



# **Media Borough Implementation of Food Scraps Diversion Program**

## **Project #613**

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Task #13

SCS Engineers is a waste management, environmental engineering, consulting, and construction firm. Nothing herein shall be considered or interpreted to be the provision of legal services or advice.

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A – Survey Questions

## 1 STATEMENT OF PROBLEM

Media Borough (Borough) has a long history of diverting materials from disposal. The Borough contracts with a private hauler to provide curbside recycling services to about 2,000 households. The Borough has established the Compost Planning Group (Group) to consider programs that divert organic materials from disposal. The Group is led by a borough council member and meets on a bi-weekly basis.

The Group is interested in implementing a program that provides separate curbside collection of food scraps from residents. In 2018, the Borough intends to launch a pilot project to understand how such a program might be successful in the Borough. Over time, the Borough desires to implement a program that provides curbside service to all households in the Borough. For the pilot project, the Borough has coordinated with a farm, Kitchen Harvest, located about four miles from the Borough that composts organic materials. Kitchen Harvest will be responsible for collection of food scraps from up to 100 homes for one year. The material will be composted at the local farm.

Although two of the most significant hurdles to implementing a program have been overcome (identifying a collection service and composting site), the Borough seeks ideas and recommendations for other program logistics such as collection frequency, container types and sizes, public education and outreach, equipment requirements, costs, and compliance measures. Curbside food scraps collection continues to grow in popularity across the United States. In order to provide the Borough guidance on program operations, five existing curbside food scraps collection programs were identified and the details of each program were recorded. SCS also compiled tips and lessons learned from each of these programs to help the Borough avoid pitfalls and facilitate program success.

## 2 SUMMARY OF WORK PERFORMED

### **Work Tasks and Outcomes:**

This section summarizes the tasks to complete this project.

#### **Task 1 – Identify Local Governments to Survey**

The Borough and SCS identified local governments in Pennsylvania and in other areas of the Northeast and Mid-Atlantic area that have implemented a pilot or permanent curbside residential food scraps collection program. SCS hosted a conference call with the Borough to select the local governments to interview as part of this study. Once the list was agreed upon, SCS contacted representatives from each local government to gauge their interest in being interviewed for details on their curbside food scraps collection program. All five of the local governments contacted agreed to participate in this study.

#### **Task 2–Conduct Interviews**

The second task was to conduct phone interviews with representatives of each of the selected local governments to obtain information on their curbside food waste collection programs. The Borough provided SCS a list of priority questions to obtain information. The list of questions was further refined and expanded into a master question list that was asked to all local governments. Information gathered included program logistics, participation, costs, collection requirements, and end-markets, among other issues. The following local governments were surveyed:

- Town of Hamilton/Town of Wenham, MA;
- Municipality of Princeton, NJ;
- City of South Portland, ME;
- Borough of State College, PA;
- City of Takoma Park, MD.

#### **Task 3 – Create Food Scrap Project Profiles**

The information obtained from Task 2 was organized for each local government and SCS developed project profiles for each curbside food scraps collection program. The structure of each project profile was the same and was organized by pilot project and existing program.

#### **Task 4 – Program Summary and Recommendations**

Based on the information obtained through interviews with selected local governments, SCS noted specific tips and lessons learned from local governments that have implemented curbside food scraps collection programs.

#### **Task 5 – Final Report**

The research and information obtained as part of this study is included in this report to DEP and the Borough. The report addresses comments and feedback provided by DEP.

## 3 RESULTS

### BACKGROUND

Media Borough has a strong desire to divert materials from disposal. Recyclable materials, including newspaper, office paper, corrugated cardboard, other mixed paper, metal cans, glass bottles and jars, and all plastic containers, are collected curbside from about 2,000 households. The Borough contracts with a private hauler for the collection of recyclable materials on a weekly basis.

The Borough looks forward to expanding their curbside diversion program to include food scraps. The Borough's Composting Planning Group is studying the feasibility of a program and is making plans to launch a pilot project in 2018. A broad approach for a pilot project is developed and a number of activities by the Group have laid the groundwork for its implementation, including:

- **Participants** – The Borough launched a survey in September 2017 to identify residents willing to participate in the pilot project. Over 100 residents have volunteered to participate and the Borough will include the first 100.
- **Collection and Compost Facility** – One of the Group's members, Kitchen Harvest, has agreed to assist with the pilot project by collecting food scraps curbside from 100 households on a weekly basis and transporting the material to their farm for composting for a period of one year. The Borough has agreed to pay Kitchen Harvest \$200 per household for the entire year the pilot project will be in operation.

Details of the curbside food scraps program are still being worked out. To provide the Borough with information on what other local governments have done to implement similar programs, SCS worked with Borough staff to select five municipalities to survey for specific program planning, operational, and cost information. The questions SCS used to interview local governments are included in **Appendix A**. These questions were developed by the Composting Planning Group and were refined and expanded by SCS to obtain a complete overview of the existing food scraps collection program at each municipality.

A number of local governments across the country have implemented residential curbside food scraps collection programs. Understanding the successes, obstacles, and challenges experienced by others will help the Borough make informed decisions on how to set-up their specific program.

### PROJECT PROFILES

The following local governments were selected to interview as part of this project:

- Town of Hamilton/Town of Wenham, MA;
- Municipality of Princeton, NJ;
- City of South Portland, ME;

- Borough of State College, PA;
- City of Takoma Park, MD.

**Tables 1 – 5** provide project profiles for each of the local government curbside food scraps collection programs surveyed. Note that four of the programs surveyed implemented a pilot curbside collection program that has transitioned into a permanent program that serves all residents. One program surveyed (City of South Portland) is finishing their pilot project in May 2018 and at this point does not plan to continue their city-supported curbside food scraps program.

**Table 1. Curbside Food Scraps Collection in the Towns of Hamilton and Wenham, MA**

<b>Municipality</b>		Town of Hamilton, MA Town of Wenham, MA
<b>Program Contact</b>		Gretel Clark Chairwoman Hamilton Recycling Committee <a href="mailto:gretel@milesriver.com">gretel@milesriver.com</a> Phone: (978) 468-7206
<b>Pilot Project</b>	Start Date	Phase 1: March 2009 Phase 2: April 2010
	Length	Phase 1: 8 weeks Phase 2: 1 year
	Households	Phase 1: 75 households Phase 2: 600 households
	Household Selection	Sign-up
	Containers	<ul style="list-style-type: none"> <li>• 2-quart kitchen counter pail</li> <li>• 13-gallon curbside cart</li> </ul>
	Collection Frequency	Weekly
	Hauler	Private contractor
	Diversion Impact	10-12 pounds/household
	End Use Facility	Composter – Brick End Farms
	Cost to Residents	Phase 1: No charge Phase 2: \$75/household for collection plus \$29 for collection containers (first 500 residents received free containers paid for by a grant)
	Cost to Local Government	Phase 2: <ul style="list-style-type: none"> <li>• \$46,000 to hauler for collection that was paid for by user fees;</li> <li>• \$15,000 for containers that was paid for by a combination of user fees, a state grant, and private donations</li> </ul>
	Details	Program was developed and implemented by a volunteer recycling committee. The committee conducted education and outreach initiatives and surveyed residents before, during, and after the pilot project for feedback.

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<b>Program Contact</b>		Gretel Clark Chairwoman Hamilton Recycling Committee <a href="mailto:gretel@milesriver.com">gretel@milesriver.com</a> Phone: (978) 468-7206
<b>Existing Program</b>	Start Date	April 2012
	Program Type	Standard offering (all residents issued containers)
	Households	~1,300 in Hamilton (half of about 2,600 households participate) ~750 in Wenham (half of about 1,500 households participate) All households have access to program.
	Household Type	Single-family and multi-family residential properties (no apartment buildings in the towns)
	Containers	<ul style="list-style-type: none"> <li>• 2-quart kitchen counter pail</li> <li>• 13-gallon curbside cart</li> </ul>
	Container Odor Control Mechanism	None
	Compostable Bags/Liners	Not provided, but residents may purchase separately at local hardware stores
	Food Scraps Co-collected with Yard Waste?	No
	Collection Frequency	Weekly
	Hauler	Private Contractor
	Collection Method	Rear-loader split body truck for collection of recyclable materials and food scraps
	Diversion Impact	9-12 pounds/household/week
	End Use Facility	Composter – Brick End Farms
	Contamination	Not identified as an issue
Compost/End Product Available	Yes, free to residents	



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<b>Existing Program</b>	Materials Accepted	<ul style="list-style-type: none"> <li>• All types of food scraps</li> <li>• Soiled paper</li> <li>• Cat litter</li> <li>• Compostable bags/liners</li> <li>• Compostable plastics (accepted, but not encouraged)</li> </ul>
	Education Activities	<ul style="list-style-type: none"> <li>• Solid waste “hot line”</li> <li>• Colorful pamphlet provided with delivery of carts/pails</li> <li>• Volunteer “neighborhood captains” encourage participation</li> <li>• Presentations at community meetings and for board/citizen organizations</li> <li>• News releases</li> <li>• Composting technical assistance</li> </ul>
	Cost to Residents	No separate solid waste/recyclable/composting fee; program paid for through property taxes
	Cost to Local Government	<ul style="list-style-type: none"> <li>• \$16,000 annual fee to private hauler for collection</li> <li>• Tipping fee at the compost site for materials collected (currently \$40/ton compared to a tipping fee of \$70/ton for solid waste)</li> <li>• Towns cut disposal costs by 15-25 percent with curbside food scraps collection</li> </ul>
	Impacts to Solid Waste Program	<ul style="list-style-type: none"> <li>• Hamilton reduced trash collection to every other week (EOW); food scraps and recyclable materials collected weekly; estimated trash reduction by 32 percent; recently town reinstated weekly trash collection due to a small number of residents voicing opposition to EOW collection; program leaders are preparing to launch campaign to return to EOW collection for trash</li> <li>• Wenham has kept weekly trash collection and measured an 18 percent decrease in trash collection</li> </ul>
	Regulatory Impacts	Required changing bylaws of the towns to accommodate the separate collection of food scraps

**Table 2. Curbside Food Scraps Collection in the Municipality of Princeton, NJ**

<b>Municipality</b>		Municipality of Princeton
<b>Program Contact</b>		Robert Hough Director of Infrastructure and Operations Municipality of Princeton <a href="mailto:rhowgh@princetonnj.gov">rhowgh@princetonnj.gov</a> Phone: (609) 497-7639
<b>Pilot Project</b>	Start Date	Early 2011
	Length	3 months
	Households	100
	Household Selection	Sign-up
	Containers	<ul style="list-style-type: none"> <li>• 1 or 2 gallon kitchen counter pail</li> <li>• 32-gallon wheeled curbside collection cart</li> </ul>
	Collection Frequency	Weekly
	Hauler	Private contractor
	Diversion Impact	Not measured
	End Use Facility	Composting facility and/or farms
	Cost to Residents	None
	Cost to Local Government	<\$10,000 (paid for using New Jersey Clean Communities grant funds)
Details	Goals of the pilot project included gauging whether or not those who signed-up actually participated and participated correctly, better understand the amount of food scraps that could be diverted (Municipality noted they had significantly overestimated the amount of food scraps that would be collected through the program – not all food scraps will be collected/diverted)	

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<b>Municipality</b>		Municipality of Princeton
<b>Program Contact</b>		Robert Hough Director of Infrastructure and Operations Municipality of Princeton <a href="mailto:rrough@princetonnj.gov">rrough@princetonnj.gov</a> Phone: (609) 497-7639
<b>Existing Program</b>	Start Date	September 2011
	Program Type	Sign-up (via website or phone call to the municipality)
	Households	800-900 (7,200 households with access to the program)
	Household Type	Single-family residences and one senior citizen complex
	Containers	<ul style="list-style-type: none"> <li>• Kitchen counter collector (1-2 gallons)</li> <li>• 32-gallon wheeled curbside collection cart</li> </ul>
	Container Odor Control Mechanism	None
	Compostable Bags/Liners	Yes, municipality provides a box of 25 bags annually and box of baking soda to each participating household
	Food Scraps Co-collected with Yard Waste?	Yes
	Collection Frequency	Weekly
	Hauler	Private Contractor
	Collection Method	Rear-loader collection vehicle (2-man crew)
	Diversion Impact	Average about 25-27 tons annually or about 1-1.5 lbs./household/week
	End Use Facility	Composting facility and/or farms
	Contamination	Not an issue
Compost/End Product Available	Yes, available for free to residents who sign-up for the program	

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<b>Municipality</b>		Municipality of Princeton
<b>Program Contact</b>		Robert Hough Director of Infrastructure and Operations Municipality of Princeton <a href="mailto:rrough@princetonnj.gov">rrough@princetonnj.gov</a> Phone: (609) 497-7639
<b>Existing Program</b>	Materials Accepted	<ul style="list-style-type: none"> <li>• All types of food scraps</li> <li>• Liquids/sauces</li> <li>• Soiled paper</li> <li>• Yard waste (no woody material)</li> <li>• Compostable bags/liners</li> <li>• Compostable plastics</li> <li>• Houseplants</li> </ul>
	Education Activities	<ul style="list-style-type: none"> <li>• Information provided on municipality’s website</li> <li>• Presentations to civic groups and citizen associations</li> <li>• Initial program growth was by word of mouth</li> </ul>
	Cost to Residents	\$65/household/year
	Cost to Local Government	Hauler charges \$15/household (container)/month or about \$13,000 total per month (\$153,000 annually); user fees cover about 35-50 percent of the cost of the program; remainder of cost is paid for through the municipality’s trash fund
	Impacts to Solid Waste Program	Amount of solid waste collected has decreased, but no changes to existing programs
	Regulatory Impacts	Food scraps collection availability incorporated into the municipality’s solid waste and recycling ordinance

**Table 3. Curbside Food Scraps Collection in the City of South Portland, ME<sup>1</sup>**

<b>Municipality</b>		City of South Portland
<b>Program Contact</b>		Julie Rosenbach Sustainability Director City of South Portland <a href="mailto:rosenbach@southportland.org">rosenbach@southportland.org</a> Phone: (207) 347-4148
<b>Pilot Project</b>	Start Date	May 2017
	Length	1 year (to be complete in May 2018)
	Households	~600
	Household Selection	Selected two neighborhoods for the pilot project – Knightsville and Meetinghouse Hill; neighborhoods represent the diversity of the city and the city’s goal was to select one trash and recycling route to pilot food scraps collection; all households in these neighborhoods received collection containers
	Household Type	Single-family residences and residential structures with four or fewer units (all households that receive city solid waste services)
	Container	Six-gallon bucket for curbside collection; no separate kitchen container provided
	Container Odor Control Mechanism	None
	Compostable Bags/Liners	Yes, including non-compostable bags may be used; facility where food scraps are taken has a de-bagging machine
	Collection Frequency	Weekly
	Collection Method	Manual collection using a truck and trailer
	Food Scraps Co-collected with Yard Waste?	No

<sup>1</sup> The City of South Portland’s curbside food scraps collection pilot project will be complete in May 2018 and the city-supported curbside program will be discontinued. The city will provide a site for residents to drop-off food scraps as well as provide containers to residents that want to subscribe to curbside collection services from a private hauler.

**Table 3. Curbside Food Scraps Collection in the City of South Portland, ME<sup>1</sup>**

<b>Municipality</b>		City of South Portland
<b>Program Contact</b>		Julie Rosenbach Sustainability Director City of South Portland <a href="mailto:jrosenbach@southportland.org">jrosenbach@southportland.org</a> Phone: (207) 347-4148
<b>Pilot Project</b>	Materials Accepted	<ul style="list-style-type: none"> <li>• “If it grows, it goes” is the city’s motto for what is accepted</li> <li>• All types of food scraps, including those not suitable for backyard composting</li> <li>• Coffee grinds/tea bags</li> <li>• Soiled paper and compostable containers</li> </ul>
	Contamination	Not an issue
	Hauler	Private Contractor
	Diversion Impact	30 tons of material collected May – November of 2017 or about 9-10 lbs./household/week
	End Use Facility	Anaerobic digester facility at a local farm
	Cost to Residents	None
	Cost to Local Government	Pilot project has cost the City about \$40,000 that was funded through solid waste reserve account; ~\$3,000 was for about 600 six-gallon buckets; \$750 for sign drop-off location; and program costs about \$3,145/month for collection
	Details	The City contracts with a private hauler to collect food scraps curbside from residents. Collected food is brought to Ecomaine where it is consolidated with food scraps collected from commercial properties/businesses. Ecomaine transfers the food scraps to Exeter Agri-Energy where they are de-bagged and processed in an anaerobic digester that converts it to electricity, fertilizer, and animal bedding. The city intends to conduct a survey of all households at the conclusion of the program to solicit feedback.
	Educational Activities:	<ul style="list-style-type: none"> <li>• Distributed letter and survey to all households in the pilot area</li> <li>• Tables/displays at grocery store and other community venues/events</li> <li>• Social media (use of ReCollect App)</li> </ul>
	Impact to Solid Waste Program	Solid waste collected has decreased by about 90 tons over the last year; no changes to existing programs are planned
Regulatory Impacts	None	

**Table 3. Curbside Food Scraps Collection in the City of South Portland, ME<sup>1</sup>**

<b>Municipality</b>		City of South Portland
<b>Program Contact</b>		Julie Rosenbach Sustainability Director City of South Portland <a href="mailto:jrosenbach@southportland.org">jrosenbach@southportland.org</a> Phone: (207) 347-4148
<b>Pilot Project</b>	Next Steps	<b>Short-term:</b> Discontinue “free” curbside program in the two neighborhoods; increase number of food scrap containers at drop-off collection area at transfer station; purchase 12-gallon containers to give to residents that want to pay a private hauler for continued curbside collection; <b>Long-Term:</b> Ecomaine evaluating system whereby bagged recyclable materials and separately bagged food scraps (bags would be different colors) are placed in the same curbside container for collection; bags of materials would be optically sorted during processing.

**Table 4. Curbside Food Scraps Collection in the Borough of State College, PA**

<b>Municipality</b>		State College Borough
<b>Program Contact</b>		Edward Holmes Public Services Manager State College Borough <a href="mailto:eholmes@statecollegepa.us">eholmes@statecollegepa.us</a> Phone: (814) 278-4713
<b>Pilot Project</b>	Start Date	January 2010
	Length	6 months
	Households	Initially ~500 participated; additional 65 homes added in April 2010; added about 10 businesses to the program as well
	Household Selection	Standard offering (all households in selected neighborhoods given carts and 14 percent opted not to participate); pilot project included two neighborhoods: one that was mainly owner-occupied homes that participated in recycling efforts and the other neighborhood consisted of mainly homes with renters and students that were not known to be “good” at recycling; goal was to test the program in two vastly different neighborhoods
	Containers	<ul style="list-style-type: none"> <li>• 2-gallon kitchen counter pail with lid</li> <li>• Cart – options 35, 65, or 95 gallon (would not offer 35 gallon option again)</li> </ul>
	Collection Frequency	Weekly
	Hauler	Borough
	Diversion Impact	About 40 tons or about 13 lbs./cart/week; Borough found the following participation after six months (about 560 homes with food scraps collection service): <ul style="list-style-type: none"> <li>• 437 homes participated at least once;</li> <li>• 334 homes participated at least 25 percent of the time;</li> <li>• 163 homes participated at least 75 percent of the time.</li> </ul>
	End Use Facility	State College Borough Composting Facility
	Cost to Residents	None



**Table 4. Curbside Food Scraps Collection in the Borough of State College, PA**

<b>Municipality</b>		State College Borough
<b>Program Contact</b>		Edward Holmes Public Services Manager State College Borough <a href="mailto:eholmes@statecollegepa.us">eholmes@statecollegepa.us</a> Phone: (814) 278-4713
<b>Pilot Project</b>	Cost to Local Government	Received PA Act 198 Resource Recovery Demonstration Grant from DEP (one of the last awarded) to cover costs of public education (resident survey, brochures, posters, website development, training), equipment (collection containers, rear-loader refuse truck, tractor), and testing and evaluation (participation rates, collection costs, composting techniques, weights, nutrient comparison); grant partners included Borough, Penn State University, Centre County Solid Waste Authority, DEP
	Details	The Borough has been collecting yard waste curbside from residents for 30+ years; woody material was placed in a chipper to produce mulch; collectors would use pitchforks to collect organic material that could not be fed into a wood chipper; borough coordinated with DEP to test the collection of yard waste and food scraps to avoid having collection crews pick-up material off the ground.
<b>Existing Program</b>	Start Date	Spring 2013
	Program Type	Standard offering
	Households	~2,900 participate out of about 3,600 with access (note some participants may only place yard waste in their container)
	Household Type	Single-family and small multi-unit residential properties
	Containers	<ul style="list-style-type: none"> <li>• 2-gallon kitchen counter pail with lid</li> <li>• Cart – options 35, 65, or 95 gallon (would not offer 35 gallon option again)</li> </ul> Residents selected the size of cart desired and are responsible for cleaning them
	Container Odor Control Mechanism	None
	Compostable Bags/Liners	Not provided, but residents may purchase separately and use them; borough prefers they not be used
	Food Scraps Co-collected with Yard Waste?	Yes
	Collection Frequency	Weekly (collection days are Tuesday and Thursday)

**Table 4. Curbside Food Scraps Collection in the Borough of State College, PA**

<b>Municipality</b>		State College Borough
<b>Program Contact</b>		Edward Holmes Public Services Manager State College Borough <a href="mailto:eholmes@statecollegepa.us">eholmes@statecollegepa.us</a> Phone: (814) 278-4713
<b>Existing Program</b>	Hauler	Borough
	Collection Method	Automated side-load collection vehicle
	Diversion Impact	N/A
	End Use Facility	State College Borough Composting Facility
	Contamination	Not an issue
	Compost/End Product Available	Yes, buy in bulk or by bag
	Materials Accepted	<ul style="list-style-type: none"> <li>• All types of food scraps (including fats, oils, grease, bones)</li> <li>• Soiled paper</li> <li>• Compostable bags/liners (but discouraged)</li> <li>• Products labeled as compostable and meet ASTM standards for compostable</li> </ul>
	Education Activities	<ul style="list-style-type: none"> <li>• Early program direct mailing</li> <li>• Compiling email addresses of residents and send focused emails regarding program along with quarterly updates/newsletters</li> <li>• Positive press in local media (newspapers, radio, etc.)</li> <li>• Social media</li> <li>• Presentations to neighborhood groups and civic associations</li> <li>• Held events before program started at local parks for residents to see and select the cart size they want</li> </ul>
	Cost to Residents	Annual refuse fee billed two times per year on resident utility bills; rate varies based on each household's trash cart size (residents receive a 9 percent discount on their refuse fee if they select the small 35-gallon refuse cart)

**Table 4. Curbside Food Scraps Collection in the Borough of State College, PA**

<b>Municipality</b>		State College Borough
<b>Program Contact</b>		Edward Holmes Public Services Manager State College Borough <a href="mailto:eholmes@statecollegepa.us">eholmes@statecollegepa.us</a> Phone: (814) 278-4713
<b>Existing Program</b>	Cost to Local Government	<ul style="list-style-type: none"> <li>• Organics/food scraps tipping fee at composting facility is \$40/ton compared to \$67/ton for solid waste</li> <li>• Partially funded through the sale of finished compost</li> </ul>
	Impacts to Solid Waste Program	No program changes; however, cost and labor savings from reduced trash collection is used to increase/expand services to residents
	Regulatory Impacts	Under the borough’s composting facility General Use Permit 25, a beneficial use permit was applied for and received; provides requirements for composting food scraps such as what the site can/cannot accept and that the composting of food scraps must be done on asphalt or concrete.

**Table 5. Curbside Food Scraps Collection in the City of Takoma Park, MD**

<b>Municipality</b>		City of Takoma Park
<b>Program Contact</b>		Nima Upadhyay Special Projects Coordinator City of Takoma Park <a href="mailto:nimau@takomaparkmd.gov">nimau@takomaparkmd.gov</a> Phone: (301) 891-7621
<b>Pilot Project</b>	Start Date	February 2013
	Length	18 months
	Households	~400
	Household Selection	Targeted two neighborhoods with a good track record of waste diversion; first neighborhood 300 out of 800 households (35 percent) participated; second neighborhood about 65 out of 260 households (25 percent) participated
	Containers	<ul style="list-style-type: none"> <li>No kitchen counter container provided</li> <li>5-gallon bucket with lid for curbside collection (and 6 month supply of compostable plastic bags)</li> </ul>
	Collection Frequency	Weekly
	Hauler	Two private haulers (separate hauler for each neighborhood)
	Diversion Impact	10-12 lbs./household/week
	End Use Facility	Initially materials went to a small scale local composting site; later materials went to larger scale composting site
	Cost to Residents	None
	Cost to Local Government	N/A
Details	City launched the pilot project to build on the success of the food scraps composting drop-off program at farmers markets (which has been discontinued); although the pilot project involved two private haulers collecting materials, the city knew from the beginning they would be collecting food scraps if/when the program was implemented citywide; all households in the two neighborhoods selected were invited to participate and households wishing to were required to sign-up	

**Table 5. Curbside Food Scraps Collection in the City of Takoma Park, MD**

<b>Municipality</b>		City of Takoma Park
<b>Program Contact</b>		Nima Upadhyay Special Projects Coordinator City of Takoma Park <a href="mailto:nimau@takomaparkmd.gov">nimau@takomaparkmd.gov</a> Phone: (301) 891-7621
<b>Existing Program</b>	Start Date	August 2014
	Program Type	Sign-up (voluntary)
	Households	1,600 (open to all households in the city; about 70 percent of households use the program each week)
	Household Type	Single-family homes and multi-family facilities with 12 units or less (must receive city trash service)
	Containers	<ul style="list-style-type: none"> <li>• No kitchen counter container provided</li> <li>• 5-gallon bucket with lid for curbside collection</li> </ul>
	Container Odor Control Mechanism	None
	Compostable Bags/Liners	City provides 12 bags annually; bags/liners are not required (local stores carry compostable bags)
	Food Scraps Co-collected with Yard Waste?	No
	Collection Frequency	Weekly
	Hauler	City
	Collection Method	Manual collection using a repurposed dump truck; one full-time employee with temporary labor provided at times
	Diversion Impact	6-7 lbs./household/week (in 2017, 242 tons of food scraps were diverted)
	End Use Facility	Prince George’s County Organics Composting Facility (city is limited to bring 4 tons of food scraps/week)
	Contamination	Yes, mainly plastic bags since the city does not provide enough; do not collect containers that use bags that are non-compostable
Compost/End Product Available	Yes, residents receive free compost that the city purchases from the Prince George’s County Organics Composting Facility (compost is available in the spring and fall)	

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<b>Existing Program</b>	Materials Accepted	<ul style="list-style-type: none"> <li>• Most food scraps</li> <li>• Soiled paper products</li> <li>• Bones</li> <li>• Wood products (popsicle sticks, chopsticks, etc.)</li> <li>• NO fats, oils, grease</li> </ul>
	Education Activities	Information on website and provided in other sources; monthly program update via mailchimp; no active education program as the city is limited in how much material they can bring to the composting site
	Cost to Residents	No (solid waste services included in property taxes (no separate line/charge for refuse)
	Cost to Local Government	<ul style="list-style-type: none"> <li>• Tipping fee = \$45/ton (242 tons x 45 = \$10,890)</li> <li>• Fuel cost = ~\$700/year</li> <li>• Fee compost = ~\$500/year</li> <li>• Equipment/containers/bags = \$10,000 (about total spent for program, about \$1,500 per year)</li> <li>• Labor = \$52,000 (1 full-time staff member with benefits)</li> <li>• <b>TOTAL COST = \$65,590</b></li> <li>• City spends about \$11/household on supplies (bucket and bags) when a household signs up</li> </ul>
	Impacts to Solid Waste Program	None; would consider program changes if the food scraps program becomes mandatory
	Regulatory Impacts	None

## 4 RECOMMENDATIONS

The experience from implementing curbside food scraps collection by the profiled municipalities in the previous section provides a wealth of knowledge for Media Borough to consider as they anticipate launching their own program. This section provides some program implementation tips and lessons learned for Media Borough to consider.

### TIPS AND LESSONS LEARNED

#### **Seasonal Implementation**

According to some municipalities surveyed for this project, timing for implementing a curbside food scraps collection program is key to participation. Implementing a curbside food scraps collection program seems to work best when avoiding seasons with temperature extremes such as winter and summer. Initiating a program in the summer when insects and other vectors are active and reproducing poses a challenge to residents who are hesitant to participate due to the “yuck” factor. Starting a program that requests residents keep containers of food scraps around their home in the summer may keep people from participating. Even those residents that do participate in a program that starts in the summer may become disgusted by rancid food and discontinue participation.

Municipalities that have started curbside food scraps collection programs in the winter have also run into operational issues that minimized their impact. For example, the Borough of State College, PA launched their pilot food scraps collection program in January. The Borough found that, during the winter months, residents tend to minimize activities and limit their time outdoors. Particularly challenging was delivering food scraps collection containers to residents in the snow. Furthermore, the Borough found that providing residents with additional containers for food scraps in the winter and asking them to store and use them was burdensome as they were hunkered down for the winter. Other cities noted that loose food scraps in curbside containers froze to the side of the containers that prevented collection crews from picking-up the material. For this reason, the City of South Portland provides bags and encourages residents to keep food scraps in bags especially during the winter.

#### **Encourage Gradual Participation**

Residents are often reluctant to participate in food scraps collection programs due to the perceived “yuck” factor that accompanies the need to separate food scraps from other household trash. Overcoming this obstacle is key to increasing participation in many food scraps diversion programs. Municipalities that have implemented curbside food scraps collection programs find success in encouraging gradual participation by residents who think food scraps separation is too disgusting. For example, residents can be encouraged to start participating by placing soiled napkins and paper towels in food collection containers. Once residents become accustomed to that practice and find that it is feasible with no undesirable consequences, residents can then be encouraged to place some food items such as apple cores or banana peels in the container. Residents can be encouraged to ramp up their participation to include all kinds of food waste as they become more comfortable with the practice of separating food scraps for diversion at different levels. This practice of gradual participation can recruit participants that may not otherwise jump right into the program by diverting all food scraps and materials accepted as part of the program.

## Compostable Bags

The use of bags in food scraps collection programs is mixed in the programs surveyed for this project. Two municipalities provide a supply of bags for residents to use to line their containers (Princeton and Takoma Park). The City of South Portland does not provide bags to residents, but accepts bagged food scraps. The farm that processes the food scraps for the City of South Portland actually de-bags the materials prior to their placement in the anaerobic digester. Finally, State College and the towns of Hamilton and Wenham do accept compostable bags with food scraps but do not encourage their use.

Providing compostable bags to residents increases the cost of a curbside food scraps collection program. However, bags can serve to encourage residents to participate in a program to minimize the “yuck” factor and odors, as well as keep containers clean. If the facility that composts the Borough’s food scraps does not accept bags (or accepts them but does not really want them) then bags should not be included as part of the program. However, if bags are an acceptable material for the composting site, the Borough could consider providing residents that sign-up with a select number of bags to initiate their participation. Extensive education will be necessary to provide information on what types of bags are acceptable for use in the program. Municipalities’ surveyed note there is a difference between bags labeled as compostable versus biodegradable that can create confusion among residents that wanted to use bags.

## Containers

There is no one container type, size, or quantity that makes curbside food scraps collection programs successful. Three municipalities surveyed provide two containers for residents to use as part of their program. One container is smaller and is for use in kitchens while the other container is a larger cart that is used for the curbside collection of food scraps. Two municipalities surveyed provide just one container (a five or six gallon bucket) for residents to place curbside. A major factor affecting the types of containers provided is whether food scraps will be collected manually or automated. Cart based programs are typically associated with automated collection. Two of the three municipalities providing carts co-collect food scraps with yard waste. Municipalities that provide kitchen pails to residents report that some households opt to use other containers (i.e. repurposed coffee containers) for collecting kitchen scraps. The City of Takoma Park notes that the City does not provide residents with garbage cans or recycling containers for use in their homes as reasoning for not providing kitchen pails. Although kitchen pails are relatively inexpensive, not providing the containers may be one way the Borough could reduce costs. On the other hand, providing them may make it more convenient for residents to participate.

All municipalities surveyed indicated that the containers they provide to residents do not have special odor or vector control measures other than a tight-fitting lid. No reports of odors or vector issues were reported by surveyed municipalities and all municipalities indicated having controls on containers were not necessary.

## User Fees

Only one municipality surveyed (Municipality of Princeton) charges residents a separate annual user fee to participate in the curbside food scraps program. The remainder of the programs surveyed are either paid for by the refuse fees charged to residents or paid for through a municipality’s general fund. SCS recommends that the Borough not charge a separate user fee, but instead incorporate the cost of the



program into the fees Media Borough charges for solid waste and recyclable material collection. A separate user fee will discourage participation and likely cause the program to be underutilized.

### **Closing the Loop on Composting**

One element of a successful organics management program is having a market for finished compost. Two opportunities were identified by municipalities surveyed that help encourage food scraps diversion, including:

- **Providing Finished Compost to Residents** – Of the four municipalities surveyed that produce compost with their food scraps (South Portland processes food scraps in an anaerobic digester), three provide residents free access to the finished compost. Municipalities note this is a significant benefit of the program and drives some resident participation.
- **Requiring Use of Compost in Community Projects** – Although no municipalities surveyed identified specific policies for the use of compost in community landscaping projects, it was agreed that local governments could provide leadership in this area. Establishing policies that require local governments to use compost in community and park landscaping projects demonstrates the importance of the program and need for participation.

### **Education**

The success of a curbside food scraps collection program is tied to the amount of time and effort a municipality gives to educating residents about the program. All municipalities surveyed conducted extensive education and outreach efforts in the planning and implementation phase of their respective programs. These educational initiatives use a variety of media – social, print, in-person – to provide information about curbside food scraps collection programs. Media Borough should consider education of residents on the curbside food scraps program a high priority in planning their program.

### **Changes to Other Program Services**

The Town of Hamilton is the only municipality surveyed that changed their solid waste collection program with the establishment of food scraps collection. Upon establishment of the weekly curbside food scraps collection, the town implemented every other week (EOW) collection of solid waste from residents<sup>2</sup>. This is in contrast to the Town of Wenham that did not modify their solid waste collection program and continued with weekly trash collection. The impacts of implementing curbside food scraps collection coupled with EOW collection were substantial. The Town of Hamilton estimated that the amount of trash disposed decreased by 32 percent. Conversely, the Town of Wenham estimated that the amount of trash collected decreased by 18 percent. The recycling committee overseeing the curbside food scraps program attributed this difference to Hamilton implementing EOW collection. Residents with EOW solid waste collection are interested in having food scraps collected weekly and are more likely to participate in such a program.

Once the Borough has established a curbside food scraps collection program, SCS encourages the Borough to consider decreasing solid waste collection from its current frequency of two times per week

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<sup>2</sup> The Town of Hamilton recently reestablished weekly solid waste collection due to the advocacy of a small number of residents who were against EOW collection. Proponents of EOW collection are preparing to launch a campaign to reestablish the program due to its success at reducing solid waste disposed.

to once a week. Careful consideration of the impacts to residents will need to be evaluated. A substantial change to the scope of services will likely need to be addressed when the Borough negotiates a new collection contract. A detailed cost analysis should be completed and program options explored. Costs for food scraps collection could be offset by reduced costs for trash services.

### **Pilot Program Goals/Data Collection**

Municipalities surveyed indicated that setting specific goals for their pilot projects was of limited value and importance. Most municipalities agreed that implementing a pilot program provided an opportunity to collect data on program participation, diversion impacts, costs, material quantities, contamination, and community concerns. This information was valuable and served to inform decisions pertaining to program expansion and improvement.

### **Survey Participants**

Surveying participants on their experiences with the program is an important initiative to receive feedback. While some municipalities implemented a formal, comprehensive survey process to solicit feedback, others surveyed participants informally in a more ad-hoc fashion. It is recommended that the Borough maintain open communication with residents throughout the pilot project and provide them with an ongoing opportunity to provide feedback. However, at or near the conclusion of the pilot project, the Borough should consider implementing a formal survey of participants to receive feedback on all aspects of the program and gives all participants the chance to respond. This approach allows residents to make suggestions at any time throughout the program. It also provides a mechanism for more formal survey results to be obtained, tabulated, and presented to interested stakeholders.

### **Explore Outside Funding**

Some municipalities surveyed indicated that they received funding from local, state, and non-profit sources to pay for various aspects of the program, particularly for collection containers provided to residents. The Borough should research and identify outside funding sources that could be used to pay for part of their program. For example, the DEP launched a new round of Act 101 Section 902 recycling grants in late 2017. These grants are allocated from the Recycling Fund and are available to municipalities, including boroughs. This grant is very competitive and is typically offered once per year. Municipalities may apply every year, but if they are awarded a grant, they may not apply during the next grant round. To be eligible for this grant, the Borough would need to confirm its ordinances do not allow the burning of leaves or other recyclable material. Municipalities are eligible to obtain up to 90 percent of approved program costs; municipalities designated by the Department of Community and Economic Development as being financially distressed are eligible for up to 100 percent of approved program costs.

Although the application period for receiving a 2018 grant has passed, the Borough should explore the possibility of applying for a future Section 902 grant to support their food scraps program. To explore this opportunity further and to help position the Borough to be competitive for the next round of grants, the Borough should contact the DEP's Regional Planning and Recycling Coordinators for the Southeast:

Ms. Ann Ryan or Ms. Mary Alice Reisse  
DEP, Bureau of Waste Management  
Phone: (484) 250-5900; [aryan@pa.gov](mailto:aryan@pa.gov) or [mreisse@pa.gov](mailto:mreisse@pa.gov)

## 5 CONCLUSION

Food scraps diversion is an important initiative to reduce the amount of waste disposed. The Borough is in a good position to implement a pilot curbside food scraps collection project to explore what program elements meet the needs of residents. The Borough should consider the recommendations listed in the previous section as they establish their pilot project and consider what a Borough-wide curbside food scraps collection program may look like.

## Appendix A Survey Questions

## Survey Questions

### Media Borough Recycling Technical Assistance Curbside Food Scraps Collection

#### Pilot Details

- 1) Did you have a curbside food scraps collection pilot project? If yes,
  - a. How long and how many households were included?
  - b. How were participants selected?
  - c. What was your experience with the pilot? Successes? Challenges?
- 2) Did your pilot project include a drop-off location?
- 3) Did you set goals and targets for the pilot?
  - a. What were they?
  - b. Were they achieved?
- 4) How did you evaluate the success of your pilot project? Lessons learned?
- 5) Have you done any kind of evaluation for the pilot?
  - a. How did you do it? Did you get feedback directly from participating residents?
- 6) What aspects/characteristics of your pilot project were changed when you expanded your curbside program beyond the pilot stage?

#### Program Type and Operations

- 1) What type of a program do you have? (i.e. mandatory, sign-up, standard offering)
- 2) How many households are serviced by your program?
- 3) Does the program include a drop-off location as an option to supplement curbside collection?
- 4) Are food scraps included with yard waste and co-collected?
- 5) Quantity of food scraps collected annually (or other period of time, lbs./HH)?
- 6) How often are food scraps collected curbside?
- 7) Does your Public Works Department do the pickup? Or is pickup contracted out to a third party?
  - a. If pickup is done in-house, was your Public Works Department able to use its existing garbage truck?
  - b. What equipment do you use for collection?
  - c. What new equipment did you need to purchase?
  - d. Were there any union issues? Any negotiations required?
- 8) Container questions:
  - a. Did you provide countertop and/or curbside containers to residents? What sizes of each? Can residents use whatever container they want for curbside collection? Are there different container sizes available to residents?
  - b. If purchased containers, do they have special pest- and odor-control characteristics? Do you think this is important or would any plastic bucket & lid suffice?
- 9) Where does the collected material go? Is the compost or AD facility a public facility? Do participants have access to the finished compost?
  - a. Free?
  - b. For a charge?
  - c. Is it delivered?
  - d. Available for local pickup?
- 10) What type of residential dwelling is serviced by your program? Single-family or multi-family, or both?
  - a. Do you have limits on what type of residence can be served by the program?

(For example, Media Borough does not currently offer recycling to residents of apartment buildings over 4 units. We wonder if we should follow this guideline for composting as well?)

### Materials Accepted

- 1) What materials are accepted?
  - a. Meat and dairy?
  - b. Plastic bags to line containers?
  - c. Plastic (compostable cutlery, cups, bowls, etc.)?
  - d. Paper napkins, tissues, towels?
  - e. Other?
- 2) How was the acceptable materials list decided? What parties were involved in determining what materials were accepted?
- 3) Have you eliminated or added materials since your program launched? Why?

### Education

- 1) Education campaign: What did you do to educate residents about the program (media used, frequency)?
  - a. Planning stage –
  - b. Implementation stage –
  - c. Operation stage –
- 2) What media were used to promote the program?
  - a. Public meeting(s)?
  - b. Brochures?
  - c. Social media?
  - d. Posters?
  - e. Newspaper advertisements?
  - f. Mailings?
  - g. Telephone hotline?
  - h. Door-to-door volunteer educators? Who and how were volunteers trained?

### Costs

- 1) How is the program funded? Users fees? Other solid waste service fees (i.e. solid waste collection)? General fund?
  - 2) Do residents pay a fee for the collection service? How much? How is price determined?
  - 3) If user fee, how is it assessed? Separate user fee on solid waste bill? Other means?
  - 4) Third party hauler collection - What do you pay to the hauler for collection, transportation, and/or composting/AD costs? Flat fee? Price/ton collected? Other? Paid monthly, quarterly, annually? OR...
  - 5) In-house collection - what are your in-house labor and equipment costs for this program?
  - 6) Do your participants pay for their food scrap containers – counter-top and curbside collection containers? Price? Do you provide “free” compostable bags to residents for use with containers?
  - 7) Is any portion of the container or collection costs subsidized? If so, how much and how was subsidy determined?
  - 8) Were there any “hidden” costs in planning, implementing, or operating the program? If so, what were they for?
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- 9) Did you find grants to support the program? What were they? One time or continual?
- 10) Estimated annual budget for curbside food scraps collection only?

**Impacts to Other Programs**

- 1) Did you change your trash or recycling schedule to accommodate food waste collection? If so,
  - a. Did you reduce the number of trash pickups?
  - b. How did you prepare the public for the changes?
- 2) Are you considering or do you anticipate any trash or recycling program changes in light of your curbside food scraps program?

**Regulatory**

- 1) Did your program entail changing municipal or city code?
- 2) Did you have to get any kind of license or permit from your state's department of environmental protection to do the program?
- 3) Any other regulatory requirements or hurdles that needed to be overcome?

**Other**

- 1) Is contamination a problem? How is contamination managed/mitigated? No collection of material? Communication to resident?
  - 2) Operational issues that you have encountered?
  - 3) What other factors should we be considering?
-