

Part 2: Away-from-Home Recycling

Today's beverage market is packed with convenience items, grab-and-go packages, and single-use containers that weren't around when curbside recycling programs were first conceived in the late 1980s. Single-use containers have grown in popularity with consumers, mostly because they're both easy-to-use and disposable. As more of these items enter the marketplace, the number of containers consumed "away-from-home" (AfH) – at places like sports stadiums, concerts, universities, and gas stations – is on the rise (see Table 4).

TABLE 4 EXAMPLES OF AWAY-FROM-HOME (AFH) LOCATIONS WHERE CONTAINERS ARE DISCARDED

Location Category	Examples
Public spaces	Parks, streets, transit stops, greenways
Industrial, commercial, and institutional (IC&I)	Bars, restaurants, hotels, amusement parks, shopping malls, convenience stores, offices (and other workplaces), gas stations, coffee shops, some multi-residential units (with private waste service), government buildings, arenas, libraries, public daycares, community centres, colleges, universities, elementary and secondary schools
Special events	Outdoor music festivals, sporting events, concerts, fairs, markets

HOW MUCH IS GENERATED AWAY-FROM-HOME?

While the majority of beverages continue to be consumed in households, it is estimated that anywhere between 30-40%² of beverages are consumed away-from-home (AfH), in areas where recycling services may not be available. Knowing the number of beverage containers that are consumed and discarded AfH is critical to determining accurate recycling rates and designing effective recovery programs. Despite this importance, there is very little data on this subject. There are several reasons for this.

For one, there is little information available on the total number of industrial, commercial, and institutional (IC&I) establishments in each province that participate in beverage container recycling programs. Secondly, waste and recycling collection and management services for IC&I buildings, events, hospitals, schools, and other AfH locations are typically contracted to private sector service providers. While this may not be a problem in itself, there are no regulatory requirements for these companies to track and report volumes collected at each location to the government or oversight authority. It is standard practice to weigh loads at the end of a route, making it difficult to obtain information about a specific location unless volumes are estimated at the point of collection by the hauler.

Moreover, there is no single provincial or municipal authority that oversees diversion performance from the IC&I sector.³ In Ontario, while Regulation 102/94 has required selected

IC&I facilities to conduct waste audits and waste reduction work plans for several years now, there are no published results or performance measures in relation to their effectiveness.

Due to the lack of data available, we rely on findings from a series of studies to estimate a recycling rate for containers recovered from AfH locations. Table 5 summarizes some of the research that has been conducted to assess the percentage of beverage containers consumed AfH, including a brief description of the methodologies used to arrive at those estimates.

TABLE 5 ESTIMATED AWAY-FROM-HOME (AFH) BEVERAGE CONTAINER MARKET SHARE

Source	Study Methodology	AfH beverage container market share (%)
<i>The Environmental and Economic Performance of Beverage Container Reuse and Recycling in British Columbia, Canada</i> , prepared by Container Recycling Institute, August 2015	Not available to the public	All beverage containers: 30-40%
IPSOS Study conducted in Ontario for CBCRA in 2012 ⁴	Not available to the public	By container type Glass: 28% Aluminum cans: 28% PET: 28% HDPE: 20% Gable top cartons: 10% All beverage containers: 26%(estimated range is between 15 and 30%)
<i>Australian Beverage Packaging Consumption, Recovery and Recycling Quantification Study</i> , prepared by Clare Davey, 2008	Based on sales data. Containers purchased at grocery stores were considered to be consumed at-home. The difference between at-home sales and total sales is assumed to represent containers consumed away-from-home.	By container type Glass: 25% Aluminum: 25% Plastic: 45%
Beverage Packaging Environmental Council (BPEC) study, 2006 ⁵	Not available to the public	By container type Glass: 33% Aluminum: 24% Plastic: 42%
<i>Understanding Beverage Container Recycling: A Value Chain Assessment</i> , prepared by R.W. Beck, in collaboration with Franklin Associates, Tellus Institute, Boisson & Associates, and Sound Resource Management, 2002	Figures for PET and aluminum are based on carbonated soft-drink point of sale data from the Container Consulting Inc. Sales at vending machines, venues, and convenience stores are assumed to be consumed away-from-home, while sales at food stores are assumed to be consumed at home. Figures for glass are R.W. Beck estimates based on an understanding of the types of beverages packaged in glass.	All beverage containers: 37% By container type Glass: 34% Aluminum cans: 13% PET: 63%
American Beverage Association (ABA) report	Not available to the public	All beverage containers: 30-34%
<i>Mise en Marché et Récupération des Contenants de Boisson au Québec</i> prepared by Francois Lafortune	Based on methodology used for 2002 report by R.W. Beck (see above)	By beverage type Milk containers: 5% Soft-drink containers: 17% Juice containers: 22% Wine/spirits containers: 22% Water bottles: 50%

EXISTING INITIATIVES TO ENHANCE AWAY-FROM-HOME COLLECTION

For jurisdictions without deposit-return, establishing a comprehensive AfH program in conjunction with a residential curbside collection program (single-family and multi-family dwelling) can mean the difference between a successful recycling program and one that is less successful. In an effort to encourage the recycling of beverage containers consumed AfH – especially those served in non-refillable containers – several Canadian cities/provinces have implemented pilots and long-term programs. Many of these initiatives are based on a partnership model in which an industry partner or non-governmental organization sponsors a program in partnership with a community.⁶ This cost-sharing model is key to the successful launch of such programs, which increase costs for municipalities with the need to purchase bins and provide promotion and education materials to their residents.⁷

Manitoba

Created and administered by the Canadian Beverage Container Recycling Association (CBCRA)—a not-for-profit, industry-funded organization whose members include beverage brand owners and distributors—Recycle Everywhere was Canada's first province-wide AfH beverage container recycling program. Recycle Everywhere provides recycling bins free of charge to communities, schools, businesses, provincial parks, community centres, and events around the province to allow Manitobans to conveniently recycle their beverage containers rather than throwing them in the garbage. (For information on how the program is funded, see Manitoba's provincial program summary on page 64).

In 2014, over 13,000 Recycle Everywhere bins were placed with partners at 739 sites.⁸ In late 2013, Recycle Everywhere officially launched Recycle Everywhere 101, a brand-new province-wide initiative designed to increase the recycling of beverage containers at schools and among students. Currently, 487 schools (primary and secondary only) across Manitoba have Recycle Everywhere bins.

Since the program began, the collection rate for beverage containers has increased from 42% in 2010, to 64% in 2014 (by weight)—an increase of 22 percentage points.⁹ The government-mandated collection target for 2016 was 75%, which CBCRA has yet to achieve. (Note: It is important to remind the reader that in provinces like Manitoba, the collection rate is reported by weight and thus does not reflect actual recycling of materials (for a more detailed explanation, see section on “Process Loss” in Part 1: Performance Measurement).

Québec

Québec's away-from-home recycling program is managed by Éco Entreprises Québec, a private non-profit organization that represents more than 3,000 contributing companies who put containers, packaging, and printed matter on Québec's market. Launched in 2008, the program provides funding to municipalities to install recycling equipment in indoor and

outdoor public spaces, such as along streets and bike trails, in bus shelters, and arenas. It reimburses 70% of the cost of the equipment, up to \$840 per unit. To date, companies represented by ÉEQ and Québec's Ministry of Sustainable Development, Environment, and Action against Climate Change (MDDELCC) have contributed a total of \$6 million to municipal organizations for the installation of over 12,000 bins in the province (equivalent to around 1,300 bins per year).¹⁰

British Columbia

BC's first public spaces recycling program "Go Recycle!" started off as a pilot project in 2011. Launched in the City of Richmond by the Canadian beverage industry, the pilot included over 80 strategically placed new bins, and specially designed instructional and promotional signage.¹¹ To measure the effectiveness of this program, industry conducted pre- and post-implementation waste audits of the pilot area and found that the number of recyclable beverage containers placed in trash bins decreased by 27%.¹² The study also found a 29% reduction of recyclable non-beverage containers in the garbage, and a 35% overall reduction in the amount of waste generated.

Other Provinces

Public space recycling programs or pilots have also been successfully implemented in Ontario (Sarnia, Markham, Niagara Region), Nova Scotia (Halifax) and Alberta (Calgary).

In 2010, the city of Sarnia, ON launched the first phase of its pilot public spaces program in three park locations, achieving an average collection rate of 75% for beverage containers—a 73.5% increase over the previous result. The second phase of the same program took place in three Sarnia arenas and eight convenience stores/gas bars and achieved beverage container collection rates of 73% and 84%, respectively.

Niagara's public spaces recycling pilot, dubbed "Niagara Recycles on the go!" achieved similar results. This program was launched in March 2010, when about 24 recycling bins were installed at two arenas in St. Catherine's. Follow-up waste and visual audits showed collection rates to be an average of 65% -- a 35% increase over baseline levels.

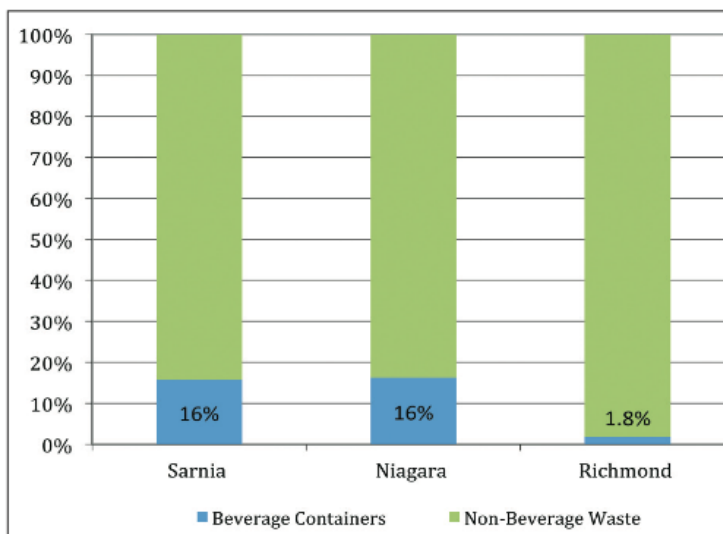
A pilot project conducted on the Halifax Waterfront generated even more promising results. After just three months of placing bins and signage along the Halifax Harbourwalk, the pilot project collected approximately 95% of all containers discarded in the area. Another highly successful public spaces pilot project took place in the city of Calgary in 2012. The program, which saw a total of 48 recycling bins installed in three different areas of the city, resulted in a significant increase in the diversion rate of recyclables—including beverage containers. In one pilot neighborhood, the number of beverage containers found in the garbage decreased by 89%.¹³

SHARE OF BEVERAGE CONTAINERS DISCARDED AWAY-FROM-HOME IN DEPOSIT VS. NON-DEPOSIT JURISDICTIONS

While each of the pilots showed that recycling of beverage containers in AfH locations was enhanced by the addition of bins and signage, it is important to point out the difference in the findings between Richmond, BC a city where all beverage containers bear a deposit, and Sarnia and Niagara, ON where most beverage containers are collected at curbside.

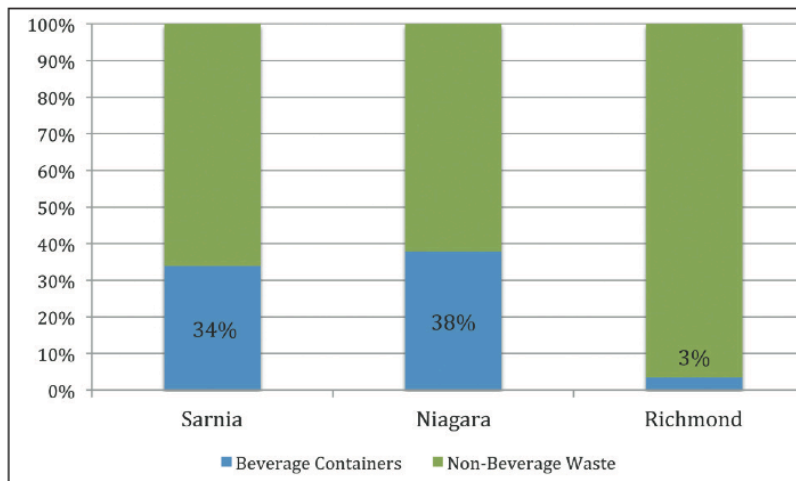
In Sarnia and Niagara, audits revealed that recyclable beverage containers made up over 15.7% and 16.2% (by weight), respectively, of the materials deposited in the waste bins. (PET beverage containers alone represented over 8% of the waste stream in each of the pilots). These numbers are significantly higher than those reported in the Richmond study, where recyclable beverage containers were found to make up only 1.8% of the total waste stream (Figure 18).

FIGURE 18 PET & ALUMINUM BEVERAGE CONTAINERS AS A PERCENTAGE (BY WEIGHT) OF WASTE AND RECYCLING STREAMS IN AWAY-FROM-HOME LOCATIONS - NON-DEPOSIT JURISDICTIONS (SARNIA AND NIAGARA, ONTARIO) VS. DEPOSIT JURISDICTIONS (RICHMOND, BC)



When viewed in terms of volume, the results are even more striking. In Sarnia and Niagara, beverage containers make up 34% and 38%, respectively, of the AfH combined waste and recycling streams, whereas in Richmond they make up only 3% (Figure 19). This data demonstrates that where deposit programs exist, beverage containers make up a smaller portion of the AfH waste and recycling stream.

FIGURE 19 PET & ALUMINUM BEVERAGE CONTAINERS AS A PERCENTAGE (BY VOLUME) OF TOTAL COMBINED WASTE AND RECYCLING STREAMS IN AWAY-FROM-HOME LOCATIONS - NON-DEPOSIT JURISDICTIONS (SARNIA AND NIAGARA, ONTARIO) VS. DEPOSIT JURISDICTIONS (RICHMOND, BC)



WHO PAYS FOR AWAY-FROM-HOME RECYCLING?

The primary cost drivers associated with starting and operating a public spaces recycling program are the same as residential collection, and include the purchase of recycling bins and signage, new collection vehicles and/or modifications to existing vehicles, hauler fees, program monitoring and management, labour, costs to sort and process materials, and ongoing promotion and education.

In general, the costs of AfH recycling are borne by the entity (public or private) responsible for waste management at the location in question. For example, recycling in an office building is the responsibility of the property manager or owner. Similarly, recycling initiatives undertaken by a school are the responsibility of the school board or principal. When it comes to publicly owned and serviced areas, like parks, arenas, and municipal buildings, recycling is financed directly by the municipality. Only in Manitoba, Ontario and Québec does industry bear a share of AfH recycling costs.

Unlike municipal curbside recycling or deposit systems, the costs associated with AfH collection are rarely studied or discussed. It is therefore difficult – if not impossible – to determine how much of taxpayers' money is going towards these programs. That being said, collection of recyclables from public spaces is much more expensive, ton for ton, than at-home collection. Collecting recyclables from parks containers, for example, requires staff to exit their vehicles and walk from container to container, emptying each one as they go. Compared to residential automated collection where one driver can service hundreds of homes in one day,

this is extremely time-consuming.¹⁴ Another factor to consider is collection frequency. Public space receptacles are typically emptied 5 to 7 times per week, whereas residential trash and recycling bins are usually only picked up once a week. Lastly, the cost to purchase public space recycling bins is also more expensive.

According to a 2014 report by the Massachusetts Sierra Club¹⁵, the total average minimum cost to municipalities for public recycling bins is estimated at USD\$216,829 per year. For the City of Boston, it is estimated that adding public recycling bins adjacent to waste bins would add \$7 to \$12 million to the city's collection costs. Cities such as Lowell and Worcester would see added costs of up to \$2 million and \$3.4 million, respectively.