

CITY OF CAMBRIDGE – DEPARTMENT OF PUBLIC WORKS

**CURBSIDE ORGANICS COLLECTION FROM RESIDENTS
PHASE 2 REPORT**



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Executive Summary

Background

The City of Cambridge has worked for nearly 10 years to increase diversion of food scraps (a.k.a. organics) from the waste stream in many ways: backyard compost bin education and sales, workshops on vermicomposting, establishment of compost pickup for businesses, public schools and public drop-off sites. In 2012, the Massachusetts Department of Environmental Protection (MassDEP) awarded the City a 2 ½ year grant for \$73,304 through the Sustainable Materials Recovery Program to research, plan and possibly implement a pilot curbside food scraps collection program for residents. Phase one of the project was a feasibility study, which was completed in 2012 and in 2015, the City completed phase two of the project – a one year pilot program for curbside organics collection. Reports for both projects can be found online at CambridgeMA.Gov/CompostPickup.



FIGURE 1 CAMBRIDGE COMPOSTS LOGO

The City's motivations to pursue a curbside residential organics program were to reduce waste, curb climate emissions, control trash disposal costs, address rodent control, and meet public demands for compost services. Curbside organics is a key strategy to meet the City's goals to reduce trash by 30% by 2020 and 80% by 2050 over 2008 levels, aligning with the goals in the MA Solid Waste Master Plan. In terms of pounds (lbs) of trash per household (HH) per week the goals are 16 lbs/HH/wk by 2020 and 4 lbs/HH/wk by 2050. A 2011 Cambridge City Council resolution supported curbside composting and a public meeting was held.

The Cambridge Department of Public Works (DPW) ran implemented the one year curbside organics pilot from April 7, 2014 to March 30, 2015. Participating households will continue to receive curbside compost collection from a DPW crew through the fall 2015, at which time the service will be provided by a private hauler. The final results: 647 participating households in 424 residences diverted 85 tons or 170,000 lbs of organics from incineration and landfill. This avoided 76 tons of CO₂ emissions.

Pilot Overview

A specific area of the Monday collection route in North Cambridge was selected for the pilot because of its mix of housing and lack of access to existing food scrap drop off sites. The City's goal was to recruit 500-800 participating households. From fall 2013 to winter 2014, the City encouraged eligible households to sign up for the pilot via the monthly recycling e-newsletter, A frame signs in the neighborhood, info tables at key community locations, and a letter to families from the Cambridge Public Schools. Eligible residences included single family homes and multifamily buildings (MF) with up to 12 units with City trash service.

554 households signed up by the first collection day of the compost pilot, April 7, 2014. Participating households received a green kitchen container to collect food scraps and soiled paper, a year's supply of BioBags to line the kitchen container, a green curbside bin (to share at multi-family buildings), free collection on the normal collection day (same as recycling, yard waste and trash), a few requests during the pilot to answer online surveys, monthly email program updates, and finished compost great for gardens available at the Recycling Center, April-October.

Based on national estimates available of 8-12 lbs/HH/wk of organics, DPW estimated that households would generate 10 lbs/wk of organics. Before the pilot, the City collected and weight the trash from all participating residences and found 18.8 lbs/HH/wk. During the pilot, the average organics collected was 6.6 lbs/HH/wk reducing trash by nearly 35%. During a pre-pilot trash audit, 43% of the trash was organics at 7.4 lbs/HH/wk. This suggests an 89% capture rate of organics. The total truck weight averaged 3364 lbs and were brought to Rocky Hill Farm in Saugus, MA for composting.

DPW identified vendors for supplies and services, and developed or strengthened working relationships with all involved. BioBag USA donated the MaxAir kitchen containers and compostable bags, curbside green bins were purchased from Orbis Corporation (on MA state contract FAC87), SureClose donated some kitchen containers, education materials were printed by Sterling Printing and Classic Graphx, supplies were delivered to all participating residences by Delta Global, organics were composted by Rocky Hill Farm, and for part of the pilot load scales were used at Northgate Recycling. The Recycling Director designed all educational materials.

During the pilot, the City communicated regularly with participants to encourage best practices and issued six surveys, collecting demographic information and feedback on user experience. The program maintained a satisfaction rate of 95%. During each weekly collection, the Organics Program Assistant (OPA) monitored bins for fill level and contamination. Most bins were under 50% full and the organics stream was very clean with contamination being extremely uncommon. On average, 83% of all green bins were set out at the curb for weekly collection.

Program Expansion

Based on the success of the pilot, during FY16 budget planning the City decided to expand curbside compost pickup to all eligible residences in the Monday route in the fall 2015. The intent is to expand city wide within two years, and to 13+ unit multi-family buildings on a case-by-case basis in subsequent years. This decision was based a general feeling that the pilot was a success, given high satisfaction levels among participating households, the potential to reduce trash by up to 35%, and demonstrated impact on reduced climate emissions.

The City will initially contract for collection with a private hauler to achieve collection efficiencies needed, primarily for logistical reasons. Similar to the curbside yard waste contract, the hauler will be required to determine the compost processing facility. Once a citywide program is mature, the City will reevaluate whether DPW crews could be utilized. The City requested proposals from several haulers with appropriate experience.

The City hopes that participation will reach at least 40-60% of approximately 2,525 eligible residences in the Monday route, or 1010-1515 stops. The City estimates this program will divert 200-500 tons/year.

With the experience of the pilot and lessons from other communities with curbside organics programs, here are some best practices and learned for effective programs:

1. Provide supplies for free to make participating easy.
2. Aim to engage with as many buildings as possible, in person in the neighborhoods through door to door outreach is best. Internal household participation is secondary and staff energy can be better spent on engaging new buildings.
3. Collect email addresses of participants to communicate regularly.
4. Plan to eventually make participation mandatory, even without an enforcement mechanism.
5. Provide training programs to residents/building managers with incentive to receive supplies or rebates.
6. Conduct recurring outreach to large multi-family buildings. Target high turnover times of year to re-educate residents.
7. Engage landlords as primary point of contact in large multi-family buildings.
8. Involve children to bring message into the home and build cultural norms. Use high school students as volunteers.
9. Determine community policy and messaging for bags (compostable or plastic). Providing compostable bags for kitchen containers or strongly encouraging their use will minimize yuck factor and ensure high participation and diversion rates. Ventilated kitchen containers Wet anaerobic digestion facilities typically will screen out bags during processing.