bioremediation Small Scale Approach	[Redacted]																																						
Step 1 - Field Investigations in NW Portion	[Redacted]																																						
Step 2 - Bioremediation Design and Installation in NW Portion	[Redacted]																																						
Step 3 - Operation, Maintenance, and Monitoring in NW Portion	[Redacted]																																						
Cover System Improvements and Landfill Gas Collection	[Redacted]																																						
Procurement/Contracting Activities for Phase II	[Redacted]																																						
Phase II: Enhanced Bioremediation Full Scale Approach	[Redacted]																																						
Enhanced Bioremediation South Portion	[Redacted]																																						
Enhanced Bioremediation SW Portion	[Redacted]																																						
Enhanced Bioremediation West Portion	[Redacted]																																						
Enhanced Bioremediation SE Portion	[Redacted]																																						
Enhanced Bioremediation Operation and Maintenance ²	[Redacted]																																						

Guide 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	\$465,000	\$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	\$143,000	\$186,000	\$186,000	\$186,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Enhanced Bioremediation - Phase II (Full Scale)⁴	\$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	\$75,000	\$690,000	\$394,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operation and Maintenance Cost ⁵	\$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 ⁵	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Cost	\$746,000	\$600,000	\$904,000	\$646,000	\$298,000	\$755,000	\$1,038,000	\$1,329,000	\$1,585,000	\$991,000	\$243,000	\$0
Total Operation and Maintenance Cost	\$0	\$143,000	\$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	\$750,000	\$1,090,000	\$832,000	\$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 RPO for groundwater is met; if not by Year 12.

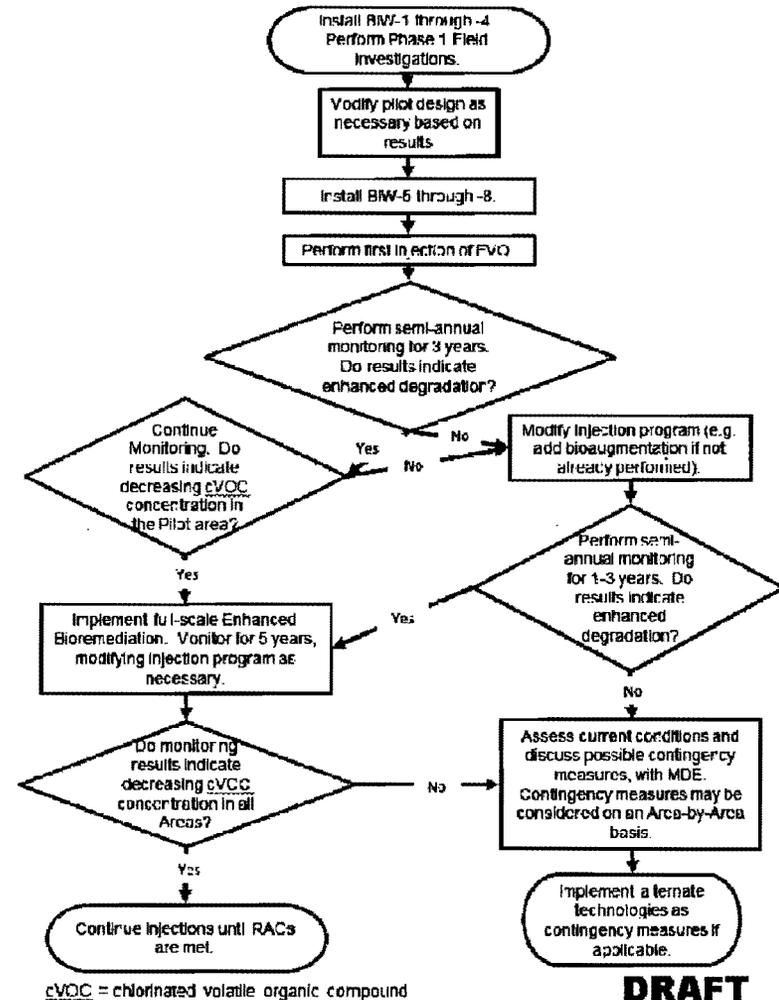
³All costs are shown in 2013 dollars.

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



Phase I – Measures of Success

- Comparison of total cVOC concentrations before and after injections.
- Reduction in molar concentrations of combined PCE, TCE, DCE, and VC indicates success.



Alternative 5

Contingency Plan

- Extension of the pilot design period may be requested if groundwater velocities are lower than assumed.
- Well spacing may change due to results of the field investigation and pilot study.
- Frequency of injection may decrease over time.
- Evaluate other treatment methods if Enhanced Bioremediation is not effective.
- Potential contingency measures include:
 - Groundwater pump and treat
 - Selective waste excavation



Alternative 5

Landfill Gas Collection

- Additional extraction wells will be installed to provide direct control over landfill gas migration in Northwest, West, and Southwest Areas.



Location of Additional Landfill Gas Collection Wells

