



The principal focus of municipal recycling since the 1980s has been on providing a comprehensive collection infrastructure for capturing recyclables first from where people live and later from where they work. However, it has become clear that the public spaces connecting home and work also generate significant quantities of recyclable materials which are lost through disposal because there is no effective system for recovering them. This is especially true for products like foods and beverages that are in packaging specifically designed for mobile consumption. For this reason, there has been a number of programs initiated within the last decade to develop recycling services that would work in public spaces, particularly those that are used for transportation, retailing or recreational purposes. Some examples of this research that can be found online are described in this month's column.

Recycling goes public

by Roger Guttentag

U.S. Studies

New York City (NYC)

The NYC Department of Sanitation (DOS) conducted a 12-week public space pilot study from April to June 2007 at six parks and two ferry terminals. The results of this study were published in two separate reports by the department and its consulting engineer. The DOS report provides useful composition data on street waste and compares the recyclable paper and container percentages to general residential waste. Information was provided on how the pilot program was developed and the results that were obtained with respect to paper and mixed container streams. Data was analyzed with respect to quantities collected, material quality and the influence of various factors such as container location and weather.

Eureka Recycling (ER)

ER, located in St. Paul, Minnesota, conducted an extensive set of pilot program research into public space recycling at the Como Park Zoo, Mears Park and its urban pavilion park system starting with the plan-

ning work in 2006 and running through the implementation phases during 2008 to 2009. The pilot program development and results are described in three separate cases studies that are presented in their 2011 report "Development of Best Practices in Public Space Recycling." Two notable features of the pilot program designs that this report describes are the baseline sorts that were done for the Como Park and Mears Park projects to determine recycling targets and the significant investments that were made in securing community input and support.

Canadian Studies

Quinte Waste Solutions (QWS)

A study was conducted in 2005 by QWS, a nine-municipal region located in southern Ontario, of public space recycling at park, sports and arena venues. The purpose of the study was to identify the materials to be recovered for recycling, test various recycling collection bin designs and public outreach methods and survey public responses to the programs being evaluated. Audits conducted by this study determined that about 29 percent of collected waste consisted of recyclable plastic and metal containers but found negligible percentages of recyclable paper materials. Other interesting finding from this study was that signage with graphics worked better and public space recycling helped support the QWS residential blue box collection programs.

York Region (Ontario)

Two park locations within the Town of Newcastle were selected during the summer of 2008 to test six different collection container designs that separated materials into recyclable, organic and waste streams. An interesting feature of this test was to provide users with compostable bags for pet waste which was deposited into the organics collection stream. The report describes the containers that were used, the educational and public outreach that was conducted and

Web Address Directory

City of Richmond (British Columbia) Public Spaces Recycling Pilot Project Report	http://tinyurl.com/PRBigBelly
Department for Environment, Food and Rural Affairs (U.K.) – Recycle on the Go – Good Practices Guide	http://tinyurl.com/PRDefra
Eureka Recycling – Public Space Recycling Study	http://tinyurl.com/PREureka
Halifax (British Columbia) Harbourwalk Public Spaces Recycling Pilot Project Report	http://tinyurl.com/PRBigBellyHalifax
NYCWasteless – 2007 Public Space Recycling Pilot	http://tinyurl.com/PRNYCWasteless
Ontario Continuous Improvement Fund – Public Place Recycling	http://tinyurl.com/PRWDOCIF
Quinte Waste Solutions (Ontario) – Recycle away Final Report	http://tinyurl.com/PRQuinte
Sustainability Victoria (Australia) – Public Place Recycling Guidelines	http://tinyurl.com/PRSusVic
York Region (Ontario) – Make the Drop Public Space Pilot Report	http://tinyurl.com/PRYorkOnt

the results that were obtained. Audits of the collected streams showed that the recycling stream averaged 23 percent contamination while the organic stream had an average of 11 percent contamination. Comments on the pros and cons of the various collection bins that were used are also provided.

Halifax Harbourwalk (HH)

A three-month pilot study in 2010 involving 15 locations in the HH area (downtown Halifax, British Columbia) was conducted utilizing Big Belly solar-powered compactor containers. A comprehensive auditing methodology was utilized to identify the recovery composition of four streams: waste, recyclable containers, recyclable paper and compostable organics. This data was then used to estimate quantities generated at each location and on an annual basis. The study results showed that the pilot program achieved an 83-percent recovery rate for recyclables and an overall waste diversion rate of 49 percent.

City of Richmond (CoR)

The city of Richmond, British Columbia conducted a pilot public space recycling project starting at the end of July 2011 through October 2011. A total of 81 containers of various designs were used in four locations involving both indoor and outdoor sites. The results of pre-implementation and post-implementation audits are summarized along with a discussion of other lessons learned from the project. An overall waste reduction rate of 35 percent was reported.

Final thoughts on best practices

During the process of doing research for this topic, I came across the following best practices documentation that can be downloaded from sites listed in the Web Address Directory on the previous page:

- “Public Place Recycling – Best Practices Guidelines”; Sustainability Victoria - 2007
- “Recycle Bins in Public Places – A Good Practice Guide”; Department of Environment, Food and Rural Affairs – 2008
- “Best Practices for Open Space Recycling”; Waste Diversion Ontario – 2009
- “Development of Best Practice in Public Space Recycling”; Eureka Recycling – 2011

What I found interesting after reviewing them is that despite the fact they were developed in four different countries between 2007 and 2011 their recommendations are very similar. They appear, at least in my opinion, to fall within the following groupings:

- Identify what materials to recycle. This can be best done in the pre-implementation stage based on visual assessments or using a more rigorous waste sorting methodology.
- Select the areas to be serviced based on traffic and usage patterns. Then proceed to gain the support of relevant stakeholder groups by soliciting public input and assistance. The Eureka Recycling report is an especially good resource with respect to this implementation step.
- Determine the type of collection containers to be used with respect to size, design and compatibility with the exist-

ing waste services infrastructure. The Sustainability Victoria report provides a lot of useful graphics to illustrate these issues.

- Develop the educational messages and signage to be used and how it will be delivered based on a consistent graphical design, text and color. They should also be compatible with other educational tools that are being used locally to promote or encourage recycling.
- Make sure there is a clear plan for providing collection services, maintaining site cleanliness and measuring program effectiveness. Post-implementation waste audits are a highly-recommended tool for assessing recovery and contamination rates.

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