

T&E COMMITTEE #2  
March 9, 2015

**Discussion**

**MEMORANDUM**

March 5, 2015

TO: Transportation, Infrastructure, Energy & Environment Committee  
FROM: *KL* Keith Levchenko, Senior Legislative Analyst  
SUBJECT: **Discussion: Composting of Food Waste**

Attachments to this memorandum include:

- Presentation Slides: Discussion on Composting of Food Waste (©1-12)
- Waste Composition Study Chart (Calendar Year 2012) (©13)

Meeting Participants Include:

- Dan Locke, Chief, Division of Solid Waste Services, Department of Environmental Protection (DEP)
- Jeremy Criss, Agricultural Services Manager, Department of Economic Development
- Nima Upadhyay, Special Projects Coordinator, Department of Public Works, City of Takoma Park
- Jessica Weiss, Executive Director and President, growingSOUL

On January 12, the T&E Committee received an update from Division of Solid Waste Services (DSWS) staff on the County's recycling efforts. The issue of food waste composting, was deferred for later discussion to this March 9 meeting.

**Background**

Every few years, DSWS does a waste composition study to better understand the mix of different materials in the County's waste stream. Based on this study, DSWS can extrapolate recycling percentages for different materials and identify opportunities where improvement is possible. The most recent study was done in FY13, utilizing calendar year 2012 actual data. A summary chart from this study is attached on ©13. Non-residential paper and food waste continue to be two major areas of opportunity for increasing the recycling rate.

Food waste is the largest non-banned material type. Since the last waste composition study (FY09), the food waste "capture rate" is estimated to have increased from 4.6% to 8.4% (through calendar

year 2012 actuals) but the opportunity to divert substantially more food waste from the waste stream is still great.

### Food Waste Composting Pilot Project

DSWS implemented a food waste composting pilot project at the Executive Office Building in November 2011 and has continued the program well beyond the initial one-year pilot period. DSWS estimates that, each month, approximately 1.3 tons of food waste is diverted from the waste stream (nearly 50 tons of pre-consumer food scraps have been diverted since the project began). For the FY15 budget review, DSWS provided the following comments on the composting pilot to date:

*“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 requested (and was approved) \$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 a centralized food waste composting effort is the general lack of capacity of acceptance facilities in the State of Maryland for food waste. DSWS cannot utilize its existing compost facility in Dickerson 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. In December, the Maryland Department of the Environment (MDE) advertised revised food waste acceptance facility regulations for public comment. This public comment period closed on January 12, 2015 and the regulations are currently under internal MDE review. The Metropolitan Washington Council of Governments is also working on the broader issue of regional capacity for food waste recycling.

### **Discussion**

For the March 9 discussion, Division of Solid Waste Services staff will provide an update on the County’s food waste composting pilot as well as the status of the regional market for receiving food waste, and efforts at the State of Maryland to implement new regulations regarding food waste facilities.

Jeremy Criss will provide further information regarding the State regulatory environment regarding food composting, and the opportunities and potential barriers affecting Montgomery County's agricultural community in particular.

Nima Upadhyay of the City of Takoma Park will discuss the City of Takoma Park's curbside food waste composting program. The City did a pilot project in 2013 and later expanded the program to all single-family homes and residences of 12 units or less.<sup>1</sup>

Jessica Weiss, Executive Director and President of growingSOUL ([www.growingsoul.org](http://www.growingsoul.org)) has piloted a number of local food composting efforts in Montgomery County and can provide her perspectives on the opportunities and challenges in expanding food waste composting in Montgomery County.

#### Attachments

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<sup>1</sup>Participants are required to register with the City to join the program. For more information on the program, please see: <http://www.takomaparkmd.gov/publicworks/food-waste-collection>



# Discussion on Composting of Food Waste

Presented to the T&E Committee

Division of Solid Waste Services  
Department of Environmental Protection  
March 9, 2015



# Food Waste Recycling Demonstration Project



- Food waste accounts for approx. 25% of the non-residential waste stream
- Businesses have shown interest in food waste recycling
- Demonstration Recycling Project in EOB Wellbeing Café to:
  - Establish best management practices
  - Implement exemplary program to showcase/highlight to others
  - Divert pre-consumer food scraps for recycling
  - Apply additional waste reduction/recycling best practices
  - Obtain data
  - Lead by example





# Food Waste Recycling Demonstration Project



## Implementation Process:

- Coordinated discussions with DGS and EOB Wellbeing Café management
- Secured 3x/week food waste recycling collection service
- Provided compostable bag liners and interior containers designated for recycling pre-consumer food waste
- Developed educational materials (posters, container labels, training manual)
- Provided on-site training to EOB Wellbeing Café managers and staff
- Conducted daily monitoring of central collection containers to monitor for contamination
- Requested regular feedback from Wellbeing Café and made adjustments when needed





# Food Waste Recycling Demonstration Project



## The Results:

- 57.5 tons of pre-consumer food waste collected for recycling from 11/1/11 through 12/31/14
- Average of 1.5 tons of pre-consumer food scraps are collected for recycling monthly



Over 57 tons of food scraps collected between Nov. 1, 2011 – Dec. 31, 2014



# Next Steps



## •The Challenge:

- Lack of food waste recycling/ composting facilities and processing capacity in region still exist

## •The Opportunities:

- Continue the model pre-consumer food waste recycling program in County government office building cafeteria
- Continue to refine best practices, educational materials and training tools
- Solicit businesses interested in composting food waste and provide technical assistance
- Develop written strategy 6 months after regulations adopted



**DSWS continues to showcase the food waste recycling demonstration project and conduct seminars for businesses to stimulate interest.**





# Efforts to Encourage Private Food Waste Composting Facilities



- Met with generators, haulers, facility operators to identify hurdles to developing facilities
- Participated in an RFP advertised by Northeast MD Waste Disposal Authority (NEA) to develop regional capacity:
  - RFP issued 2/12/14
  - Bids received 7/10/14
  - Bid responses catered to Baltimore County needs with unrealistic acceptance requirements
  - RFP cancelled 12/5/14
- Direct partnering discussion with Howard County (HC): HC decision to expand their pilot for in-county material only
- Direct partnering discussion with Prince George's County: very productive; discussion is ongoing



# Update on MD Compost Facility Regulations



- Maryland Proposed Composting Facility Regulations
  - Regulations initially posted in the Maryland Register on January 10, 2014; MDE received numerous public comments
  - MDE revised regulations based on the public comments
  - Revised regulations were posted in the Maryland Register on December 12, 2014
  - 2<sup>nd</sup> public comment period closed on January 12, 2015
  - MDE received and reviewed additional comments
  - Regulations are currently under internal MDE review
- Next steps: If approved by the MDE Secretary, the regulation will be posted in the Maryland Register as Final Adopted for a period of 10 days



# MD Proposed Composting Facility Regulations



- Establish regulatory requirements for composting facilities
- Delineate Tiers of composting facilities based on:
  - feedstock types
  - sizes (amount of finished compost product)
- Create Composting Facility Permit
- Provide siting, design and operational requirements for composting facilities
- Establish procedures, processes, variances, recordkeeping, reporting, enforcement and other requirements



# MD Proposed Feedstocks for Composting Facilities



## Type 1 Feedstock:

- Yard waste (grass, leaves, brush, garden clippings)

## Type 2 Feedstock:

- Source separated food scraps
- Non-recyclable paper
- Approved animal manure and bedding
- Approved industrial food processing materials
- Animal mortalities
- Compostable food service products

## Type 3 Feedstock:

- Sewage sludge or biosolids
- Used diapers
- Mixed municipal solid waste
- Material not covered under the composting facility regulations, other than tree and other natural vegetative refuse (natural wood waste)



# MD Proposed Tiers for Composting Facilities



## Tier 1:

- Composts only Type 1 feedstocks

## Tier 2 - Small:

- Composts only Type 1 and Type 2 feedstocks
- Produces  $\leq$  10,000 cubic yards of compost/year

## Tier 2 - Large:

- Composts only Type 1 and Type 2 feedstocks
- Produces  $>$  10,000 cubic yards of compost/year

## Tier 3:

- Composts only Type 3 feedstocks (regardless of whether other feedstock types are also composted)

Tier 2 is divided into size categories based on amount of finished compost produced each year.



# MD Proposed Composting Facility Regulations



- Compost Facility Permits\* are required for:
  - Tier 1
  - Tier 2 – Small
  - Tier 2 – Large
- Refuse Disposal Permit or Sewer Sludge Utilization Permit is required for Tier 3, depending on feedstock

*\* Exemption exists for Tier 1 or Tier 2 facilities that use no more than 5,000 square feet in support of composting and meet maximum pile height restrictions.*



# MD Proposed Composting Facility Regulations



Exemptions Possible for On-Farm Composting,  
Whereby Compost Facility Permits Are Not Required:

1. Farm composts only materials generated on-site (or on a site controlled by same operator) and uses all compost on-site (or on a site controlled by same operator);
2. On-farm composting facility uses no more than 40,000 square feet of area in support of composting and complies with stated restrictions; or
3. Non-routine, catastrophic animal mortalities with approval of MD Dept. of Agriculture.

## Waste Recycling by Material Type: Achievement and Opportunity

Basis: CY12 actual recycled tonnages plus composition of the disposed waste from FY13 "Tip&Sort" applied to CY12 disposed waste tonnages.*		CY12 Actuals									Opportunity			
		Single-Family			Multi-Family			Non-Residential			Disposed by Sector (tons)			Currently Disposed (Tons)
		Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Generated (tons)	Captured (tons)	Capture Rate %	Single-Family	Multi-Family	Non-Residential	
Banned ER15-04	Subtotal Banned Components	239,426	185,587	77.5%	35,324	8,474	24.0%	316,229	227,729	72.0%	53,838	26,850	88,500	
	Paper	92,355	59,467	64.4%	18,180	3,343	18.4%	134,171	80,559	60.0%	32,888	14,837	53,612	101,338
	Glass	19,252	16,017	83.2%	4,542	590	13.0%	14,485	6,168	42.6%	3,234	3,952	8,318	15,504
	Other Ferrous	12,294	9,211	74.9%	2,154	1,378	64.0%	71,988	68,220	94.8%	3,083	776	3,768	7,627
	Yardwaste	99,701	94,635	94.9%	4,585	3,003	65.5%	76,154	71,104	93.4%	5,066	1,582	5,050	11,697
	Narrow-Neck Plastics	8,226	3,453	42.0%	3,200	39	1.2%	9,985	256	2.6%	4,772	3,161	9,730	17,663
	Ferrous/Bimetal Containers	4,279	2,191	51.2%	1,396	104	7.4%	6,344	1,245	19.6%	2,089	1,293	5,099	8,480
	Aluminum Beverage Cans	1,587	594	37.4%	613	17	2.8%	1,754	176	10.0%	993	595	1,579	3,167
	Other Aluminum (Foil)	1,286	19	1.5%	508	0	0.0%	1,263	1	0.1%	1,267	506	1,262	3,034
	Other Non-Ferrous Metal	446	-	0.0%	148	-	0.0%	84	-	0.0%	446	148	84	678
Potential and Encouraged	Food Waste	45,605	-	0.0%	15,996	-	0.0%	87,449	7,337	8.4%	45,605	15,996	80,112	141,713
	Shopping Bags	1,021	-	0.0%	504	-	0.0%	1,229	20	1.6%	1,021	504	1,209	2,735
	Other Film Plastic	18,478	-	0.0%	5,652	-	0.0%	27,099	437	1.6%	18,478	5,652	26,662	50,792
	Plastic Flower Pots	584	58	10.0%	28	1	2.4%	475	4	0.9%	525	27	471	1,023
	Plastic Tubs and Lids	2,776	218	7.9%	1,137	2	0.2%	4,794	16	0.3%	2,558	1,135	4,777	8,470
	Other Rigid Plastic	5,232	1,309	25.0%	2,025	170	8.4%	10,252	2,932	28.6%	3,923	1,855	7,320	13,098
	Textiles & Leather (no Rugs)	13,579	100	0.7%	4,684	1	0.0%	9,804	7	0.1%	13,479	4,683	9,796	27,958
	Carpets / Rugs	1,344	-	0.0%	1,144	-	0.0%	12,181	8,894	73.0%	1,344	1,144	3,288	5,776
	Wood Waste (including Pallets)	651	-	0.0%	278	50	17.9%	5,973	3,881	65.0%	651	229	2,092	2,972
	Whole Tires (as Rubber)	2,220	2,220	100.0%	716	555	77.5%	4,030	2,776	68.9%	-	161	1,254	1,415
	Lubricants (e.g. Motor Oil)	107	6	5.6%	0	0	100.0%	344	256	74.6%	101	-	88	189
	Electronics	5,107	1,771	34.7%	1,954	20	1.0%	6,889	1,349	19.6%	3,336	1,934	5,539	10,809
	Batteries	93	93	100.0%	1	1	83.0%	2,464	2,464	100.0%	-	0	-	0
	Latex Paint	633	269	42.4%	43	3	7.1%	147	20	13.6%	365	40	127	531
Tire Steel	278	-	0.0%	89	-	0.0%	504	-	0.0%	278	89	504	871	
No Markets	Other Wood	4,316	-	0.0%	1,468	-	0.0%	8,283	-	0.0%				
	Other Glass	637	-	0.0%	396	-	0.0%	508	-	0.0%				
	Disposable Diapers	10,778	-	0.0%	5,189	-	0.0%	4,794	-	0.0%				
	Other Waste	57,048	-	0.0%	17,667	-	0.0%	72,686	983	1.4%				
RRF Ash		62,487			15,652			53,996						
<b>TOTAL</b>	<b>409,914</b>	<b>264,119</b>	<b>62.0%</b>	<b>94,298</b>	<b>24,928</b>	<b>26.4%</b>	<b>576,131</b>	<b>313,101</b>	<b>54.3%</b>	<b>145,502</b>	<b>60,300</b>	<b>231,738</b>	<b>437,541</b>	

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

Notes:

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

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

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