

Source Separated Organics Collection to Begin in 2008

BY TIMOTHY REEVE-NEWSON

To help reach the City of Toronto's 70% diversion target by 2010, organic waste collection in apartments and condominiums will be implemented over a span of one and a half years commencing mid-2008.

PILOT PROJECTS

The City concedes that a single universal collection system is not realistic and will consider each building's unique situation. At approximately 13 buildings a day, the City would implement a system and educate residents on a building by building basis. The organics program is based on the positive feedback of 28 buildings involved in pilot projects designed to test the feasibility of organics collection. In these pilot projects residents were provided with the in-home kitchen containers and were allowed to use plastic liners, similar to their single family dwelling counterparts. The residents then disposed of the collected organics through one of five different methods.

The first was into a deep collection system, consisting of a large container installed mostly underground, which allows for compaction by gravity and the cool underground temperature to keep the organics odour free. Second, disposal into aesthetically pleasing 35 gallon carts collected weekly placed in various locations such as the laundry room, parking levels and the mailroom. The superintendent then transferred the waste from the carts to the central recycling area. Third, disposal into bulk containers located in a common collection point. Fourth, disposal into an automated recycling system. This provided residents the opportunity to direct material into recycling, organics or garbage streams from the convenience of their chute room. Finally, closing the chute to garbage and

dedicating it strictly for organics. Residents were asked to carry their regular garbage to a central area, as they did with their recyclables. This project was terminated after three weeks due to excessive contamination.

City staff delivered information materials door-to-door with the assistance of property managers and then followed up with a lobby display to have one-on-one contact with the residents and to hand out the kitchen containers. Posters were also provided to the property management to publicize and inform residents about the organics project. Lastly, a follow up survey with residents and the property management was conducted.

IN 2006, OVER 375,000 TONS OF RESIDENTIAL WASTE WAS DIVERTED FROM LANDFILL, REPRESENTING AN OVERALL RESIDENTIAL DIVERSION RATE OF 42%. THIS OVERALL RATE IS A COMBINATION OF THE DIVERSION RATES FOR SINGLE FAMILY RESIDENCES, 58%, AND A VERY POOR 13% FOR MULTI-UNIT RESIDENCES.

RESULTS OF PILOT PROJECTS

The buildings set out an average of approximately 1 kg/household/week of organic waste, ranging between 0.43 to 2.09 kg/hh/wk, compared to 4 kg/hh/wk for single family homes. Recent waste composition studies have shown that there is approximately 4kg/hh/wk of organics available in the waste stream, thus only 25% of the potential was captured.

Residents and property managers were pleased with the pilot projects overall and indicated that the main reason for participating was the belief that the program was good for the

environment. The main criticisms included inconvenience, messiness, vermin infestation, odour and more work. Several property managers stressed the importance of promotional and educational materials and ongoing communication support from the City. The buildings with better performance were found to either have very keen property management or no garbage chutes (used a common collection point for all waste).

COST TO PROPERTY MANAGERS

It is proposed that the City provide the initial in-home kitchen containers for all multi-unit residential units and the property management companies be responsible for the purchase of the outdoor containers, repairing and replacing broken containers and new ones for new tenants. Examples of the anticipated cost for building owners are:

- A multi-residential complex of 50 units and 200 units would require approximately 4 and 15 carts respectively at \$55 each
- A multi-residential complex of 300 plus would require approximately two plastic bins at \$500 each
- Those buildings with underground storage different from pickup locations would require stronger steel bulk bins that cost approximately \$1,200
- The deep collection units range between \$2,000 and \$3,500 plus installation

The cost of the City's Solid Waste Management program is currently \$183.5 million. The multi-unit organic collection and other new programs are estimated to cost an additional \$54 million. The implementation of these programs was contingent on the recently approved volume based user-fee system, billed similar to hydro, with a priority lien status, commencing on or about July 1, 2008. The City will remove the cost of the Solid Waste Management program from the broad property tax base and instead implement a structure better related to the volume of a property's residual waste. The City believes a volume-based rate structure would provide property managers with the opportunity and means to reduce their generation of waste and in doing so better manage their expense. With this

financial incentive, it is estimated that buildings would set out an average of 75 kg/hh/year, which would result in the actual diversion target of 30,000 tons annually. Any profits would go to the WM Reserve Fund and be utilized to fund net operating expenses and future capital requirements.

Similar to recycling, the onus would be on the property management company to ensure the organic waste is not contaminated and is suitable for composting by the City.

UP FROM 0 TONS OF
DIVERTED ORGANIC
MATERIAL THIS PAST YEAR,
THE PROGRAM TARGETS
1,500 DIVERTED TONS IN
2008, AND AMBITIOUSLY
AIMS TO REACH 15,000
TONS THE FOLLOWING
YEAR AND 30,000 TONS
BY 2010.

The report concluded that the performance of a building on organics collection often has more to do with the efforts of property management than the merits of a particular collection system. It adds that without financial incentive, some property managers may not make the effort to operate an effective organics separation program. The report did not comment on the proposed dollar amount of financial incentives.

LOOKING AHEAD

To adapt to the new waste collection system, a building's residents and property management should assess the financial and environmental implications of implementable diversion methods and the cost of noncompliance. The most common solution would be to designate a central disposal area, most likely adjacent to the recyclables on the ground floor or parking level, and ask that each resident dispose of his or her organic waste appropriately. A daunting ambition considering the current recycling rate of multi-unit buildings rests at only 13%. Aesthetic appeal, odour control, and vermin infestation of the central disposal area will also need to be considered. A second option would be to retrofit an automated recycling system capable of diverting waste to separate organics, recyclables, and residual garbage categories using the

continued on page 32

continued from page 31

building's existing garbage chute. With the above two options in the pre-levy era, resident motivation and education were crucial to avoiding cross contamination. The financial penalties associated with the new user-fees should encourage residents to change their historical disposal behaviour. A third option, as convenient as it would be expensive, is to hire private haulers for floor-to-floor pick up. Regardless of the chosen strategy, organics collection in highrises is no longer a concern on the distant landfilled horizon, but rather an impending challenge that merits immediate attention.

OTHER INITIATIVES

As well as the implementation of source separated organics collection in multi-unit residences, some of the other new initiatives to reach 70% diversion include:

- Implement door-to-door collection in townhouses by purchasing and using smaller and lighter waste collection vehicles.
- Provision of in-unit and on-floor recycling systems to increase the recovery of recyclable material in multi-unit residences.
- Review of possible voluntary measures to reduce in-store packaging; review of City powers to tax, ban, or regulate in-store packaging; lobbying the provincial and federal government to improve packaging and stewardship regulations.
- Development of Reuse Centres for the reuse, disassembly and recycling of electronics, mattresses, furniture, carpets, and other durable goods and consideration of possible partnership or grant programs for reuse organizations.

City will issue request for tenders from private companies wishing to make use of the reusable material.

- Replacement of blue boxes with larger blue recycling carts (three sizes 2 to 6 times the size of current blue box).
- Addition of new materials such as plastic film and polystyrene to the Blue Cart Recycling program.
- Education and enforcement of the City's Diversion Bylaw.
- Investigation and, where appropriate, implementation of emerging source separation techniques, including initiatives such as the possible recycling of residential construction and demolition waste.
- Development of residual waste processing facilities to recover resources from mixed residual waste and reduce the amount of material to be landfilled.
- Request Provincial and Federal government to take immediate steps to implement policies and programs and adopt financial mechanisms to promote, encourage, and achieve source reduction or reuse of packaging and products which currently become municipal solid waste. ♦

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