


T&E COMMITTEE #3  
July 12, 2018

**Briefing**

**MEMORANDUM**

July 10, 2018

TO: Transportation, Infrastructure, Energy & Environment Committee

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Briefing: Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion in Montgomery County, Maryland**

PURPOSE: To receive a briefing from Executive Staff on the Strategic Plan

Attachments to this memorandum include:

- Presentation Slides (©1-16) prepared by DEP/Division of Solid Waste Services Staff
- Strategic Plan Transmittal Memorandum dated April 12, 2018 (©17)
- Strategic Plan Executive Summary and Introduction (©18-28)
- Maryland Department of the Environment (MDE) Letter dated July 9, 2018 to T&E Committee Chair Berliner (©29)

Meeting participants include:

- Patty Bubar, Acting Director, Department of Environmental Protection (DEP)
- Willie Wainer, Chief, Division of Solid Waste Services (DSWS)
- Eileen Kao, Chief, Waste Reduction and Recycling Section, DSWS, DEP

On April 12, 2017, the County Executive transmitted the Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion in Montgomery County, Maryland.<sup>1</sup> The Strategic Plan was a culmination of a substantial amount of coordination, outreach, and work group activity during 2017 and into 2018.

For the July 12 Committee meeting, Eileen Kao – Chief, Waste Reduction and Recycling Section, Division of Solid Waste Services (Department of Environmental Protection) will provide a presentation (see slides on ©1-16) regarding the development of the Strategic Plan and its findings and recommendations/next steps. The Plan's Executive Summary and Introduction are attached on ©18-28).

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<sup>1</sup> The full Strategic Plan document and background on the development of the plan is available at:  
<https://www.montgomerycountymd.gov/sws/foodwaste/index.html>

## Background

### Bill 28-16

On November 15, 2016, the Council enacted Bill 28-16 "Solid Waste (Trash) - Strategic Plan to Advance Composting, Compost Use and Food Waste Diversion". This bill requires DEP to develop a strategic plan to advance composting, compost use, and food waste diversion in Montgomery County.

As noted in the action memorandum for the bill:

*"Bill 28-16 would require the Director of the Department of Environmental Protection (DEP) to develop a Strategic Plan to Advance Composting, Compost Use and Food Waste Diversion in Montgomery County by July 1, 2017. In developing the Strategic Plan, the Director would be required to consult with many organizations inside and outside of County government. The Strategic Plan would provide recommendations on legislative changes necessary to reduce food waste and promote composting as well as identify potential new county policies and initiatives to reduce food waste and promote and support composting in the County. The Director would be required to submit an annual report on the progress toward achieving the goals of the Strategic Plan by July 1 of each year."*

### Current Food Waste Composting/Diversion Efforts

Food waste is the largest non-banned material type currently in the waste stream, and a comprehensive program that diverts food waste would provide the single biggest increment the County can capture to meet or exceed its waste diversion goal of 70% by 2020. Based on a waste composition study from 2012, food waste represents about 13.5 percent of the total municipal solid waste managed by the county and about 20 percent of recyclable material currently disposed of in the County.

The County has an ongoing food waste composting pilot (focusing on County Government facilities) that has been in place for several years. This effort has helped the County better understand food waste diversion challenges (both on-site capture and storage as well as securing receiving facilities for the food waste). Through March of 2018, a total of 129.4 tons of pre-consumer food scraps has been collected and recycled.

As part of the FY19 Budget, the Council approved the Executive's recommendation to add \$564,000 and one full-time position in FY19 for the creation of a Food Waste Organics Recycling program. FY18 Costs associated with the strategic planning work have also been moved to this program for a total program budget in FY19 of \$667,000. This includes both a commercial and residential organics education and outreach initiative as well as follow-up work identified in the Strategic Plan.

For some additional regional background and perspective, in May 2016, the Metropolitan Washington Council of Governments (MWCOCG) produced a report: Composting: Sustainable Food Waste Reduction in the National Capital Region (which is available for download at:

<http://www1.mwcog.org/ire/projects/CPM%20Cohort%2013%20Composting%20Final%20Paper.pdf>)

### Strategic Plan Components

The Strategic Plan includes a comprehensive review of the major facets of food waste diversion including:



- Reducing food waste/channeling food to others
- On-site composting (including residential, institutional, business, and farms)
- Curbside collection of food scraps
- Regulatory/legal issues and policies
- Food scrap processing technologies
- A review of other food scrap recycling efforts

As noted on page 1 of the Executive Summary of the Strategic Plan (see ©18), the strategies noted above are consistent with the County's "solid waste management hierarchy;" especially regarding the highest priorities of waste reduction, reuse, recycling, and composting.

Most of these items include recommendations/strategies requiring additional follow-up. Council Staff has asked DEP staff to elaborate on how it plans to sequence and address these next steps and what additional resources and/or legislative changes may be needed in the short-term to initiate these efforts.

In his transmittal memorandum of April 12 (see ©17) the Executive notes that with its FY19 recommended budget resources (subsequently approved by the Council) he has *"directed DEP to work to secure processing capacity to serve commercial generators of food scraps and increase commercial recycling, as well as work with residents of single-family homes to determine the viability of a future residential curbside food scraps recycling program."*

#### Integrated Waste System Strategic Plan

In addition to its food waste strategic planning effort, DEP, through the Northeast Maryland Waste Disposal Authority has contracted with HDR, Inc. on the development of a broader integrated waste system vision and long-term strategies for Montgomery County. In addition to looking at the status of the County's existing programs and facilities, this study will consider best practices from other jurisdictions and if and how these can be applied in Montgomery County. The study is expected to take about 16 months.

In early June, the Executive convened a Task Force to assist DEP and HDR with this planning effort. The Task Force will (as referenced in the County Executive's May 30 email announcing the members of the Task Force):

*"...provide advice and guidance on how best to maximize waste reduction, reuse, recycling, and sustainable management of all materials across the entire integrated waste management system, including all programs, facilities, operations, initiatives, and services."*

Given the importance and opportunities for major increases in food waste diversion from the solid waste stream, the County's food waste diversion efforts and this broader planning exercise will need to be closely coordinated going forward.

#### Attachments

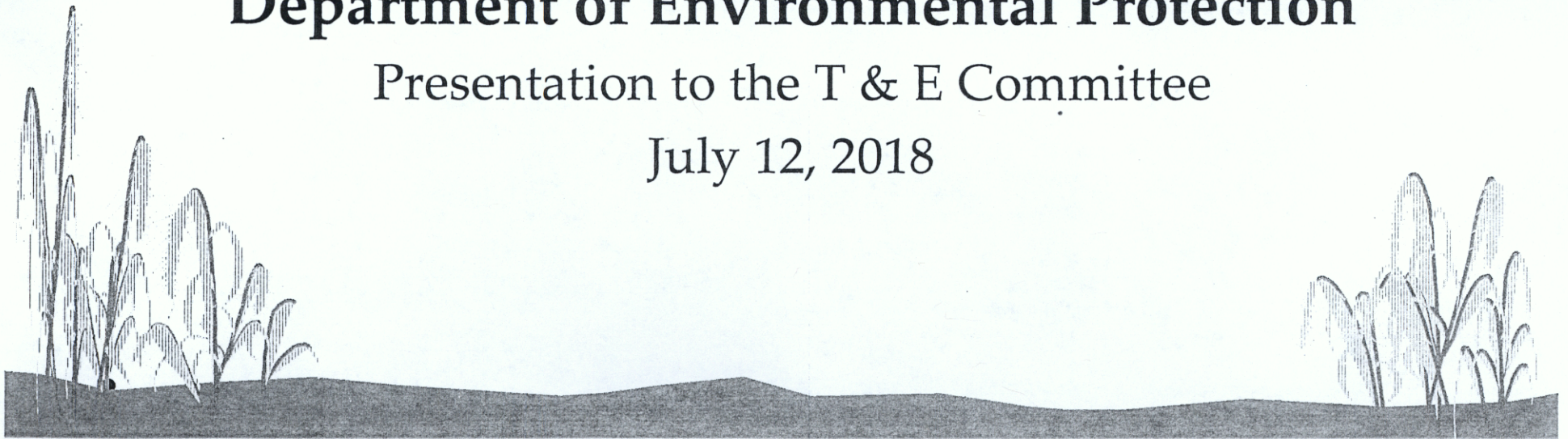
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# Montgomery County's Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion

**Department of Environmental Protection**

Presentation to the T & E Committee

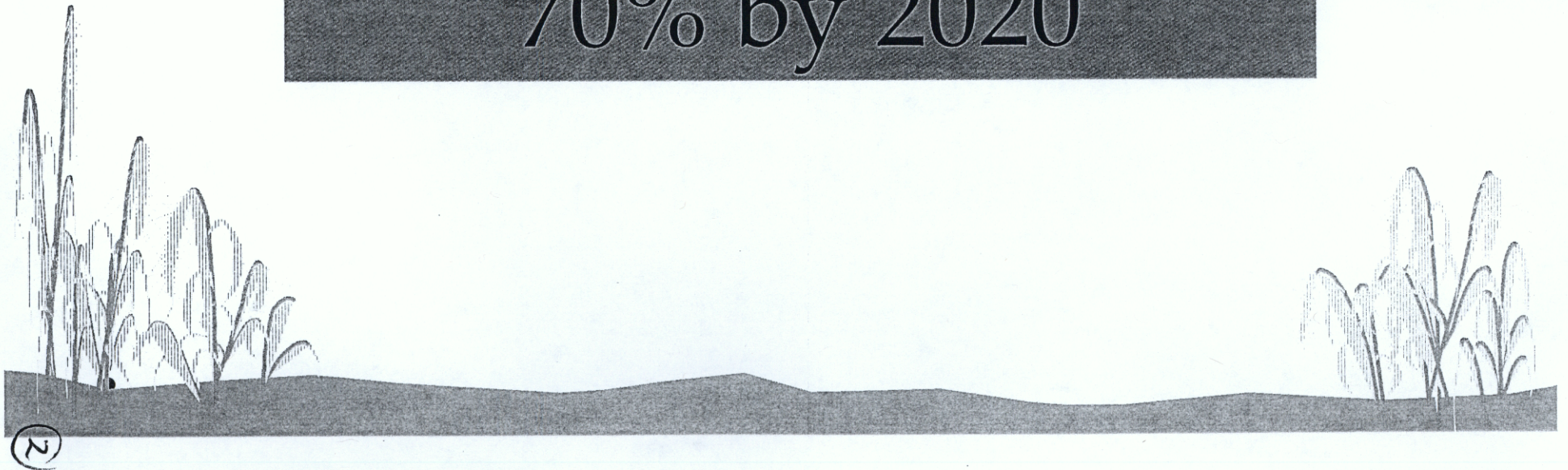
July 12, 2018





# Montgomery County's Waste Reduction & Recycling Goal

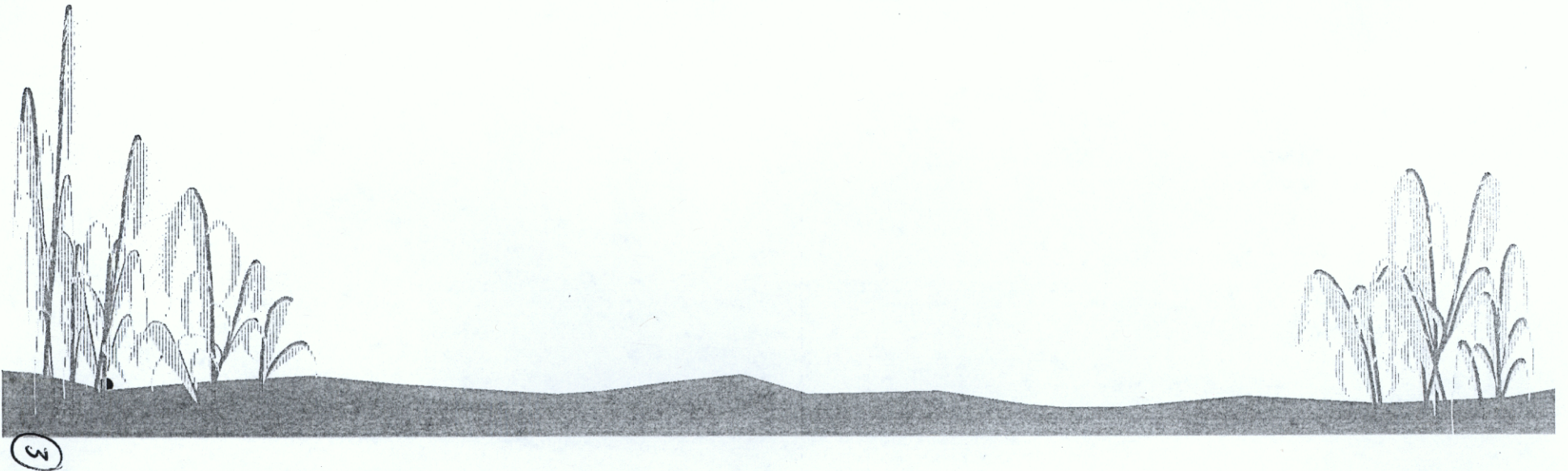
70% by 2020





# Food Scraps The Next Frontier

- Food represents significant opportunity to reduce, reuse, and recycle more
- Generation greatest in Non-Residential Sector

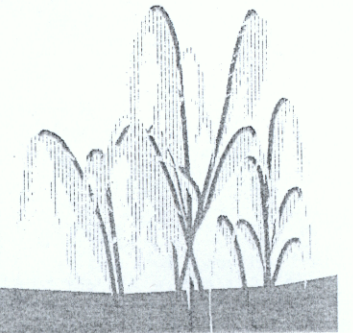
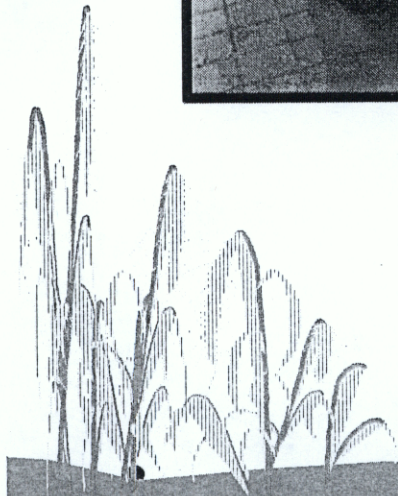




# On-Going Efforts



- Identify significant quantity generators of food scraps
  - Education/technical assistance
- Work with businesses, multi-family properties
  - Individualized support to voluntarily source separate and recycle
- Work to secure processing capacity at facilities





# Montgomery County Council Bill 28-16

<b>BILL No. 28-16</b>	
Concerning <u>Solid Waste (Trash)</u>	
Strategic Plan to Advance	
Composting, Compost Use and Food	
Waste Diversion	
Revised 11/15/2016, Draft No. 3	
Introduced June 23, 2015	
Enacted November 15, 2016	
Effective November 22, 2017	
Sunset Date None	
Ch. 33, Laws of Mont. Co., 2016	
<b>COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND</b>	
Lead Sponsor: Vice President Bestline	
Co-Sponsors: Councilmembers Katz, Hucker, Ehrick, Riener and Navarro	
<b>AN ACT</b> to:	
(1)	require the Director of the Department of Environmental Protection to develop a Strategic Plan to Advance Composting, Compost Use and Food Waste Diversion in Montgomery County
(2)	generally amend County laws related to Solid Waste (Trash).
By adding	
Montgomery County Code	
Chapter 48, Solid Waste (Trash)	
Section 48-17B	
<b>Boldface</b>	Recalling or defining term
<u>Underlined</u>	Added to existing law by original bill
[Single boldface brackets]	Deleted from existing law by original bill
[Double underlines]	Added by amendment
[Double boldface brackets]	Deleted from existing law or the bill by amendment
• • •	Existing law unaffected by bill
The County Council for Montgomery County, Maryland approves the following Act:	

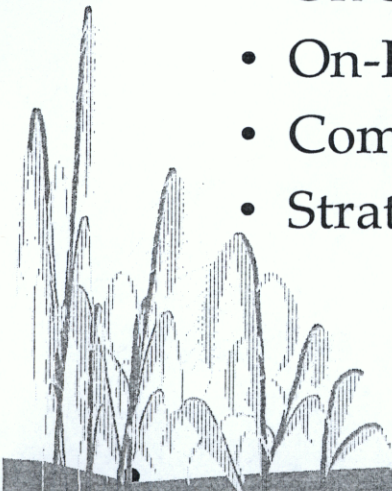
- Required DEP to:
  - Identify/examine many specific elements in reducing food waste and increasing composting
  - Make comprehensive and far-reaching recommendations
  - Consult with substantial set of stakeholders and interested parties
  - Accomplish this in compressed amount of time



# The Strategic Planning Process



- Internal work, identification of stakeholders
- Six focus areas:
  - Reducing Wasted Food/Channeling Food to Others
  - In-Home, Backyard, and Community-Scale Composting
  - On-Site Institutional and On-Site Business Composting
  - On-Farm Composting
  - Composting Capacity to Serve Montgomery County
  - Strategies to Maximize Food Scraps Collection at the Curb

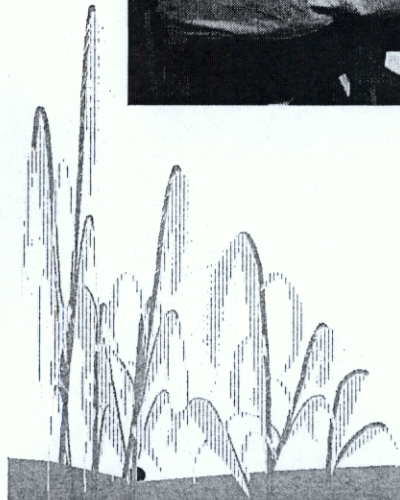




# The Strategic Planning Process



- June 2017 stakeholders meeting
- Creation of working groups
- Draft “chapters” provided to working groups
- Group reviews and consensus
- November 1, 2017 meeting to share work
- 409 sets of comments received November 8, 2017
- Draft Strategic Plan and Briefing Document

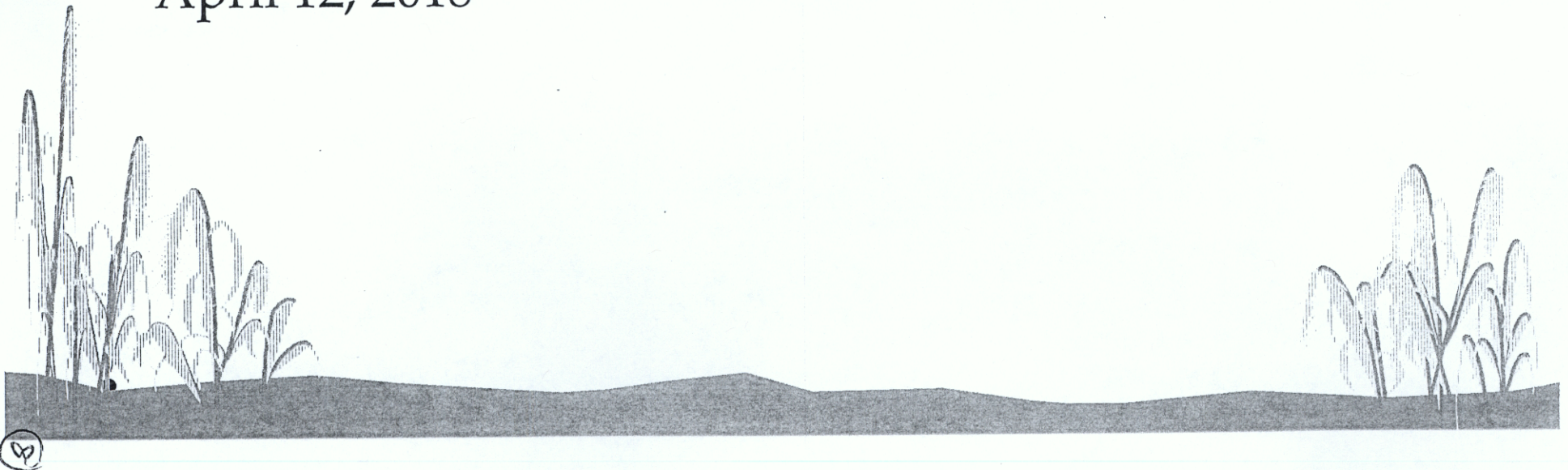




# Finalizing the Strategic Plan

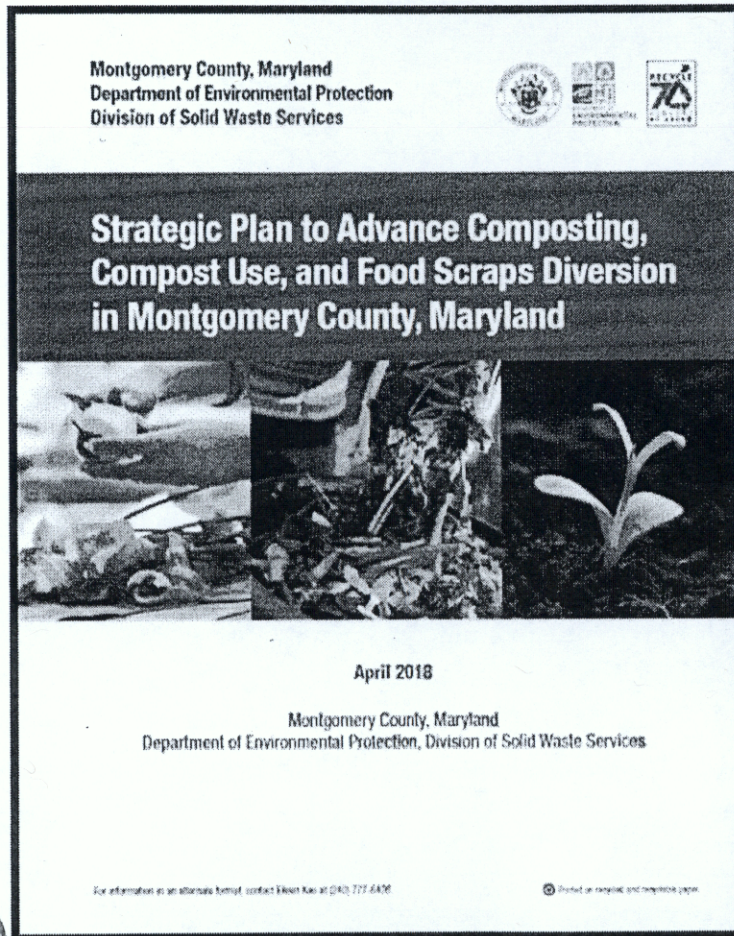
- Briefing document referred to key Directors
- Meetings to discuss major findings/recommendations
- Briefing for ACAO
- Revised plan to brief CAO/CE
- Strategic Plan completed and transmitted by CE to CC

April 12, 2018

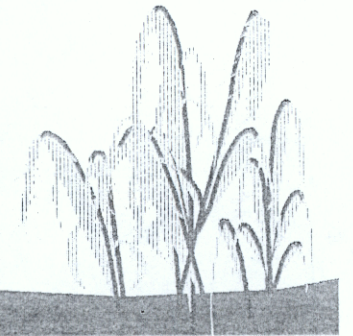




# The Strategic Plan



- Provides direction and strategies
- Strategic Plan, not an implementation document
- Frames continuing work
- Priority areas for FY19

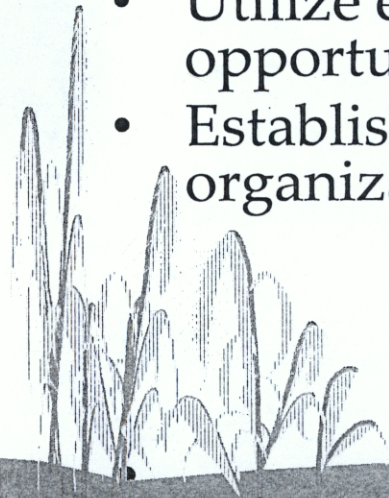




# Reducing Wasted Food/Channeling Food to Others

**Recommendations: collaboration, education, policies, data,  
reporting**

- Collaborate with community-based organizations to increase education
- Work with MCHHS, MCPS, and other school/educational institutions to reduce wasted food and educate students
- Utilize established groups to increase food donation opportunities
- Establish reporting by food recovery and assistance organizations

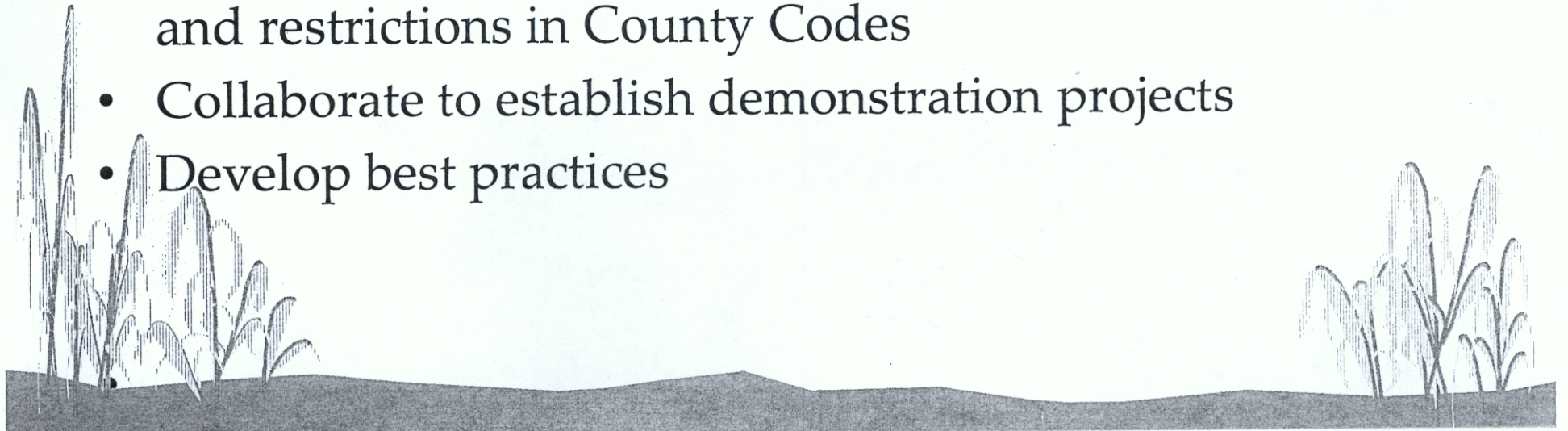




# In-Home, Backyard, and Community-Scale Composting

**Recommendations: collaboration, continuing education, regulations/codes, demonstrations**

- Continue educational efforts
- Coordinate inter-agency review of existing requirements and restrictions in County Codes
- Collaborate to establish demonstration projects
- Develop best practices

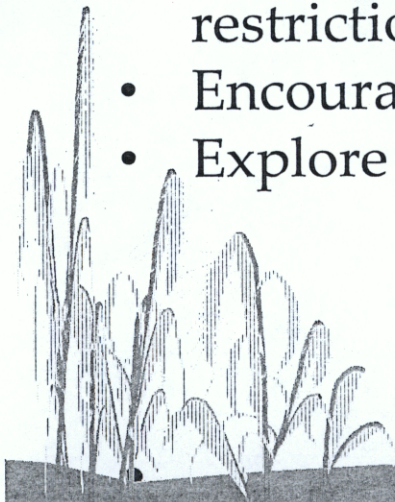




# On-Site Institutional and On-Site Business Composting

**Recommendations: continuing technical support/education, collaboration, regulations/codes**

- Identify significant generators with open settings
- Assess potential and level of interest
- Continue collaboration with businesses, institutions, and business groups
- Coordinate inter-agency review of existing requirements and restrictions in County Codes
- Encourage reporting of data
- Explore incentives such as grants for supplies, equipment

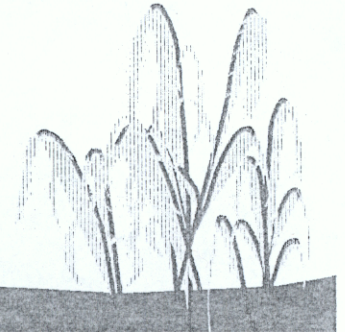
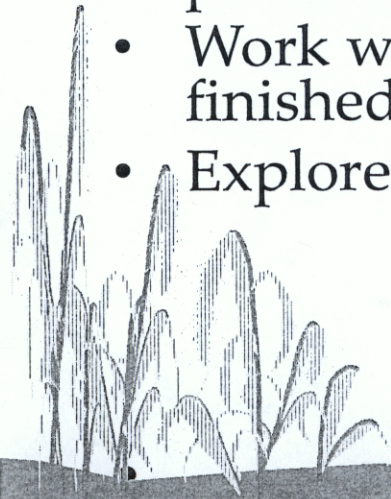




# On-Farm Composting

**Recommendations: collaboration, education, regulations/codes**

- Collaborate between County Ag Services, MDE, MDA and farming community
- Coordinate inter-agency review of existing requirements and restrictions in County Codes
- Develop education on State and local requirements, best practices, MDE permit requirements
- Work with MDA on their requirements for sale/distribution of finished product
- Explore incentives such as grants for supplies, equipment

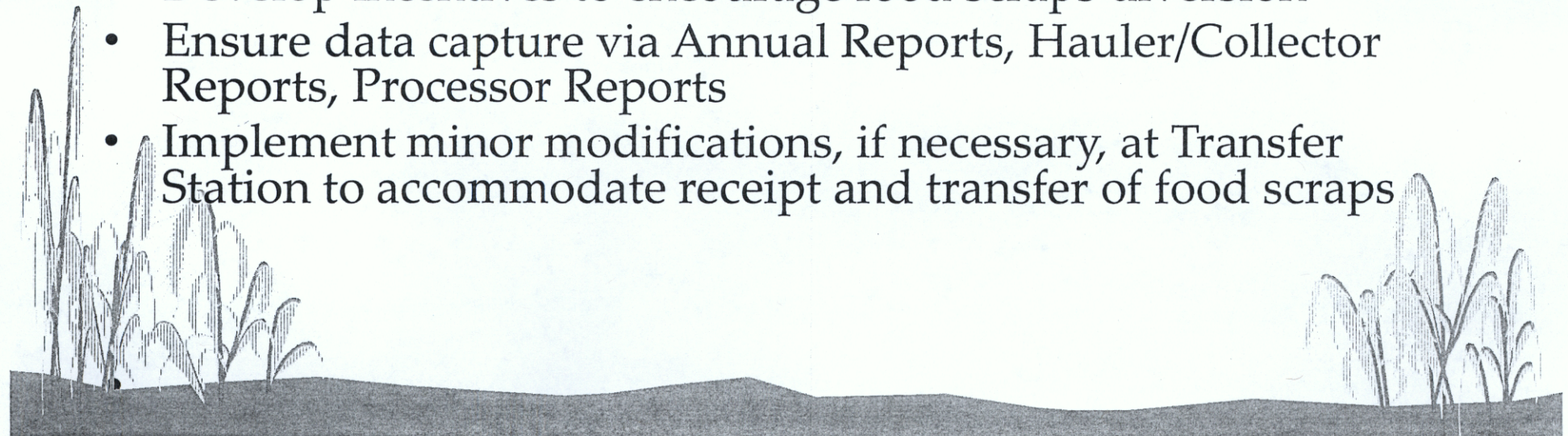




# Composting Capacity to Serve Montgomery County

**Recommendations: continuing/expanding collaborations, continuing education/technical assistance, priority efforts for FY19**

- Secure processing capacity
- Continue work with generators, collectors, composting/anaerobic digestion facilities, other jurisdictions
- Develop incentives to encourage food scraps diversion
- Ensure data capture via Annual Reports, Hauler/Collector Reports, Processor Reports
- Implement minor modifications, if necessary, at Transfer Station to accommodate receipt and transfer of food scraps

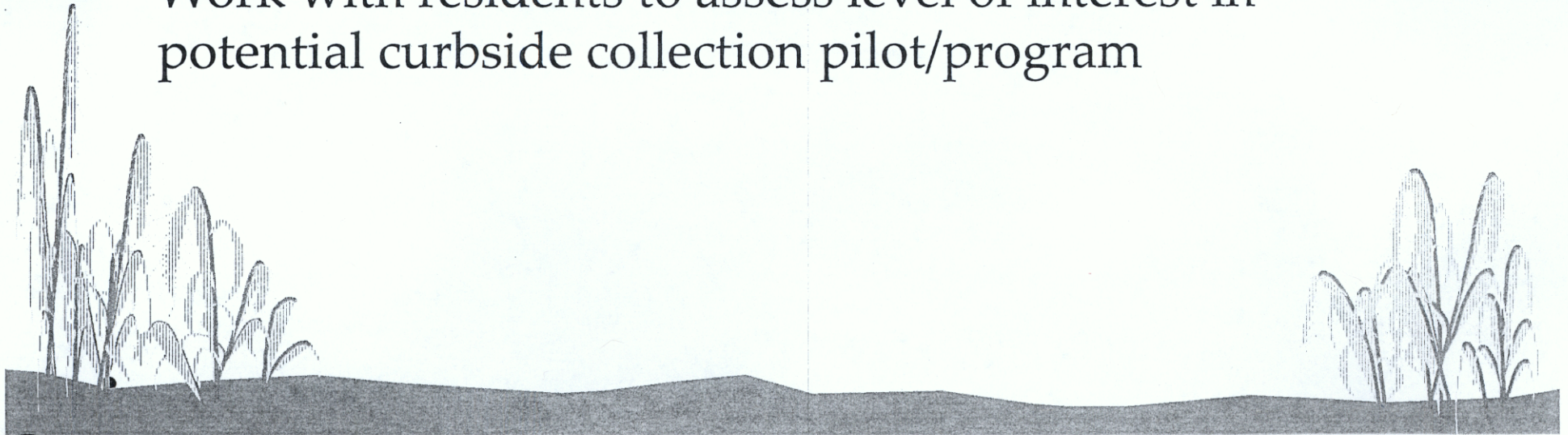




# Strategies to Maximize Food Scraps Collection at the Curb

**Recommendations: education to residents, assessment of interest, priority efforts for FY19**

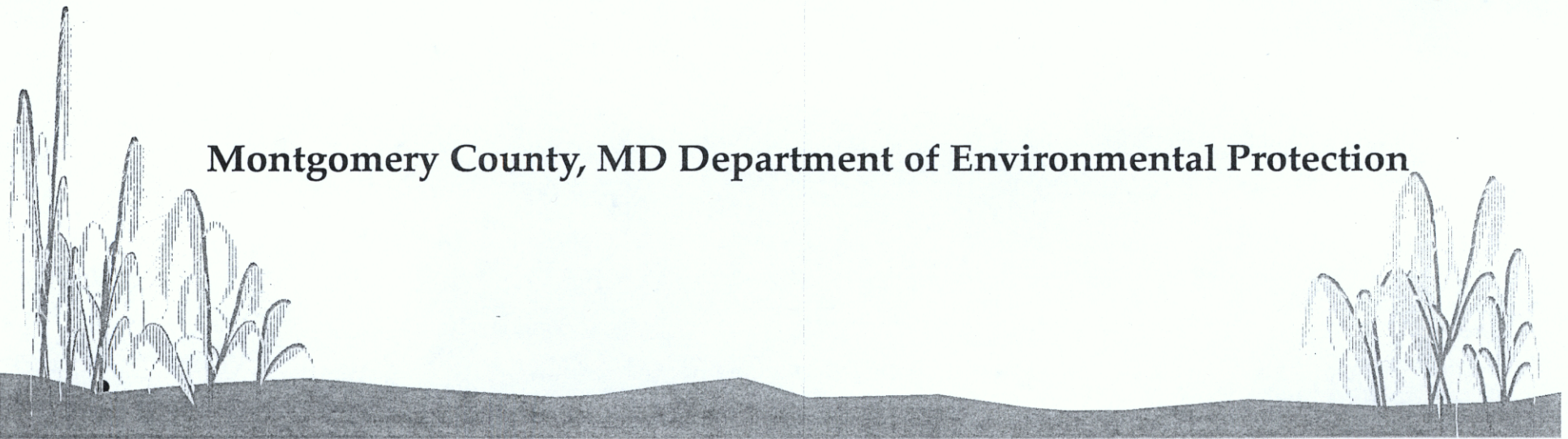
- Develop information and materials on best practices
- Provide education to single-family residents
- Work with residents to assess level of interest in potential curbside collection pilot/program





# Questions?

**Montgomery County, MD Department of Environmental Protection**



Env & Energy



OFFICE OF THE COUNTY EXECUTIVE  
ROCKVILLE, MARYLAND 20850

2018 APR 12 11:12:47

KL  
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Isiah Leggett  
County Executive

RECEIVED  
MONTGOMERY COUNTY

MEMORANDUM

April 12, 2018

TO: Hans Riemer, President, County Council

FROM: Isiah Leggett, County Executive 

SUBJECT: The Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion in Montgomery County

I am pleased to transmit the attached Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion in Montgomery County, developed by the Department of Environmental Protection (DEP). This Plan provides direction and a strong foundation of strategies to reduce wasted food in the County, increase food channeled to those in our community who are food insecure, and increase recycling of food scraps, through composting or other technologies such as anaerobic digestion. In developing this Strategic Plan, we identified and collaborated with many partners, including businesses, organizations, community groups, as well as individuals, who provided their expertise and ideas in formulating the recommendations.

As you know, Montgomery County has been a leader in protecting the health of our environment, and improving the quality of our land, air and water. Our efforts to accomplish this have included comprehensive programs to reduce waste, reuse items, and recycle everything possible to recycle. Food waste (which we refer to as food scraps) provides a great opportunity to expand in each of these important areas. Moving forward to pursue and expand these efforts will also help us make progress toward our goal to reduce waste and recycle 70 percent by the end of 2020. In addition, achievements in these efforts will preserve available capacity to process solid waste at the Shady Grove Processing Facility and Transfer Station, and the Resource Recovery Facility.

As part of my Recommended Fiscal Year 2019 Operating Budget, I have directed DEP to work to secure processing capacity to serve commercial generators of food scraps and increase commercial recycling, as well as work with residents of single-family homes to determine the viability of a future residential curbside food scraps recycling program. This Strategic Plan reflects my decisions to undertake activities in these two areas in FY19 to further increase recycling achievement.

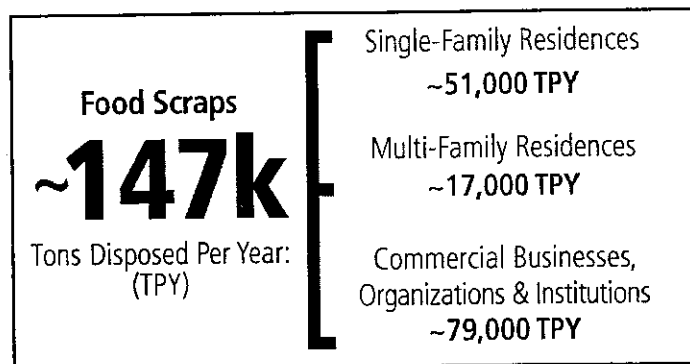
Please contact Patty Bubar, Acting Director, Department of Environmental Protection at 240-777-7786 or Eileen Kao, Chief of the Waste Reduction and Recycling Section at 240-777-6406, if you would like any additional information.

Attachment

# Executive Summary

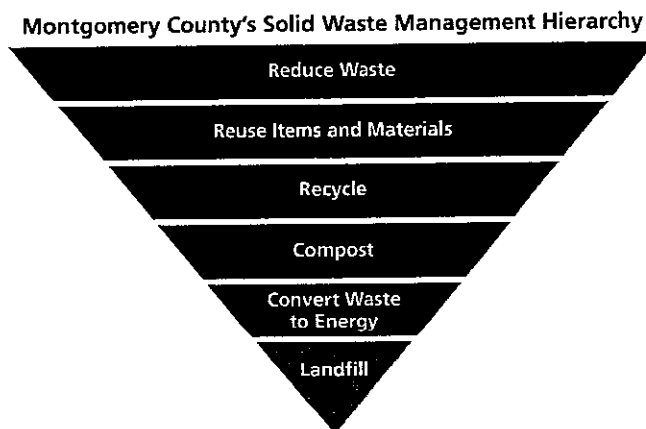
Montgomery County, Maryland has been a leader in recycling for over 30 years and continues to expand its waste reduction and recycling programs. The County continually strives towards its established goal to reduce waste and recycle 70% of all waste generated in the County by 2020. In calendar year (CY) 2015, Montgomery County's waste diversion rate was 61%, one of the highest in the United States (U.S.). As the chart below displays, food waste (referred to as food scraps) represent a significant portion of the County's solid waste disposed, and presents a significant opportunity to reduce, reuse, and recycle more.

## Food Scraps in Montgomery County, Maryland



Note: As Compared to 648,000 Overall Tons of Solid Waste Disposed Per Year

Furthermore, reducing wasted food and encouraging the donation of food to those in need correspond with the top priorities of the County's Solid Waste Management Hierarchy. Reducing waste, reusing materials, and recycling are the three top tier priorities of the County's Solid Waste Management Hierarchy as seen below.



Montgomery County has a longstanding commitment to protecting the environment and saving natural resources for the future. The County's Department of Environmental Protection (DEP) operates with an integrated solid waste management system, comprised of facilities, programs and services to manage solid waste in the most environmentally preferable manner, and cost-effectively. The County has a formal goal to reduce waste and recycle 70% of the waste generated by 2020, a waste reduction policy, and regulations in effect that require recycling across all segments of the diverse community, single-family residential, multi-family residential, and businesses, including non-profit organizations and all levels of government. In addition, DEP's education efforts are comprehensive and robust, and provide technical support and recommendations in efforts to reduce, reuse, and recycle more.

Over the years, DEP has provided assistance and guidance to individual residents, multi-family properties, and businesses in their efforts to separate food scraps and recycle them. One of the limiting factors preventing more widespread recycling of food scraps has been the lack of long-term, stable food scrap composting (or processing) facilities, able to accept and process food scraps to create a new product, namely compost. Despite this, DEP has continued its efforts to expand food scrap recycling through several initiatives.

DEP implemented food scrap recycling programs in on-site cafeterias in three county facilities to gain first-hand expertise and develop best practices. DEP has also actively participated in regional coordination on market development and worked with jurisdictions and the State of Maryland to draft Maryland's first Composting Regulations, adopted in 2015.

In addition, DEP had been performing planning and evaluation activities, among other efforts, looking to secure composting processing capacity for food scraps with the goal of further expanding recycling opportunities. In the meantime, the County Council enacted Bill 28-16, which requires DEP to develop a strategic plan to reduce excess food generation, reuse food that would otherwise be wasted, and increase the amount of food and other compostable waste that is composted. Bill 28-16 requires that DEP include in the strategic plan in consultation with numerous stakeholders, legislative, policy, metrics, and cost recommendations to reduce food scraps and increase composting based upon its evaluation of numerous specific considerations.

The establishment of food scrap reduction efforts and policies laid out in the strategic plan can significantly reduce the impact food currently places on Montgomery County's solid waste stream. The implementation of a food scrap recycling program in Montgomery County can be a major component toward achievement of the 70% recycling goal, while also staying consistent with principles of sustainable resource/materials management. In addition to advancing the County's recycling rate, diverting food scraps from disposal also preserves the limited available capacity at the Resource Recovery Facility (RRF) to process other – non-recyclable – materials as the County's trash tonnage continues to increase. If the RRF capacity is reached, as could occur without the implementation of a food scrap recycling program, the County would incur costs for bypassing excess materials that could not be processed by the RRF due to capacity constraints.

The Strategic Plan provides the direction, framework, and strategies for reducing wasted food including: educating generators on how to decrease the amount of excess food generated, giving food that would otherwise be wasted to organizations that serve people in need, and composting food scraps. Optimal waste management efforts prioritize eliminating or reducing the amount of waste generated to begin with as the most preferred and effective management technique. The next highest priority is to extend the usefulness of any product or material to the maximum extent possible through reuse. The next priority is to recycle or compost the material, depending on the material type. The composting process promotes the biological decomposition of organic material, such as food scraps, into a stable, humus-like product. The "finished" compost product can be used in various agricultural and environmental applications. Compost provides a demonstrated benefit to soil by suppressing plant diseases and pests, reducing or eliminating the need for chemical fertilizers, promoting higher yields of agricultural crops, and by improving overall soil structure. Compost is also a valuable stormwater management tool to reduce runoff volume due to the soil's increased water holding capacity and increased infiltration. Non-recyclable or non-compostable material for which disposal is necessary should be converted to energy. Landfilling is the least preferred method of managing solid waste.

To participate in the development of the Strategic Plan, DEP invited stakeholders to an initial meeting in June 2017. During the meeting, DEP presented goals and objectives for the Strategic Plan, relevant background information on the status of food scrap recycling efforts and requirements of Bill 28-16, and outlined its approach, process, steps and timing, including stakeholder participation. Stakeholders were invited to volunteer and participate in one of six working groups created by DEP: Reducing Wasted Food/Channeling Food to Others; In-Home, Backyard, and Community-Scale Composting; On-Site Institutional and On-Site Business Composting; On-Farm Composting; Composting Capacity to Serve Montgomery County; and Strategies to Maximize Food Scraps Collection at the Curb. DEP drafted chapters for each of the six-major focus areas and provided them to the stakeholder working groups for their review and comment. Stakeholders were asked to provide collective comments, information, and feedback on the draft chapters by November 8, 2017. The stakeholder comments (409 sets) were then reviewed, and the Strategic Plan was written. Some stakeholder comments have not been included at this strategic planning stage, but will be addressed in a later phase of implementation planning.

Recommendations for the six focus areas relate to collaboration, policies, regulations, data, infrastructure, education, and development of implementation plans. Future implementation plans would include timelines and cost estimates for associated activities, and assess and mitigate any potential impacts. Further additional research may be needed to identify required additions or changes to existing regulations, policies, or standard practices related to food scraps. Additional research on data and metrics are needed to further assess current efforts and identify additional sources of food scraps that should be included in the development of a food scrap recycling program. Identification of options to secure food scrap processing capacity at facilities to serve generators in the County is needed.

This executive summary provides a snapshot of the findings for each area of focus, along with the major recommendations.



## Reducing Wasted Food/Channeling Food to Others



### Findings

While Montgomery County, Maryland may be considered one of the wealthiest counties in the U.S., according to Feeding America, the nation's largest domestic hunger-relief network, 6.3% of the County's population is considered food insecure (i.e., they don't have consistent access to quality, nutritious food). Current practices for channeling "quality, nutritious" food to those who have unmet needs should be modified through collaboration and coordination with other established groups to include donation of food that would otherwise be wasted or thrown away. Donations of food by residents, businesses, and multi-family properties in the County can be affected by food labeling, specifically expiration or "use by..." or "best by..." dates. Expanded and targeted education of donors to understand what is "acceptable" in terms of donation of foods to others can reduce the amount of food that is wasted and disposed of as trash. Through efforts to increase food donations, the County could decrease the amount of food thrown away and decrease food insecurity, which are objectives of this Plan and the Montgomery County Food Security Plan.



### Recommendations

- Expand collaboration with community-based stakeholders to create awareness among residents, multi-family properties, and businesses of the importance of reducing wasted food and channeling wasted food to those who are food insecure.
- Work with the Montgomery County Department of Health and Human Services and others to provide input to the State of Maryland and other pertinent groups to further efforts to establish common terms, definitions, metrics, and practices to improve interconnectedness of food systems; encourage development of standardized food labels that are clear and consistent.
- Work with the Montgomery County Department of Health and Human Services, Montgomery County Public Schools, and other schools/educational institutions to develop policies to reduce the amount of wasted food and encourage food donation.
- Consider increased efforts to measure wasted food reduction initiatives, and consider collecting additional data on food recovery efforts by tracking food scraps generated and donated by businesses, non-profit organizations, and others, using existing reporting and other mechanisms.
- Gather and use data to measure food scraps reduction efforts and food recovery donation through reporting by food recovery and assistance organizations.
- Consider development of educational materials on food recovery and assistance programs, including guidelines on donating excess foods.
- Utilize established groups to increase food donation opportunities and to train donors on proper source-separation and storage of donated food.



### Resources

Resources which may include staffing, operating, and/or capital funds that are needed to support these recommendations are dependent on the specific details that should be determined in the development of an implementation plan.



# In-Home, Backyard, and Community-Scale Composting



## Findings

Montgomery County has promoted grasscycling (leaving grass clippings on the lawn after mowing), backyard and community-scale composting of yard trim materials through training, compost workshops and demonstrations, distribution of educational materials, and vermicomposting to recycle kitchen food scraps in-home. Over the long-term, the County has successfully used education and training to encourage residents to grasscycle and compost yard trim materials. At the Montgomery County Composting Facility, a maximum of 77,000 tons of materials may be processed annually, and DEP's efforts have encouraged many residents to manage their grass and leaves at the source. In fact, since 2007, DEP has also distributed over 38,000 backyard compost bins to residents to use for backyard composting. According to the County's most recent Waste Composition Study, yard trim materials accounted for less than 2% of the County's overall disposed waste stream, indicating that most yard trim is recycled through composting (via backyard/on-site, community, or composting facilities) or grasscycling. The County should evaluate the feasibility of encouraging residents to recycle food scraps through at-home, backyard, and community-scale composting programs.



## Recommendations

- Continue educational efforts on all forms of in-home, backyard, and community-scale composting, including providing compost training workshops and demonstrations on best practices for backyard and community-scale composting, as well as research and evaluation of other types of compost bins that are suitable for composting food scraps.
- Conduct a coordinated inter-agency review of existing requirements and restrictions pertaining to backyard/community-scale composting, and recommend regulatory changes to County zoning and applicable County codes to clarify, and support activities to include food scraps.
- Consider implementation of regulatory changes or modifications to promote and encourage proper backyard and community-scale composting activities.
- Consider increased collaboration with community-based stakeholders and other pertinent groups (i.e., The Maryland-National Capital Park and Planning Commission - Montgomery Parks, Montgomery County Public Schools, and interested residents, multi-family properties, and businesses or organizations) to establish community-scale composting demonstration projects throughout the County.



## Resources

Resources which may include staffing, operating, and/or capital funds that are needed to support these recommendations are dependent on the specific details that should be determined in the development of an implementation plan.



## On-Site Institutional and On-Site Business Composting



### Findings

According to the DEP's most recent Waste Composition Study, an estimated 79,000 tons of food scraps are disposed by the non-residential sector (comprised of businesses, organizations, and government). Yard trim materials, including grass clippings and leaves, are mandated for recycling, and are currently being recycled by businesses on-site (through grasscycling or composting) or are removed off-site by lawn care service providers for composting. Only 1.6% of non-residential waste disposed as trash includes grass clippings and leaves, demonstrating there is a high level of compliance and most yard trim is being properly managed in the non-residential sector.

DEP has identified a few businesses that have some type of on-site composting program in place where their food scraps or other organic materials generated on-site at the place of business are also composted on-site. To increase composting of food scraps, expanding on-site composting at businesses/commercial properties is one solution that could minimize the amount of food scraps disposed in the solid waste stream.



### Recommendations

- Continue efforts to expand educational activities to encourage businesses that may wish to set up on-site food scrap recycling programs.
- Identify institutions and businesses that generate significant quantities of food scraps and assess potential for on-site composting activities; provide educational materials and trainings; provide follow-up assistance to address issues/concerns; and evaluate.
- Continue to work with businesses, institutions, and business groups (such as the Chambers of Commerce, business associations, government agency representatives, and others) to encourage businesses to set up and maintain on-site food scrap composting programs.
- Encourage businesses and institutions to report data on the amount of food scraps composted on-site to measure on-site composting efforts.
- Explore incentives such as grants for businesses and institutions to purchase necessary supplies and equipment to facilitate the collection and on-site composting of food scraps.



### Resources

Resources which may include staffing, operating, and/or capital funds that are needed to support these recommendations are dependent on the specific details that should be determined in the development of an implementation plan.



## On-Farm Composting



### Findings

The U.S. Department of Agriculture's 2012 AgCensus Report estimated there are 540 farms (average size 118 acres) in Montgomery County, of which 42% are farmed as a primary occupation. In 1980, Montgomery County created the Agricultural Reserve, which includes 93,000 acres of land and is zoned to encourage agricultural uses. The agricultural community has routinely composted organic material, such as manure, on-site to reduce the amount of waste, and typically, these materials are generated on-site, as a by-product of their farm operation. The finished composted material is then used by the farm to rejuvenate its soils. Currently, DEP is aware that limited amounts of food scraps and other organic materials from off-site sources are being composted on-site at some farms. To increase composting of food scraps, expanding on-farm composting is one solution that could minimize the amount of food scraps disposed in the solid waste stream.



### Recommendations

- Work with Maryland Department of the Environment, Maryland Department of Agriculture, the Montgomery County Office of Agriculture, Soil Conservation District, Cooperative Extension Service, and others to meet with the agricultural community to discuss on-farm composting of food scraps.
- Convene a multi-agency group to review and update County zoning and other applicable County codes, if necessary, to promote increased opportunities for on-farm composting of food scraps and other organic materials.
- Conduct research to assess expansion of on-farm composting activities, including identifying farmers interested in on-farm composting.
- Develop technical assistance to generators and farmers to facilitate on-farm composting of food scraps, including information on State and local regulations applicable to on-farm composting of food scraps, as well as educational materials, which may include design standards, guidelines, and best practices.
- Consider policies, legislation, and regulations that promote and encourage the use of finished compost in the region.
- Explore incentives such as grants for farmers to purchase necessary supplies and equipment to facilitate the collection and on-farm composting of food scraps.



### Resources

Resources which may include staffing, operating, and/or capital funds that are needed to support these recommendations are dependent on the specific details that should be determined in the development of an implementation plan.





# Composting Capacity to Serve Montgomery County



## Findings

The commercial sector generates over half of all waste generated in the County and disposes of approximately 79,000 tons of food scraps annually. Therefore, encouraging businesses to set up food scrap composting programs for their workplaces provides the County the opportunity to divert a significant amount of waste from the overall waste stream. According to data from CY2015 Annual Business Waste Reduction and Recycling Reports, 30 businesses reported they source-separated food scraps for recycling, sent to processing facilities through collection by recycling collection companies. Numerous businesses have expressed to DEP an interest in separating their food scraps for recycling. DEP developed food scrap recycling collection programs for pre-consumer food scraps generated in cafeterias in three County facilities: the Executive Office Building, the Council Office Building, and the Public Safety Headquarters Building. DEP used these programs to develop educational materials and training, and recommended best practices when implementing food scrap recycling programs. However, a limiting factor in businesses setting up food scrap recycling collection programs has been the lack of long-term, stable food scrap composting processing facilities to serve the region.

More recently, there has been an increasing availability of processing facilities in the regional market to accept and process food scraps for recycling. DEP should build upon its existing efforts to County businesses, and provide financial incentives to expand the current number of businesses that source separate food scraps, contract for food scrap recycling collection service, and encourage development and expansion of processing facilities to increase capacity for additional tonnages of food scraps for recycling.



## Recommendations

- Continue to identify businesses/multi-family properties that generate significant quantities of food scraps; provide education and training; and provide resource lists of food scrap composting processing facilities and recycling collection service providers that offer food scrap recycling collection services.
- Continue to promote use of the Prince George's County Western Branch Composting Facility for recycling of commercially-generated food scraps and other acceptable organic materials.
- Continue to research opportunities to secure additional capacity for food scraps and other organic material generated in the County that can be processed at regional composting facilities, and other facilities that utilize other technologies such as anaerobic digestion.
- DEP should continue to work with composting and/or anaerobic digestion facilities, and should pursue and attain agreement(s) to secure stable processing capabilities for additional tonnages of food scraps generated in the County, through the issuance of Request for Proposals (RFPs).

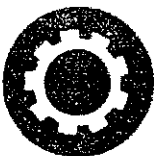


# Composting Capacity to Serve Montgomery County



## Recommendations (continued)

- DEP should structure agreements to secure stable processing capacity, and to offset processing costs to incentivize and induce increased recycling of food scraps.
- DEP should establish Executive Regulations to support the expansion of food scrap processing capacity:
  - A regulation to establish differential tip fees to motivate generators to source-separate food scraps and other organics, and encourage collectors to provide recycling collection services for these materials.
  - A regulation to establish rules to ensure the County pays its contract processor(s) only for food scraps and other organic materials that are generated within the County.
- Work with licensed collectors/haulers that collect food scraps and other organic materials from businesses, organizations, and government facilities, to provide information, education, and trainings.
- Continue and expand work with business owners/managers, Chambers of Commerce, business associations, representatives of government agencies, and others to raise awareness of food scrap recycling programs and increase participation.
- Consider various metrics to obtain data regarding the amount of food scraps available to better estimate processing capacity needs and document the amount of food scraps and other organics collected for recycling.
- DEP should implement any necessary minor modifications to the Transfer Station Annex Building to accommodate receipt and transfer of food scraps for recycling.
- Longer-term, DEP should explore feasibility of using in-County capacity, including County-owned property(ies) for processing source-separated food scraps and other acceptable organic materials.



## Resources

In FY19, \$432,000 funds a new, dedicated position in DEP to manage the Commercial Food Scraps Recycling Program, and provides for minor modifications that may be necessary to the Transfer Station Annex Building to accommodate receipt and transfer of food scraps for recycling. The new Program Manager will work to secure capacity to process and recycle food scraps (and potentially other acceptable organics), and also develop incentives to increase recycling of food scraps in the commercial sector. These incentives may include establishment of differential tip fees at County solid waste acceptance facilities to motivate generators to source-separate food scraps and potentially other organics, and encourage collectors to provide recycling collection services for these materials.

Additional resources, including staffing, operating, and capital costs, may be needed in the future to support these recommendations, dependent on the specific details determined in further development of an implementation plan.



# Strategies to Maximize Food Scraps Collection at the Curb



## Findings

As part of its weekly curbside recycling collection provided to all approximately 217,000 single-family households in the County, DEP collects yard trim. These materials are transported to the County's Shady Grove Processing Facility and Transfer Station, where the grass clippings and leaves are loaded and transported to the Montgomery County Composting Facility. In CY2015, approximately 66,000 tons of material was processed at the County's Composting Facility; 77,000 tons may be processed annually. The finished product is a soil amendment called Leafgro®, which is bagged, distributed to retailers and sold; the product is also sold in bulk. According to the County's most recent Waste Composition Study, it is estimated that approximately 51,000 tons of food scraps are disposed by the single-family sector annually. Diverting food scraps and other acceptable organic materials for recycling would help the County towards achievement of the goal to recycle 70% by 2020. DEP should consider the feasibility of conducting a pilot program to provide single-family residential curbside recycling collection of food scraps and other organic material leveraging existing collection services, and available capacity at its facilities for operational and cost efficiencies.



## Recommendations

- DEP should develop information and materials on best practices, provide education to single-family residents about separation and recycling of food scraps, and utilize its education and technical assistance offerings to assess the level of interest residents have to voluntarily participate in any potential residential curbside collection pilot or program.
- DEP should consider implementation of a curbside food scraps recycling collection pilot for single-family households, to examine numerous aspects (i.e., education to the broader community and to participating residents, containerization, collection, processing, finished product, monitoring, and collecting data and feedback for evaluation).
- DEP should pursue any necessary agreements and Maryland Department of the Environment permit amendments to update existing processes at the Montgomery County Composting Facility to incorporate food scraps and other acceptable organic materials (such as soiled paper and compostable food service ware products).
- DEP should determine any adjustments to its receiving procedure at the Montgomery County Shady Grove Processing Facility and Transfer Station, and identify any equipment at the Montgomery County Composting Facility that may be necessary in the future to properly compost food scraps and other organic materials, and mitigate potential odor and runoff issues.



## Resources

In FY19, \$132,000 funds DEP staff to provide education and technical assistance to residents of single-family homes to increase awareness and understanding about food scraps separation and recycling. Staff will develop best practices, and use these to create educational materials, and conduct meetings and presentations to residents. Staff will also assess the level of interest residents have to participate in a voluntary residential curbside recycling collection pilot which may be planned in the future.

Additional resources, including staffing, operating, and capital costs, that are needed in the future to support these recommendations are dependent on the specific details determined in further development of an implementation plan.



# Introduction

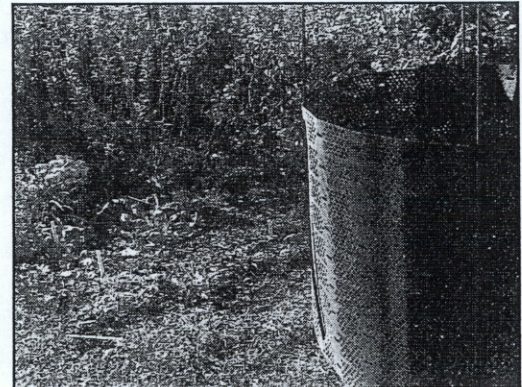
Montgomery County, Maryland strives to minimize the amount of waste generated and disposed as trash in the County, through various waste reduction, reuse, and recycling programs and initiatives. The County has a goal to reduce waste and recycle 70% of all waste generated in the County by 2020. In Calendar Year 2015, a total of 1,116,511 tons of waste were generated in the County. Of this amount, 625,407 tons of materials were recycled. Along with the County's 5% source reduction credit awarded by Maryland Department of the Environment (MDE) for documented waste reduction efforts, the County's waste diversion rate was 61%.<sup>1</sup> The 70% waste diversion and recycling goal, established through Executive Regulation (ER) 7-12, was predicated on the premise that certain materials are mandated for recycling, and that additional materials would be recycled once anticipated markets developed, such as the recycling of food scraps and other organic material (food-soiled paper and compostable food service ware).

The non-residential, or commercial sector, generates the greatest percentage of the waste that is generated in the County. Approximately 51% of the waste generated in CY2015 was generated by the commercial sector, which includes businesses, not-for-profit organizations, institutions, and Federal, State and local government offices. In 2015, there were an estimated 33,000 businesses and organizations in the County with an estimated employment of 528,000 people.<sup>2</sup>

The single-family residential sector generated approximately 40% of the waste stream, while the multi-family sector generated an estimated 9% of the waste stream. It is important to note that the Department of Environmental Protection (DEP) provides weekly recycling collection services to all single-family households in the County (approximately 217,000), and weekly refuse collection service to approximately 93,000 single-family households (mostly in the down-County area). Residents living in municipalities, such as the cities of Gaithersburg, Rockville and Takoma Park, receive curbside collection services through their municipalities, and not from the County. All multi-family properties (apartments and condominiums with 7 or more dwelling units), and all businesses, organizations and institutions, contract recycling and refuse collection service with private collectors, or they may self-haul or back-haul their materials to acceptance facilities.

According to the County's most recent Waste Composition Study, food scraps represent a significant percentage of the County's overall disposed solid waste stream.<sup>3</sup> An estimated 147,000 tons of food scraps are disposed annually in the County. Of this amount, it is estimated that the commercial sector disposes of 79,000 tons of food scraps each year, followed by 51,000 tons disposed annually by single-family households and 17,000 tons disposed by multi-family residents each year.

The commercial sector, therefore, provides the greatest opportunity to divert these materials from the waste stream and recycle them instead, contributing to increases in the County's recycling achievement.



*Backyard composting using the bin that DEP provides to interested residents.*



*Educational poster on food scraps recycling.*

- 1 Montgomery County, MD (2015) Recycling Rate and Tons Disposed by Calendar Year. Department of Environmental Protection, Division of Solid Waste Services. <http://www.montgomerycountymd.gov/sws/programs/recycling-rate.html>
- 2 Maryland Department of Commerce (2017) Brief Economic Facts: Montgomery County, Maryland. [https://static1.squarespace.com/static/5873c778e6f2e14a3529e892/t/58d13b956b8f5bad3a97fa0e/1490107300088/Montgomery+County+Brief+Economic+Facts\\_2016.pdf](https://static1.squarespace.com/static/5873c778e6f2e14a3529e892/t/58d13b956b8f5bad3a97fa0e/1490107300088/Montgomery+County+Brief+Economic+Facts_2016.pdf)
- 3 SCS Engineers (2013) Montgomery County Waste Composition Study - Summary of Results. Presented to Division of Solid Waste Services, Department of Environmental Protection, Montgomery County, MD. <http://www.montgomerycountymd.gov/sws/resources/files/studies/waste-composition-study-130726.pdf>



A review of business listings from the 2016 Dun & Bradstreet (D&B) Business Database shows that there are more than 1,300 businesses in the County that have the potential to generate larger quantities of food scraps that could be recycled.

Through the years, DEP has provided technical assistance and education to businesses that generate significant amounts of food scraps in their efforts to reduce, reuse, and recycle this material. To increase efforts to recycle food scraps, the County has implemented several commercial food scrap recycling demonstration projects, focused on recycling of pre-consumer food scraps. DEP has also successfully promoted backyard and on-site composting of yard trim materials, such as grass clippings, leaves, brush and garden trimmings, as well as grasscycling (leaving grass clippings on the lawn after mowing). In addition, DEP has provided education to residents on vermicomposting, for those who are interested in recycling food scraps using worm bins.

However, there has been limited food scrap recycling processing capacity in the State and region, which has contributed to the slow expansion of food scrap recycling programs in the County. Just recently, a number of processing facilities in Maryland have been permitted by the State through MDE to accept food scraps for composting processing. There are also several facilities that are in the planning/design/construction phase, that should have the ability to process food scraps generated in the County. In addition, other food scrap processing technologies are expanding in the country, such as anaerobic digestion (AD) which is being pursued by some operators in the region.

DEP has been monitoring the expansion of these opportunities as it continues its efforts in planning for food scrap recycling in the County.

During this time, the Montgomery County Council enacted, and the County Executive signed Bill 28-16<sup>4</sup> on November 28, 2016, requiring DEP to develop a Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion. The purpose of the Strategic Plan is to identify: County policies and initiatives to reduce waste and support composting; models and best practices used by other jurisdictions; metrics for assessing and increasing food scraps diversion, composting and compost use; goals and associated timelines for achieving certain levels of food scraps diversion; challenges to meeting these goals and solutions for overcoming such challenges; potential sites for composting operations; environmental and public health benefits of composting and food scraps diversion; and cost estimates and potential economic and environmental benefits of implementing the Strategic Plan.

This Strategic Plan provides the direction, framework, and strategies to reduce wasted food, channel excess food to others to meet needs, increase recycling of food scraps through a variety of means, and encourage use of finished compost product. Pursuit of food scrap reduction and recycling efforts as described in the Strategic Plan will also reduce the amount of food scraps processed at County disposal facilities and preserve limited disposal capacity. This Strategic Plan includes a background, assessment of current efforts, and challenges associated with maximizing participation in six specific focus areas: reducing wasted food and channeling food to others; in-home, backyard and community-scale composting; on-site institutional and on-site business composting; on-farm composting; composting capacity to serve Montgomery County; and strategies to maximize collection of food scraps at the curb. In addition, the Strategic Plan includes recommendations in each focus area to address policy, legislation, regulations, education, metrics, and resources.



*Stakeholders attend June 2017 meeting during which DEP describes details to develop the Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion.*



*November 2017 meeting during which each of the six Working Groups share information on their efforts to support development of the Strategic Plan.*

4

County Council for Montgomery County, MD (2016) Bill No. 28-16, enacted 15 Nov 2016.

[https://www.montgomerycountymd.gov/council/resources/files/lims/bill/2016/Signed/pdf/3120\\_1030\\_Signed\\_10052017.pdf](https://www.montgomerycountymd.gov/council/resources/files/lims/bill/2016/Signed/pdf/3120_1030_Signed_10052017.pdf)





# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor  
Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

July 9, 2018

The Honorable Roger Berliner  
Chair, Transportation, Infrastructure, Energy and Environment Committee  
Montgomery County Council  
100 Maryland Avenue  
Rockville, MD 20850

Dear Chairman Berliner:

In advance of your briefing on the Montgomery County Department of Environmental Protection's (DEP) *Strategic Plan to Advance Composting, Compost Use, and Food Scraps Diversion in Montgomery County, Maryland* (the Plan), the DEP thought it may be helpful for me to provide some information and context on the issue of food recovery and the County's strategic plan.

MDE considers food recovery to be a crucial aspect of an overall sustainable materials management program. In July 2017, the first Statewide waste characterization study was published, showing that Maryland residents and businesses dispose of more food than any other material in the waste stream, by a significant margin. MDE has focused on this issue extensively over the past several years, studying and making regulatory revisions relative to composting, conducting outreach through a Food Recovery Summit, and most recently embarking on a study of methods to improve organics recovery, including by improving infrastructure for food recycling and donation. We recognize that the counties play an essential role in implementing food recovery programs within their communities.

For the above reasons, we consider food recovery worthy of the type of in-depth strategic planning that Montgomery County has undertaken with the development of the Plan. In February, we met with Eileen Kao and William Broglie, then the Acting Chief of the Division of Solid Waste Services, to hear about and discuss the plan. We were pleased to see that the County was conducting a thorough assessment of the challenges and opportunities to reduce wasted food, divert edible food to those in need, enhance backyard and community composting, and plan for larger scale food recycling efforts. Importantly, the plan recognizes that food recovery is an issue that crosses many sectors, calling for partnerships across local agencies, MDE, local businesses, the agricultural sector, and community-based groups.

We look forward to continuing to work with Montgomery County on sustainable materials management, including on food recovery, as both the State and County continue to move forward on this important issue.

Sincerely,

Kaley Laleker  
Acting Director, Land and Materials Administration

cc: Patty Bubar, Director, Montgomery County Department of Environmental Protection  
Willie Wainer, Chief, Division of Solid Waste Services  
Eileen Kao, Chief, Waste Reduction and Recycling Section