



Best Practice: Green Bin Program: City-Wide Composting

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CITY: OTTAWA

POLICY AREA: WASTE MANAGEMENT

BEST PRACTICE

The **Green Bin Program** is part of the City of Ottawa's long-term plan for solid waste management. It adds organics (for example food scraps, soiled paper and yard waste) to the list of recyclable materials, increasing the diversion rates of all residential waste from landfills, saving land space and producing a valuable soil amendment used by local farmers.

ISSUE

Ottawa's plastic, metal and fiber recycling programs have diverted a third of all residential waste from landfills. However, many resources that could have been converted into nutrient-rich compost ideal for agricultural use were still being thrown away. In order to boost the City's waste diversion rate, the Green Bin Program was introduced.

GOALS AND OBJECTIVES

The goal of the Green Bin Program is to divert residential organic waste from landfills by recycling the material at a composting facility into a useful resource – compost. The program will lengthen the life of local landfills as organics will no longer be placed in them. By collecting organic waste in this way, the Green Bin Program will help feed the land but not the landfill.

IMPLEMENTATION

From June to September 2009, the project team implemented the Green Bin Champion Pilot Project, which provided hands-on experience with the organics program to members of the community and valuable feedback on the program operation prior to the launch of the full-scale Green Bin Program. The pilot involved 96 participants including Councilors, Councilors' Assistants, members of the Environmental Advisory Committee, family ward representatives, City staff and media. The project team sought feedback from participants several times during the pilot to prepare for the city-wide launch in the fall of 2009.

To ensure a successful program rollout, the project team developed a three-phase plan to introduce green bins:

- **Phase 1** (began January 2010): 220,000 existing single residential properties and low-rise multi-unit residential properties received and began to use green bins. As new houses were built and occupied, they were provided with green bin containers as soon as possible.
- **Phase 2** (May 2010 to end of 2011): 30,000 medium-density residential properties received and began to use green bins. Multi-unit buildings were dealt with separately because of the manner in which waste was collected at these locations. To be successful, consultation with building managers and tenants was often required.
- **Phase 3** (2011 to present): The Green Bin Program is being assessed for implementation in high-density residential properties, with 45 apartment buildings presently participating.

Rural areas of Ottawa will be added to the Green Bin Program in November 2012. This will add 7,000 dwelling units to the program and result in the entire city having the ability to divert organic material on a weekly basis.

The Green Bin Program was initially rolled out as weekly during the spring, summer and fall, and bi-weekly (every two weeks) during the winter months. Starting November 2012, green bin organics will be collected weekly year-round and the residual

Best Practice: City-Wide Green Bin Composting Program

garbage will be collected bi-weekly year-round. This change in service level will significantly reduce the number of trucks on the road and program costs.

To engage residents in a meaningful way and to encourage participation in organics diversion, the project team coordinated an integrated, multi-phased communications plan to increase awareness and knowledge. The communications plan used a variety of traditional and non-traditional media and consisted of three phases:

1. Preparation (April-July 2009);
2. Education (August-December 2009); and
3. Participation (January-March 2010).

The project team also developed a Community Outreach and Education Program to ensure Ottawa residents were well informed about the Green Bin Program and were aware of ways in which they could participate. During the delivery of green bins to residences, outreach officers accompanied each delivery team to provide personal, one-on-one support to residents. Additional outreach activities included holding community workshops, expanding school programs to include the Green Bin Program, updating the school curriculum (K-Grade 8) to include organics, providing information about the program to adults, and holding fun educational activities for kids at community events. Residents of Ottawa were and still are invited to join the Green Bin team on Facebook, YouTube, Flickr and Twitter to exchange information.



A green bin in Ottawa is loaded into a special collective vehicle.

COST

The Green Bin Program was initially rolled out to 220,000 residential households. The one-time only implementation costs, which included two sizes of bins delivered to each household, user guides and promotional/outreach materials, totaled approximately \$52 CAD (approximately \$51 USD) per household.

The operational cost of the Green Bin Program, which includes promotion, collection and processing costs, was approximately \$15 million CAD (approximately \$14 million USD) for 2011.

RESULTS AND EVALUATION



A green bin in Ottawa with instructional labels

Ottawa's Green Bin Program produces compost that is sold for agricultural purposes. The compost is natural and reduces the need for mined minerals (such as phosphorus), processed chemicals, packaging or long-distance shipping. This reflects the philosophy of the three Rs (reduce, reuse, recycle), minimizes the use of virgin materials, and reduces the use of fossil fuels. Local citizens benefit by having access to a high-quality local fertilizer.

The City has diverted over 100,000 tonnes of organic material in the first two years of the Green Bin Program. Prior to the Green Bin Program, the City's diversion rate, according to Waste Diversion Ontario (WDO) data, ranged from 32.2% and 33.2% between 2006 and 2009. Following the introduction of the Green Bin Program, the WDO diversion rate for 2010 rose to 38.8%.

Best Practice: City-Wide Green Bin Composting Program

TIMELINE

March 2008	Council awards an organics processing contract.
May 2008	Council approves level of service for the collection of green bins.
November 2008	Contracts awarded for the manufacture of organic collection carts and kitchen containers respectively.
April 2009	Develop and deliver an education and communications campaign for the implementation of the Green Bin Program.
June 2009	Green Bin Champions Pilot project launched.
July 2009	Project team updates Committee and Council about the implementation schedule and the communication and outreach support to residents for the rollout of the Green Bin Program.
October 2009	Project team updates Committee and Council on their efforts to extend green bins to small businesses that currently participate in the City's Yellow Bag Program and on engaging the participation of the Industrial, Commercial and Institutional (IC&I) sector.
December 2009	Project team delivers over 220,000 green bins across the municipality to single family residential properties.
January 4, 2010	Collection of green bins for these single family residential properties begins.
May 2010	Project team begins the delivery of bins to 30,000 low-rise multi-unit residential properties (town homes and garden homes).
Early 2011/2012	1,100 high-density residential properties receive green bin collection service.
November 2012	7,000 remote rural residents will receive green bin service. All curb side residential properties in Ottawa will have a consistent service level that includes weekly Green Bin collection and bi-weekly residual waste/garbage collection.
January 25, 2012	Initiated Ottawa's Waste Plan

The City is developing a Waste Plan to guide management of recyclables, organics and garbage over the next thirty years. Phase 1 of the plan established its vision, guiding principles, goals, objectives and targets. The specific elements that relate to the Green Bin Program include Goal 2: Optimize Waste Diversion, as well as the short, medium and long term capture rate targets for residential Green Bin organics.

LEGISLATION

The facility built to process the organic material was required to apply to the Province of Ontario to ensure that a Certificate of Operation was in place in advance of operation. The certificate is required to ensure that environmental concerns are properly managed.



Best Practice: City-Wide Green Bin Composting Program

LESSONS LEARNED

The City of Ottawa has learned the following lessons in implementing the Green Bin Program:

- As with any large project, adequate resources to ensure effective implementation need to be identified in advance and integrated in the overall program cost.
- Strategies are required in advance to address resident concerns about the potential negative impacts of the new program (cost, odor, full environmental impact).
- Different housing types require different service level solutions.

TRANSFERABILITY

Because urban, suburban, and rural properties have been included in the implementation, the City of Ottawa's Green Bin Program implementation project can be applied to most other cities across North America. Other cities commencing organic waste collection and processing have contacted Ottawa for insight. These cities include the City of Victoria, the Capital Regional District of British Columbia (Vancouver Island), the City of Montreal and the City of Vancouver.

Logistics make the collection of organic material more difficult from apartments and townhouses. The program is better suited to communities that have higher percentages of population living in single family homes.

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http://ottawa.ca/en/garbage_recycle/greenbin_yard/index.html

Facts and figures in this report were provided by the highlighted city agency to New York City Global Partners.