

Part 3: Provincial Program Summaries

Beverage container recycling programs in Canada are varied. Despite some commonalities, each has their own set of strategic objectives as well as their own rates of effectiveness and costs. This section of the report provides a summary of the salient features of each province's program, including a description of the regulatory framework under which the program operates, a description of the program's scope (including the types of beverages and materials covered), a listing of key performance targets, a description of the agents responsible for managing and operating the program, an explanation of how the program is funded, as well as a description of the collection system and performance rates achieved. Some provinces also include a "What's New" section describing the latest updates since the 2016 edition of *Who Pays What*[™].

British Columbia



Regulatory Framework

Established in 1970 under the province's *Litter Act*, British Columbia (B.C.)'s DRS is the oldest EPR program in the province and is one of the longest-standing beverage container recycling programs in the world. In 1998, to address changes in beverage container packaging, the province replaced the *Litter Act* with the *Beverage Container Stewardship Program* regulation, which expanded the program's scope to all ready-to-drink beverages, except for milk and milk substitutes. This regulation was replaced in 2004 with new legislation – the *Recycling Regulation* – that consolidated all B.C. product stewardship regulations into one.

The *Recycling Regulation* sets out the requirements that apply to all producers and stewardship programs with specific product category provisions listed in schedules. Most of the provisions of the original beverage container program are now contained in Schedule 1 of the *Recycling Regulation*. Under this regulation, product stewards (usually the producer or brand-owner, or an agency operating on their behalf) are required to submit stewardship plans that describe the structure and operation of a system for collecting and recycling beverage containers that meets various criteria, including convenient and free consumer access to collection facilities. It is also worth noting that Section 7 and 8 of the *Recycling Regulation* require that all redeemed containers be refilled or recycled, and that no redeemed containers be landfilled or incinerated.

In 2009, the Canadian Council of Minister of the Environment (CCME) approved a Canada-wide Action Plan for Extended Producer Responsibility (EPR) where jurisdictions, including B.C., committed to working towards the development of EPR programs for an agreed-to list of product categories. To meet this commitment, B.C. amended its *Recycling Regulation* in 2011 to include packaging and printed paper (PPP). Under the updated

regulation, producers of PPP that enters the residential waste stream were given until November 2012 to submit their stewardship plans (or be included in such a plan) to the Ministry of Environment, describing how they plan to recover the materials they put on the market. The implementation date was set for May 2014. To date, the only plan covering all PPP and granted approval by the province is from Recycle BC (formerly Multi-Material BC (MMBC)).

Performance Targets

The *Recycling Regulation* establishes a minimum recovery target (collection rate) of 75% for each sub-category of beverage containers listed in Schedule 1. However, there are no penalties for failing to achieve these targets, and there is no specific requirement for continuous improvement.

In addition to the provincial requirements, Encorp Pacific (Canada) has set its own recovery targets in its 2014-2018 Stewardship Plan. These are summarized in Table 5.²² Beyond recovery rate targets, Encorp has set targets for consumer access and awareness levels. A 97% consumer access level is the goal set within the approved stewardship plan. This target is based on drive times—30 minutes for urban areas and 45 minutes for rural areas—set out in the Stewardship Agencies of British Columbia (SABC) accessibility standard. Regarding public awareness of the types of beverages and containers registered under the system, the stewardship plan sets a target of 95%. It also sets a goal of 90% for awareness of locations to which containers can be returned.

Table 5 Encorp Pacific (Canada)'s Recovery Rate Targets (2014-2018)

	Recovery Rate Targets (%)				
	2014	2015	2016	2017	2018
Glass	93.9%	93.9%	93.9%	94.0%	94.0%
Plastic	76.2%	76.6%	76.9%	77.3%	78.0%
Aluminum	84.1%	84.3%	84.5%	84.6%	85.0%
Polycoat	59.1%	60.3%	61.5%	62.6%	65.0%
Other (other metals, bag-in-box and pouches)	56.2%	57.0%	57.7%	58.5%	60.0%
Total Recovery Rate (weighted)	80.1%	80.6%	81.0%	81.5%	82.0%

For beer containers, the Brewers Recycled Container Collection Council (BRCCC) has set a recovery (collection) target of 87.5% for the years 2015-2019.²³ This target applies to both the overall rate and the rate for each container type. BRCCC has also set an accessibility target of 385 return locations by 2019 (or 80% of the population living within a 10 minute drive of a return location).

Who is Responsible?

There are two corporate entities that collect and recycle beverage containers in B.C. on behalf of producers (brand owners or first importers of beverages sold in the province): Encorp Pacific (Canada) and the BRCCC.

Originally formed in 1994 and then as a product stewardship agency in 1998, Encorp is a not-for-profit organization responsible for all non-alcohol beverage containers (e.g. soft drinks, water, etc.) and all alcohol beverage containers (including glass bottles used for wine, spirits, beer, and cider), except for aluminum beer cans and refillable beer bottles. Encorp operates the "Return-It" depots across B.C., where all types of beverage containers (other than milk and milk substitutes) can be returned for a refund of the deposit. The

corporation is governed by a Board of Directors consisting of representatives of the beverage and retail grocery industries as well as directors who have no connection with either industry.

BRCCC is the stewardship agency for all refillable glass beer and cider bottles, as well as all aluminum beverage alcohol cans. Established by brewers, the BRCCC is a not-for-profit society composed of members representing companies or organizations that together represent over 95% of the beer volume sold in B.C. BRCCC subcontracts Brewers Distributor Limited (BDL), a privately-owned distribution and logistics company, to act as its agent. BDL is responsible for collecting container fees from brand-owners, managing unredeemed deposits and material revenues, and coordinating recycling collection through alcohol retailers, and also through Encorp's "Return-It" depots.

As of May 2014, producers of packaging and printed paper (PPP) that enters B.C.'s residential waste stream also have obligations under the *Recycling Regulation*. Recycle BC (previously named Multi-Material BC) is the non-profit stewardship organization responsible for ensuring that PPP is collected and recycled on behalf of its members. Recycle BC provides PPP collection and recycling services either directly to communities or by working in partnership with municipalities, First Nations, private companies, and other non-profit organizations.

Program Financing

Deposit Return Program

As shown in Encorp's financial statements, the total cost of running the "Return-it" program in 2016 was \$91.6 million. Handling fee payments to depots represented the biggest expense (\$53.5 million, accounting for 58% of total costs), followed by operations expenses (\$28.7 million, accounting for 31% of total costs). This includes transportation and processing fees. Administration and consumer awareness costs accounted for about 10% of total costs.

In 2016, total revenues amounted to \$85.3 million. The three primary sources of revenue for the program are: 1) unredeemed deposits; 2) revenue from the sale of processed material; and 3) container recycling fees (CRFs). Encorp receives no government funding.

At \$17.5 million, unredeemed deposits represent about 20% of total funds received. This is the difference between the deposits collected (\$87.6 million) from consumers and the refunds issued (\$70.1 million). Deposits, which are charged on all beverage containers covered under the program, are laid out in the *Recycling Regulation* and vary by container type and size. Non-alcoholic beverages up to and including 1L carry a 5-cent deposit, while alcohol containers of the same size carry a 10-cent deposit. All containers (alcohol or non-alcohol) over 1L carry a 20-cents deposit.

Revenues from the sale of processed containers represented approximately 13% (\$11 million) of the total funds received by Encorp in 2016. Although prices for aluminum and plastic declined in 2016, the weak Canadian dollar helped to offset the negative effect of the low commodity prices denominated in US dollars.

When the revenues from unredeemed deposits and material sales are insufficient to cover the costs of collecting and recycling a specific container type, a non-refundable CRF is added to the container to make up for the deficit. Encorp collected a total of \$45.3 million in CRFs in 2016, representing the largest (53%) source of funding. Implemented by the beverage industry (excluding the domestic beer industry), CRFs are charged based on the net cost for recovering and recycling beverage containers and vary depending on the market value—which fluctuates with economic conditions—and the collection rate for a particular container. CRFs are

adjusted on an annual basis and are rounded up to the nearest penny. With the exception of glass bottles over 1L, CRFs for all container types have increased since the 2016 report. As of February 1, 2018, CRFs range from 1-cent/unit for aluminum cans to 16-cents/unit for large (>1L) glass containers. For some non-alcohol containers, including large (>1L) bi-metal cans and gable top containers up to 1L, a CRF is not necessary.

Since the implementation of the CRF, producers of non-alcohol beverages bear no direct costs for the operation of the system. Any surplus funds (after expenses are paid) are placed into reserves. A minimum level of reserves must be maintained in order to ensure the program's financial stability over the long-term and to avoid cross-subsidization of container types. To prevent reserves from accumulating beyond their targeted ranges, Encorp can adjust or even eliminate CRFs in any given year, or it can increase its expenses to improve the recovery rate for a specific container type. As of 2016, Encorp had \$26.2 million in reserves.

Unlike the costs of managing of non-alcohol containers, the collection and recycling of alcohol containers is fully funded by the producers. This cost is factored into the shelf price of the product (i.e. not added at the till) as any other business cost, such as labor, energy, or transportation. Because BDL does not disclose financial details in its annual reports, its expenditures have not been analyzed.

Curbside Program

Since May 2014, B.C.'s residential PPP recycling program has been financed 100% by businesses (i.e. retailers, manufacturers, and restaurants) that supply PPP to residents. Producers pay fees to Recycle BC quarterly based on the weight and type of material. For municipalities and/or private companies offering curbside recycling and/or multi-family recycling, Recycle BC provides a fixed fee per household as a financial incentive. Municipalities, non-profits, and private companies operating depots for residential drop-off receive a fixed fee per tonne. Under this model, municipal waste management costs are fully or partially offset, effectively shifting the cost of recycling from taxpayers to businesses.

Collection System & Facilities

As of 2016, Encorp's collection network provides access to recycling of beverage containers to 99.4% of B.C. residents. Empty containers can be returned to 172 privately owned depots (down from 173 in 2014) and hundreds of beverage retailers, including corner stores, supermarkets, and government liquor stores. Ninety-five percent of all redeemed containers are collected through Return-it Depots. The rest is collected by retailers.

Encorp uses 37 transporters to pick-up the material and transport it to 12 processing facilities throughout the province, where the containers are compacted and prepared for shipment to various recyclers. In 2016, baled aluminum cans were shipped to a re-melt facility in the United States where they were turned back into sheet stock for new cans. Plastic containers were sold to Merlin Plastics and shipped to two different facilities in Alberta and B.C. to be cleaned and pelletized to become secondary feedstock for manufacturers of various plastic products and fibres. Glass bottles were processed in B.C. and shipped to various end markets, including a facility in Alberta that makes fibreglass insulation; a facility in Seattle (US) that produces new bottles, and a facility in Quesnel, B.C. that produces sandblasting materials.²⁴ Some glass is also crushed and sent to municipal sites to be used as construction aggregate. In the case of polycoat containers, these were sold to ICF International and shipped to manufacturing plants in South Korea, Thailand, and India, where they are used in the production of tissue paper. There were no end markets for stand-up pouches in 2016, so these were stored in Delta, B.C. The plastic bladders inside bag-in-box containers were shipped to a facility in South Korea

where the recycled plastic was used to make reservoir tanks. The cardboard was recycled by local processors. Bi-metal containers were collected and sold to scrap dealers for metal recovery.

For containers covered under the BDL program (refillable beer and cider bottles and aluminum alcohol beverage cans), BDL provides for container returns at 1,140 locations²⁵, including 72 authorized depots, 649 licensee retail stores, 200 government liquor stores, and 219 rural agency locations. BDL also offers on-site collection services to several thousand restaurants and bars. In addition to collecting the containers designated under its stewardship plan, BDL also collects and recycles all secondary packaging associated with its containers. In 2016, 100% of aluminum cans collected by BDL were sent to recyclers and processed for metal recovery. Ninety-nine percent of refillable glass bottles were sent to brewers for reuse, with 1% sent directly to a glass recycler for recycling.

Until May 2014, containers containing milk and milk substitutes were collected as part of a voluntary (non-deposit) recovery system financed by the British Columbia Dairy Council and administered through Encorp Pacific under the name Return-It Milk™. The collection and recycling of these containers is now part of Recycle B.C.'s residential PPP recycling program, which uses three collection methods: curbside collection from households, multi-family collection from a central location in buildings with five or more residential units, and depot collection.

Program Performance

Encorp collected a total of 1 billion beverage containers in 2016 (210.6 units per capita) for an overall collection rate of 78.0%. The chart below shows rates that include deposit cans so the aluminum and total numbers number are higher than those shown by Encorp.

Recycling rates for containers recovered under BDL's deposit program were significantly higher. In 2016, BDL collected nearly 600 million containers for an overall return rate of 90.6%. Industry standard refillable beer bottles saw the highest return rate at 94.3%, while non-standard bottles were recycled at a rate of 81.7%. The return rate for aluminum beer cans was 90.5%.

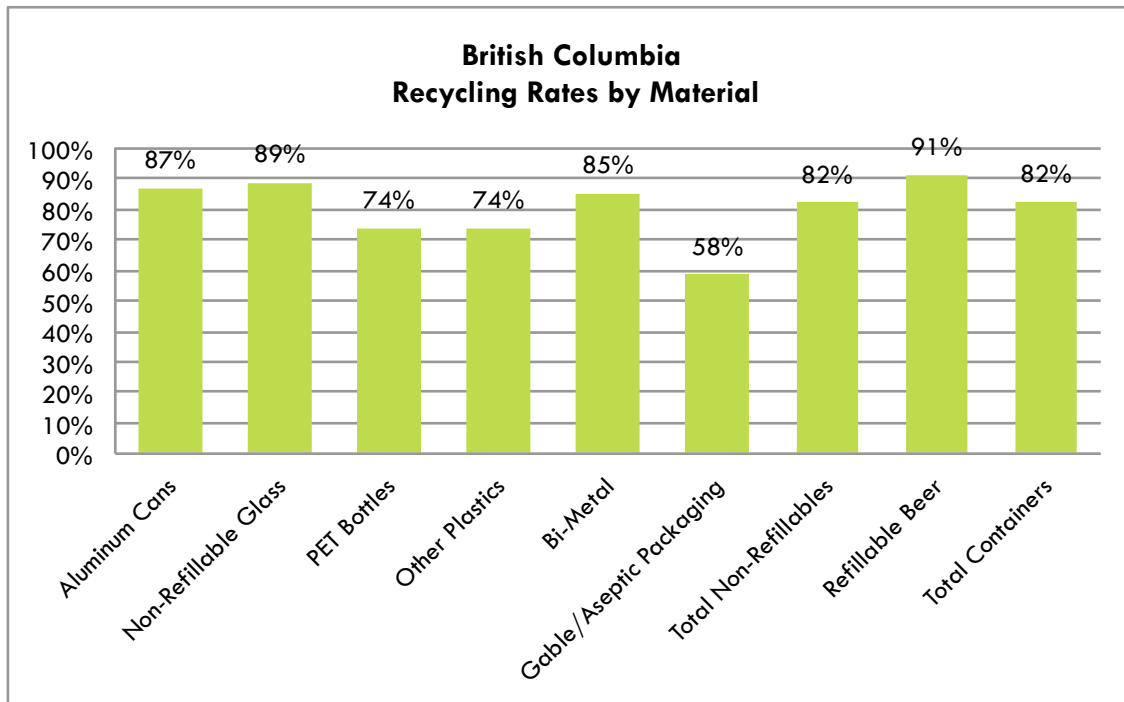


Figure 20 British Columbia Recycling Rates by Material (2016)

With respect to awareness of Encorp's Return-it program, research shows that a 99% net awareness level has been reached. Ninety-nine percent of those surveyed were aware that most beverage containers could be returned for a refund of the deposit, and 90% were aware of at least one location where they could return beverage containers for recycling.

BDL's program for beer containers is also well known. A 2013 survey by the Stewardship Agencies of BC showed that 96% of B.C. residents were aware of the program.

Alberta



Regulatory Framework

Alberta's DRS for beverage containers was established through the *Beverage Container Recycling Regulation*, which was enacted under the *Environmental Protection and Enhancement Act*.

First introduced in 1972, the Regulation has undergone several amendments over the years, including one in 1989 to include additional goods such as carbonated and/or flavored waters, fruit and vegetable juices, and prepared teas, and one in 1997 to include aseptic and gable top cartons. The Regulation's scope was further expanded in 2001 to

include all domestic beer containers. This meant that domestic beer producers would now be treated the same as other beverage producers in terms of program compliance, reporting requirements, and financial obligations (like handling fees paid to depots). Another big change came on November 1, 2008 when—for the first time in 20 years—Alberta increased the level of its deposits from 5-cents to 10-cents and 20-cents to 25-cents. The last major amendment to the Regulation was made in June 2009, when Alberta became the first jurisdiction in North America to include milk containers in a regulated deposit refund program. As a result of this expansion, every beverage container sold in Alberta is now part of the deposit system.

As of 1997, regulatory authority for the program is given to the Beverage Container Management Board (BCMB). Incorporated under the *Societies Act* as a management board under the *Beverage Container Recycling Regulation*, the BCMB operates in accordance with a number of general by-laws set by the Board of Directors, including, among others, the *Administrative By-Law*, the *Handling Commission Criteria By-Law*, and the *Collection System Agent By-Law*.

Performance Targets

In Alberta, there are no legislated targets for beverage container collection or recycling. However, the BCMB's 2016 annual report includes an overall return rate target of 84.1% for 2016. Overall return rate targets have also been set for 2017 (86.1%), 2018 (85.8%), and 2019 (86.4%).²⁶ In addition to setting overall targets, the BCMB has set material-specific return rate targets for aluminum (89.2% in 2016), bi-metal (89.1% in 2016), non-refillable glass (92.0% in 2016), refillable glass (96.5% in 2016), plastics 1L and less (78.1% in 2016), plastics over 1L (88.9% in 2016), aseptic containers and pouches (65.8% in 2016), and gable top containers (66.9% in 2016).²⁷

Who is Responsible?

Alberta's beverage container recycling system is administered by the BCMB. The BCMB is a not-for-profit, industry-led Board made up of representatives of Alberta beverage manufacturers, container depots, and the public. As a Delegated Administrative Organization (DAO), it operates at arm's length from government and has authority under the Ministry of Environment and Parks to impose requirements on recycling program stakeholders. The BCMB reports directly to Alberta Environment and Parks and submits annual reports on program performance. Its main responsibilities include registering brands, issuing permits, establishing handling fees, negotiating operating standards, and monitoring compliance with regulatory requirements.

To collect containers from return locations, the BCMB works in partnership with the Alberta Beverage Container Recycling Corporation (ABCRC), the Alberta Beer Container Corporation (ABCC), and the Alberta Bottle Depot Association (ABDA).

The ABCRC is the approved collection system agent (CSA) for Alberta's non-refillable beverage containers. It works on behalf of manufacturers of non-alcoholic beverages to collect and recycle non-refillables from depots, and process and ship them to recyclers. To facilitate this collection, it outsources 100% of transportation services to a third-party company, and contracts with a regional processor in Lethbridge for a small portion of processing capacity. The ABCRC also operates two of its own processing facilities: one in Edmonton and the other in Calgary.

The ABCC is the collection service provider (CSP) for beer manufacturers and is responsible for collecting and processing standard-sized, refillable beer bottles. Since 2009, the ABCC has outsourced the management of non-refillable beer containers to the ABCRC.

The ABDA represents bottle depot owners in Alberta. Depot operators are responsible for collecting, sorting, and counting containers for ABCRC.

Producers of alcohol containers are represented by a provincial government agency, the Alberta Gaming and Liquor Commission (AGLC). The AGLC uses ABCRC to manage its wine and spirit containers and the ABCC to manage its beer containers.

Program Financing

The total cost to run Alberta's beverage container recycling system in 2016 was \$126.4 million. The program's single largest expense was for handling commissions and BCMB fees (\$94.9 million, or 74.7% of total costs). Together, processing and transportation costs came up to \$22 million, representing 17.4% of total expenditures. Other costs to the system include those for administration (\$5.3 million, or 4.2%), marketing (\$2.4 million, or 1.9%), depreciation (\$1.4 million, or 1.1%) and financing charges (\$213,000, 0.2%).

Like many other provinces, Alberta's beverage container recycling program is self-funded and receives no money from any government source. Some of the money (\$28.9 million in 2016, or 24% of total revenues) comes from the proceeds ABCRC receives when it sells recycled beverage containers that have been baled to various recyclers. The rest comes from unredeemed deposits and container recycling fees.

In 2016, the program generated \$35.9 million in unredeemed deposits (30% of total revenues). This is the difference between the deposits collected (\$253,708,406) and the deposits refunded (\$217,787,354). The deposit amount for containers 1L or smaller is 10-cents and for containers larger than 1L it is 25-cents. Consumers are refunded the deposit when they return empty beverage containers to an Alberta bottle depot. For every one of their containers that is returned, beverage manufacturers (through the ABCRC or a CSP) pay the depot a handling fee as compensation for handling and collecting the containers.

Container recycling fees (CRFs) generated a total of \$54.7 million in 2016, accounting for nearly half (46%) of total funds received by the program. Administered by the ABCRC, the CRF is a fee that beverage manufacturers are required to pay to cover the net costs of recycling beverage containers that remain once the funds from unredeemed deposits and material sales are depleted. Although the decisions by manufacturers and retailers regarding cost internalization are made independently, this fee is typically passed down to the consumer, which means that the beverage industry bears no direct costs for the operation of the program.

Because some containers are more expensive to recycle than others, the CRF varies by container type and size. As of October 2016, CRFs ranged from 1-cent (aluminum cans) to 12-cents (large plastic containers). Some containers, like gable top cartons and bag-in-a-box (BIB), do not have a CRF because high material revenue and unredeemed deposits are sufficient to cover the collection costs. Depending on the retailer, the CRF may or may not be shown separately on sales receipts. Unlike deposits, these fees are non-refundable and are adjusted on an annual basis (usually on February 1).

Individual domestic brewers internalize their stewardship (collection, transportation, refilling, and recycling) costs. Precise costs are not publicly available.

Collection System & Facilities

Alberta's collection network for beverage container recycling is one of the largest in Canada. As of 2016, Albertans can return their empty beverage containers to 217 independently owned "universal" depots (accepting all beverage containers) and 17 Class D depots (accepting liquor containers only) across the province. Approximately 49% of the population lives within a 10-minute drive of a depot, and 35% live within an 11-20 minute drive.

After drop-off at the depot, containers are counted and sorted by depot operators. Wine and spirit containers are sorted by color, refillables are sorted by brand and size, and non-refillables are sorted by material type, size, and color, where applicable. Following sorting, the depots consolidate container loads in specified shipping containers (mega bags) for transport to processing facilities. Pick-up from depots is carried out by the ABCRC (for non-refillables) and the ABCC (for refillables). The majority of processing is carried out in ABCRC-operated facilities in Edmonton and Calgary, although a small amount of processing occurs in a Lethbridge facility.

Program Performance

In 2016, Albertans returned over 1.9 million beverage containers to Alberta depots, for an overall return rate of 85.7%.

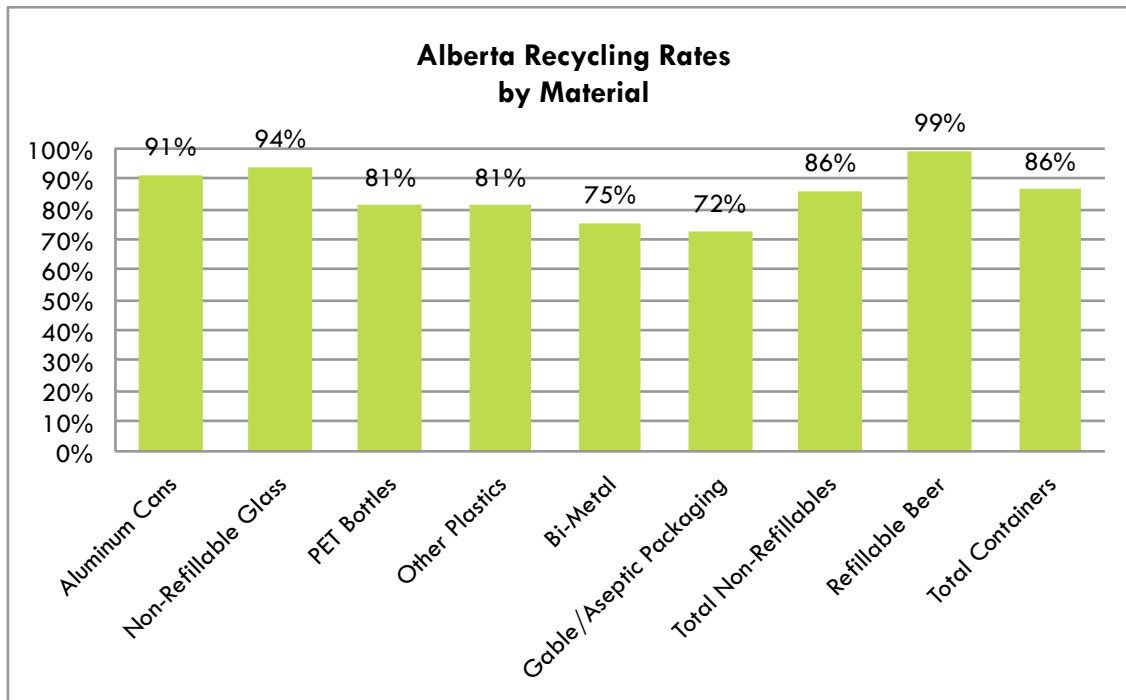


Figure 21 Alberta Recycling Rates by Material (2016)

What's New?

Improved Quality Control

In 2016, Alberta became the first province in Canada to implement TOMRA's automated counting machines in a processing facility. Installed for quality control purposes, this technology resulted in increased performance related to ABCRC's auditing of material shipped from Alberta depots. These machines have also resulted in increased system efficiencies because they require less space, less energy, and allow for quicker and more accurate counts than the previous counting technology.²⁸

Saskatchewan



Regulatory Framework

Established by the Ministry of Environment in 1988, Saskatchewan's beverage container collection and recycling program was originally legislated under the *Litter Control Act* (1978) and the *Designated Container Regulations* (1990). Today, the program is supported by the *Environmental Management and Protection Act* (2010).

Although the DRS initially covered only soft drinks and cans, several amendments to the regulations expanded the program's scope to eventually include all ready-to-serve beverages packed in metal cans,

plastic bottles, non-refillable glass bottles, multi-material shelf stable containers, and paper-based polycoat gable top containers. As of April 1, 2017, the program also includes milk containers.

In February 2013, the Government of Saskatchewan approved the *Household Packaging and Paper Stewardship Program Regulations*. These regulations require stewards of printed paper and packaging (PPP), including beverage-related consumer packaging, to develop and operate a product management program, or join a stewardship agency to do so on their behalf. The stewardship agency formed to discharge the obligations of its members is Multi-Material Stewardship Western (MMSW), which was established under the *Saskatchewan Non-Profit Corporations Act*. The regulations cover any container that is not under deposit, including those made of glass, metal, paper, boxboard, cardboard, paper fibre, or plastic (or any combination of these).

Performance Targets

There are no legislated targets set for Saskatchewan's DRS or the recently launched multi-material recycling program.

Who is Responsible?

The beverage container recycling program is administered by SARCAN Recycling, a division of the Saskatchewan Association of Rehabilitation Centres (SARC). SARCAN operates under contract to the Saskatchewan Ministry of Environment, with which it signed a new four-year agreement effective April 1, 2016. The ministry is responsible for designating containers to be included under the program and for establishing deposit levels and the environmental handling charges (EHC) that consumers pay when purchasing a beverage.

Multi-Material Stewardship Western Inc. (MMSW) is the stewardship organization established to operate Saskatchewan's Multi-Material Recycling Program (MMRP). Its members include brand owners, first importers, retailers, restaurants, manufacturers, distributors, wholesalers, and other organizations that supply PPP to Saskatchewan residents. Its main responsibilities include executing agreements with municipal partners and collecting fees from its members to finance residential PPP recycling programs.

Program Financing

Total costs for Saskatchewan's DRS for the year ended March 31, 2017 were \$32.1 million. These costs were offset by \$32.5 million in revenues. Although SARCAN's annual report does not provide a breakdown of revenue sources, Saskatchewan's program is similar to others in that the majority of funding comes from unredeemed deposits and environmental handling charges (EHCs).

As of April 1, 2018, deposits range from 5-cents to 40-cents per unit, and the EHC ranges from 5-cents to 9-cents per unit, depending on container type and size. Unlike the deposit, which is fully refundable, the EHC is kept by the provincial government and is used to offset SARCAN's contract cost and contribute to general revenues. Additional funding for the program comes from the proceeds generated from material sales and from a provincial grant (the current grant agreement with SARCAN expires March 31, 2020).

Saskatchewan's MMRP is a cost-sharing program between businesses and municipalities. Under the *Household Packaging and Paper Stewardship Program Regulations*, businesses that distribute or sell packaging and paper products in Saskatchewan—including beverage-related consumer packaging—are required to finance up to 75% of the costs associated with running recycling programs. Municipalities, First Nations, or Regional Waste Authorities that join the program are paid a fixed fee per household as long as MMSW standards are met. In 2016, this fee was set at \$11.75 per household served, and was paid out on a quarterly basis.²⁹ According to the 2017 Annual Report, since the launch of the program in January 2016, MMSW has executed funding agreements with 481 municipalities, First Nations communities, and Regional Waste Authorities.³⁰

Collection System & Facilities

SARCAN's collection network consists of 72 depots in 67 communities across Saskatchewan. All 72 depots now have Drop & Go service. Initially launched in 2014 as a pilot project, this service allows customers to drop off their deposit bearing containers at the depot without having to wait in long lines. To use this service, customers simply register online or through a touch screen at the drop-off location. After signing up, customers can login, attach identification tags to their bags, drop them off at a special receiving area, and leave. The deposit refunds are provided electronically through PayPal or by cheque.

After the containers have been counted and sorted by SARCAN staff, they are flattened and compacted into bales using multi-material flatteners. The bales are then picked up by SARCAN trucks and transported to one of the company's processing facilities where they are prepared for shipment to end-markets.

Refillable beer containers can be returned to Saskatchewan Liquor and Gaming Authority (SLGA) stores. All SARCAN depots and SLGA stores retain a 5-cent portion of the 10-cent refund as a handling fee. From there, they are sorted and sent back to the brewers for the full refund and for washing and refill.

Municipalities that provide residential recycling programs for waste packaging and paper can choose to participate in the new MMRP. Participating municipalities have options in terms of how recycling service is provided to their residents – through curbside pickup or a central depot – depending on the size of the community and the associated costs. Residents have the option to recycle their deposit containers through this program if they prefer, but will forfeit their deposit. Containers collected via the MMRP will find their way to SARCAN through municipal contractors.³¹

Program Performance

Over 405 million beverage containers were returned to SARCAN recycling depots in 2016-2017. This translates to an overall return rate for non-refillable containers of 81.9%, which is a decrease from 82.5% in the 2016

version of this report. Of all beverage container materials, refillable beer bottles were recovered at the highest rate (100%) (see Figure 21).

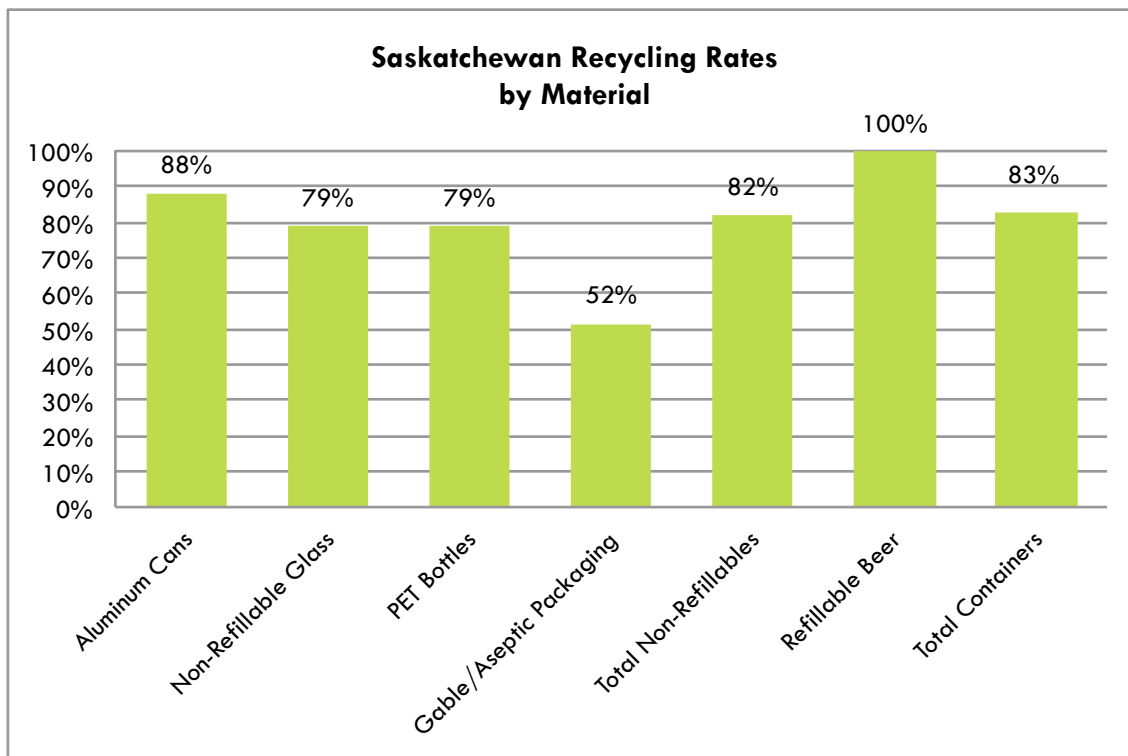


Figure 22 Saskatchewan Recycling Rates by Material (2016)

What's New?

Milk Containers Added to Deposit Program

As of April 1, 2017, “ready-to-serve” milk containers (including buttermilk, cream, fluid coffee creamers, lactose-free milk products, and drinkable yogurt) are included in the same DRS as other beverage containers accepted at SARCAN depots. Previously, the recycling of milk containers was covered under the province’s multi-material recycling program, which launched on January 1, 2016. Prior to that, beverage containers of milk products were collected voluntarily by SARCAN under the Unified Dairy Recycling System (URDS). Launched in 1999, the UDRS was a program whereby the Saskatchewan dairy industry contracted with SARCAN to provide a collection and recycling option for plastic milk jugs and milk cartons.

The addition of milk containers to Saskatchewan’s deposit program means that in addition to a refundable deposit, milk containers are now subject to an environmental handling charge of 8-cents for plastic containers, 9-cents for glass containers, and 5-cents for aseptic and paper-based polycoat cartons.

Deposit Rate Increases

Another change affecting Saskatchewan’s deposit program in 2017 is the increase of some of the deposit refund amounts. As of April 1, 2017, the deposit/refund amount for larger (1L or greater) plastic and aluminum/tin/metal containers is 25-cents, up from 20-cents. Gabletop cartons and aseptic containers have

also seen their deposit levels increase from 5-cents (all sizes) to 10-cents for containers less than 1L and 25-cents for containers 1L or greater. The deposit amount for glass containers remains unchanged. This is the first time deposit refund amounts have increased in 25 years.

There have also been changes to the non-refundable EHC. Effective April 1, 2018, the EHC costs consumers 5-cents for tetra cartons (up from 3-cents), 7-cents for aluminum cans (up from 5-cents), 8-cents for plastic jugs/bottles (up from 6-cents), and 9-cents for glass containers (up from 7-cents).

Manitoba



Regulatory Framework

Manitoba's regulatory framework, under the *Waste Reduction and Prevention Act* (1990), enables the Minister of Conservation to designate products or materials for waste reduction responsibilities. The first regulation to be developed under the Act was the *Beverage Container and Packaging Regulation* (1992). This regulation was established to assess environmental levies on packaging materials, as well as to hold distributors of beverage containers responsible for developing a stewardship program. This regulation was later repealed and replaced by the *Multi-Material Stewardship (Interim Measures) Regulation*, which was

enacted in 1995. The primary purpose of this Regulation was to create the Manitoba Product Stewardship Corporation (MPSC). One of the key mandates of the MPSC was to establish and administer a waste reduction and prevention program for designated packaging and printed materials for Manitoba.³²

In December 2008, Manitoba introduced a *Packaging and Printed Paper Stewardship Regulation*. The Regulation requires any business that supplies, distributes, or sells packaged products or printed paper in Manitoba to register as stewards and to remit fees that are used to cover up to 80% of the cost of municipal recycling programs. The Packaging and Printed Paper Program Plan was developed in response to the Regulation and was approved by the Minister of Conservation in September 2009. The program launched on April 1, 2010, and is run by Multi-Material Stewardship Manitoba (MMSM).

Beverage producers have a separate program plan through the Canadian Beverage Container Recycling Association (CBCRA). The CBCRA plan works in conjunction with the MMSM plan (for the residential produced beverage containers) and targets beverage containers consumed both at home and away-from-home (AfH). All used, sealed ready-to-serve beverage containers are included under the program; this includes aluminum, PET, HDPE, aseptic packages, and gable top containers. Dairy containers are currently exempt.

Manitoba's Minister of Conservation approved CBCRA's first program plan in August 2011 (Until that time, the organization operated on a voluntary basis). The 2012-2016 program plan expired on December 15, 2017, and a new draft plan (for 2018 to 2022) was submitted to the government in November 2017³³. As of the time of writing, it is unknown if the minister has approved the updated plan.

Performance Targets

The Guidelines accompanying the *Packaging and Printed Paper Stewardship Regulation* include a requirement that stewards of obligated beverages are responsible for achieving a 75% recovery target. There is no timeline specified for when this target must be met.

Who is Responsible?

The PPP regulation targets producers of designated PPP material supplied into Manitoba. In order to fulfill their obligations under the Regulation, obligated stewards created MMSM to design, implement, and operate a residential PPP program on their behalf. MMSM is a not-for-profit organization that is governed by a board

of directors consisting of representatives from a number of sectors, including grocers, consumer producers, beverages, retailers, printed paper, newspaper, and restaurants. In accordance with the Regulation, MMSM is responsible for providing the Minister with an annual report on program performance. This information is obtained from stewards, who are required to report annually to MMSM the total quantity of designed PPP supplied for household use in the province. The reported quantity of PPP is used to determine a steward's total fees payable to MMSM.

The beverage container program, "Recycle Everywhere," is managed by the CBCRA, a not-for-profit, industry-funded organization created in 2010. As of the time of writing, the organization represented all of the obligated stewards of beverage containers supplied into Manitoba (excluding beer). While its members and stewards are also stewards of MMSM, the CBCRA is a separate and independent organization from MMSM, the latter of which also represents the interests of other PPP stewards. (The key elements of the relationship between CBCRA and MMSM are set out in a Memorandum of Understanding, last updated in 2016).

Whereas MMSM's focus is on the residential collection system, the CBCRA is tasked with enhancing both at home and away-from-home (AfH) collection. It does this by establishing partnerships with various public and private partners, including municipalities, schools, businesses, institutions, parks, festivals, and events that generate beverage container waste. CBCRA provides beverage container recycling bins for public spaces across the province free of charge, and partners take the recovered containers to a nearby recycler. To support their recycling programs, CBCRA also provides participating generators with the necessary signage, technical support, and promotion and educational materials. In addition to remitting a portion of its fees to MMSM, the CBCRA must report to MMSM all of its members' packaging (i.e. tonnes of aluminum cans; PET bottles; glass; Tetra Pak, etc.) sold into the province.

Provincial oversight responsibility has been delegated to Green Manitoba, a special operating agency that works closely with the Department of Sustainable Development (formerly Conservation and Water Stewardship) on regulation enforcement.

Program Financing

Under the Regulation, stewards of designated PPP material supplied into Manitoba are responsible for financing 80% of the total net cost of municipal recycling programs. Steward fees are established by MMSM on an annual basis and are calculated using a four-step methodology that takes into account material-specific recycling rates and commodity values.

Stewards who supply beverage containers into Manitoba are charged a 2-cent Container Recycling Fee (CRF) for every nonalcoholic, non-dairy beverage container they supply into the province. Producers report and remit these fees to the CBCRA on a monthly basis. In most cases, beverage producers pass the CRF to the retailer, who passes it on to the consumer. This fee is visible on most store receipts and is consistent across the province.

The CBCRA uses the revenue from the CRF to pay for the entire AfH recycling program, including infrastructure, signage, technical support, and P&E.³⁴ A portion of the CRF is also remitted to MMSM (on behalf of each member), which uses it to pay for up to 80% of the net cost to collect and process beverage containers recovered through the residential collection system. In other words, the CRF is designed to cover the costs of recycling beverage containers from all channels, including both residential and AfH. Alcohol distributors pay MMSM directly for their PPP obligation.

As in other provinces where they are charged, the CRF is adjusted annually by the CBCRA based on the overall cost of the program, as well as the differential cost of recycling various materials. The intention is that the costs of each material group should reflect the true cost of recycling that type of container, with no cross-subsidization.

In 2016, the CBCRA collected \$9 million in CRFs, \$1.1 million of which was remitted to MMSM.³⁵ CBCRA uses the remaining revenue to purchase and supply recycling bins to its partners, provide technical support, conduct waste audits, and to pay for awareness campaigns. Total costs in 2016 were \$8 million.

Collection System & Facilities

Beverage containers from the residential sector are collected via curbside recycling or depot drop-off centers. The program, operated by MMSM reached roughly 94% of the population of Manitoba in 2016. Generally, containers are collected, transported to MRFs, sorted, baled, and shipped to their respective end markets for recycling. With the exception of glass, all used beverage containers are sent out-of-province for final processing.

The CBCRA's program, which includes the AfH collection of containers, focuses its efforts on public spaces (e.g. parks and streets), IC&I locations (e.g. gas bars, restaurants, convenience stores, shopping malls), government buildings, educational institutions, and special events. In 2016, CBCRA distributed Recycle Everywhere bins to nearly 800 locations across the province, including 68 municipal sites, 498 IC&I sites, 6 park sites, 178 schools, 16 government buildings, and 8 First Nations. As of December 2016, the CBCRA has distributed a total of 52,000 Recycle Everywhere bins across the province.³⁶

Refillable and non-refillable beer cans are collected via retail beer vendors, the Manitoba Liquor Commission, and rural agency stores. Brewers Distributor Limited (BDL) collects empty domestic beer containers and back-hauls them to various distribution centres where recyclables are baled and shipped to market. Refillable bottles are sorted and sent back to the brewers for washing and refill.

Program Performance

Verifiable performance data for Manitoba's beverage container recovery program is not available.

Ontario



Regulatory Framework

Established in 1994, Ontario's Blue Box Program is one of the oldest and most comprehensive curbside recycling systems in North America. Initially developed under the *Waste Diversion Act (WDA)* of 2002, the program covers most food and beverage containers, including those made from glass, PET, aluminum, and steel. Other containers, such as Tetra Pak, gable top cartons, and HDPE bottles, may be added to the program voluntarily. Eligible waste materials are designated in the *Blue Box Waste Regulation* under the *WDA*.

In November 2016, the former *WDA* was repealed and replaced with the *Waste-Free Ontario Act (WFOA)*. The new legislation, which will have a major impact on the way municipal solid waste is managed in Ontario, is comprised of two schedules: 1) the *Waste Diversion Transition Act (WDTA)* and 2) the *Resource Recovery and Circular Economy Act (RRCEA)*. The first sets out the operation of existing waste diversion programs (including their wind up) and outlines the transformation of the current Waste Diversion Ontario (WDO) into the Resource Productivity and Recovery Authority (RPRA), a strong oversight body with new compliance and enforcement powers. The latter outlines the scope of the new producer responsibility framework, which will make producers individually responsible and accountable for their products and packaging at end of life. Currently, the cost to run the Blue Box Program is split roughly 50/50 between municipalities and producers. The new legislation has started the movement towards 100% producer responsibility for these programs, although much of the details on how the new system will work are still to be determined via the regulations.

Accompanying the *WFOA* is the *Strategy for a Waste-Free Ontario: Establishing the Circular Economy* (the Strategy). The Strategy includes 4 objectives and fifteen concrete actions to build up the province's circular economy and help reduce greenhouse gas emissions from landfills, such as banning certain materials (such as beverage containers) from landfill and requiring producers to register and report on their waste management activities. It also includes an implementation timeline that targets transition of the blue box program to full producer responsibility by 2022.

In July 2017, the Municipal 3Rs Collaborative and Stewardship Ontario sent a joint letter to the Minister of Environment and Climate Change asking that he request an amendment to the Blue Box Program Plan (BBPP). In response to this request, on August 14, 2017 the Minister issued a directions to the RPRA and Stewardship Ontario (SO) to develop a proposal for an amended BBPP, and if approved, to submit the proposal by February 15, 2018 for the Minister's consideration. The first phase of consultations on the engagement plan was completed between October and November 2017. On December 19, 2017, the second phase of consultations was launched with the posting of SO's draft amended BBPP. As of February 2018, SO and RPRA have agreed that more time is needed to address the comments received on the draft amended plan.³⁷

Unlike the Blue Box program, the Ontario Deposit Return Program (ODRP), which came into force in February 2007, is a voluntary program implemented by the provincial government. As such, there is no law mandating that wine and spirits sold under the Liquor Control Board of Ontario (LCBO) be placed on deposit. Also, although wine and spirit containers are on deposit, they may be added to municipal blue box programs voluntarily.

Refillable and non-refillable beer containers are collected through a separate program administered and operated by Brewers Retail Inc. (The Beer Store).

Performance Targets

The *Strategy for a Waste-Free Ontario: Building the Circular Economy* sets the following waste diversion targets: 30% overall waste diversion by 2020, 50% diversion by 2030, and 80% by 2050.³⁸ The province's ultimate goal is zero waste. The Strategy also indicates that the province will establish requirements that producers must meet, including reduction, reuse, and recycling targets. What these targets will be and how they will be set (material-specific or overall BB) will be set out in the regulations.

To encourage reuse, Regulation 340 of the Ontario *Environmental Protection Act* requires a minimum of 40% of soft drinks to be sold in refillable containers, dropping to 30% if a 60% collection rate for non-refillable bottles is achieved. While soft drinks companies are still legally required to meet this quota, in reality, the refillable market share is less than 1% because the requirements are not enforced.

Who is Responsible?

The new legislation transfers full (100%) responsibility – physical and financial – for the collection, transfer, and processing of Blue Box materials to individual producers. Obligated producers will be responsible for meeting any targets set through legislation and will report directly to the RPRA. They can join a collective organization to meet these obligations, or can choose to meet them on their own.

Unlike the previous waste diversion regime, there is no legislated role for municipalities in the *WFOA*. Rather, municipalities are considered a potential service provider to producers in the management of their materials. Other options for municipalities include: continuing to provide the service but letting producers pay for it; letting another provider take over using municipal infrastructure; or stepping back entirely. At this point, the municipal role in the system is still evolving. (Note: Changes to Regulation 101/94 to remove requirements for municipalities to collect materials at the curb will be part of the Blue Box transition consultation.)

As of November 30, 2016, the organization responsible for overseeing the Blue Box program is the RPRA (formerly the WDO), a non-Crown, not-for-profit organization. In addition to its oversight, compliance, and enforcement activities, the RPRA is responsible for operating a public-facing registry to receive and store data from producers and others who conduct resource recovery and waste reduction activities. The Authority is directly accountable to the Minister of Environment and Climate Change (MOECC) and is required to provide information to the Minister upon request.

With regards to the ODRP for alcohol beverage containers, the LCBO is the responsible entity, with oversight from the Ministry of Finance. When the provincial government decided to establish the program, The Beer Store (TBS) already had a successful DRS infrastructure in place for beer. Therefore, rather than establishing its own system, the LCBO has contracted collection (including return-to-retail collection for licensees), processing, and marketing responsibilities to TBS.

Program Financing

Each year, the RPRA conducts a Municipal Datacall, requiring municipalities to submit tonnage and financial information for residential Blue Box material collected in their recycling programs. Stewardship Ontario (SO)

uses this data, along with material generation estimates, to determine “fair” fees to charge stewards based on the type of material they sold into the Ontario marketplace. Each designated Blue Box material is associated with a fee rate, which is set annually. Stewards pay these fees to SO in quarterly increments.

Under the previous legislative framework, recycling costs were split roughly 50/50 between municipalities and the companies that place packaging and printed paper (PPP) products on the market. In 2016, stewards paid a total of \$122.9 million in fees to SO, of which \$110.8 million was transferred to municipalities³⁹. The new legislation is set to increase the obligation for PPP stewards from 50% to 100% (or full producer responsibility). This means that many companies in Ontario that currently pay blue box fees will potentially see their costs double. Although details of when the shift to full producer responsibility have not been announced, it is likely to occur beginning in 2019, after approval of the amended Blue Box plan by the Minister.

The funding for the ODRP comes from two primary sources: unredeemed deposits and government revenue. In 2016, the amount of the deposit ranges from 10- to 20-cents/unit, depending on container type and size. When eligible containers are returned to TBS for a refund, the LCBO pays the amount of the deposit to TBS, in addition to a per unit service fee. For the year ended March 31, 2016, expenditures related to service fees paid to TBS totaled \$41.0 million (including \$4.7 million of HST).⁴⁰ A contract with TBS, in effect since February 2012, sets the fee at 10.5-cents for 2016.

Collection System & Facilities

When it comes to beverage container collection there are two different streams. Beverage alcohol containers, as well as any associated packaging (including cardboard boxes, boxboard, bottle caps, tabs, and plastic wrap), are collected through a return-to-retail system. As of December 31, 2016, there were a total of 956 redemption locations across Ontario, including 446 Beer Store locations, 187 on-site brewery stores (beer containers only), 210 Beer Store retail partner stores and LCBO Northern Agency stores, 3 LCBO stores, and 110 Beer Store contracted empty bottle dealers.⁴¹ Refillable bottles are collected and separated to send to partner brewers for washing and refilling. Non-refillables are sorted by material type, separated into streams, and back-hauled to various distribution centers where they are sorted, baled, and shipped to recycling markets.

Non-deposit beverage containers are collected through curbside recycling programs (i.e. the Blue Box) together with non-beverage packaging. Since the inception of the Blue Box program, collection has been the responsibility of municipalities, but this is set to change under the new legislation. The new producer responsibility framework will provide municipalities will new options – to act as service providers to producers who are required to pay for these programs, to work with private companies that may use municipal infrastructure, or to opt out altogether.

Currently, Blue Box programs are only required to collect PET, glass, aluminum, and steel containers, while the inclusion of other types of containers such as aseptic cartons, gable top, and HDPE are voluntary. It is expected that the list of obligated materials subject to the program will be expanded under the amended Blue Box Program Plan beginning in 2020.⁴²

Program Performance

In 2016, the total recycling rate for deposit beverage containers (beer store system containers and ODRP containers combined) was 87%. The rate for refillable bottles sold through the Beer Store and LCBO was 95%,

and for non-refillables it was 80%. Of all alcoholic beverage containers, Tetra Pak/Bag-in-Box containers achieved the lowest recycling rate at 25%.⁴³ Many of the remaining containers end up in municipal Blue Boxes; about 37% of the glass in Blue Boxes is DRS material.⁴⁴

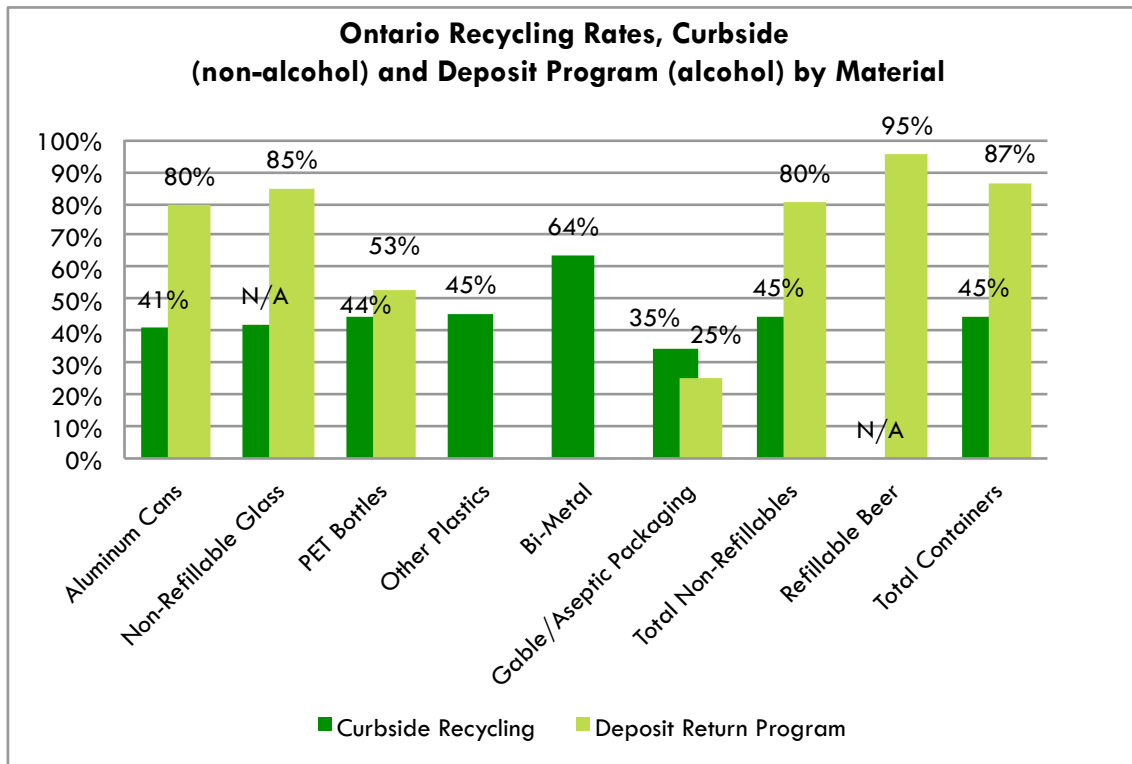


Figure 23 Ontario Recycling Rates by Material – Curbside (Non-Alcohol) and Deposit Program (Alcohol) by Material (2016)

The curbside recycling rates presented for Ontario are the only curbside beverage container recycling rates reported in *Who Pays What* 2018, as dependable data was not available for Manitoba and Quebec. The rates in the curbside programs are typically lower than rates in deposit programs. This is shown by comparing the rates by material from the two co-existing systems in Ontario. Non-alcoholic beverage containers collected through the Blue Box program show an overall recycling rate of approximately 45% while deposit containers are recycled at a rate of 87%. The rate for non-alcohol aluminum containers is 41%, half the rate of the same containers in the ODRP.

What's New?

Ontario to Transition to Full Producer Responsibility

In late 2016, Ontario proclaimed the *Waste-Free Ontario Act*, which repealed and replaced the *Waste Diversion Act* of 2002. Under the new waste diversion regime, producers will be 100% responsible – financially and physically – for the collection, transportation, and processing of their printed paper and packaging materials at end-of-life. Although many of the details on how the system will work have yet to be determined, it is expected that Blue Box recycling programs will undergo some of the biggest changes.

In December, 2017, Stewardship Ontario submitted a proposal for amending the current Blue Box Program Plan.⁴⁵ The amended Plan will transition the program from its current cost share model to full producer

responsibility, and will require a 75% recovery rate for PPP as well as a proposal for material-specific targets. The Government's *Strategy for a Waste-Free Ontario: Building the Circular Economy* identifies a schedule to start the transition of the Blue Box Program, to be completed by 2022-23. The Province has promised to ensure proper consultation, careful consideration, and cooperation among municipalities, producers, the RPRA, and Stewardship Ontario is maintained during the transition period.

According to the Strategy, considerations for consultation on the Blue Box program transition could include: roles and responsibilities for the operation of the Blue Box system; opportunities for municipal integrated waste management system to support producer responsibility; how to address municipal contracts and assets; opportunities to harmonize materials collected across Ontario and the type of collection activities that are undertaken; opportunities to lower overall costs; and the status of Regulation 101/94 which currently requires municipalities with a population of 5,000 or more to operate a Blue Box waste management system.⁴⁶ It is also worth noting that Ontario's new strategy includes a proposal to ban certain materials from landfill, including beverage containers.

Quebec



Regulatory Framework

Established in 1984, Québec's DRS for beverage containers is regulated under the provisions of the *Environment Quality Act* (1972). The program covers all non-refillable soft drink and beer containers, including plastic bottles, metal and bi-metal cans, and glass bottles.

The details of the deposit system for soft-drink containers are set out in the *Agreement Relating to the Consignment, Recovery, and Recycling of Non-Refillable Soft Drink Containers*, the most recent of which was signed

on January 1, 2016 and which is in effect until December 31, 2018 (Note: the initial agreement was made on December 1, 1999). This is an agreement between the Ministry of Sustainable Development, Environment, and Action against Climate Change (MDDELCC), the Société Québécoise de Récupération et de Recyclage (Recyc-Québec), the Association des Embouteilleurs de Boissons Gazeuses du Québec Inc., Boissons Gazeuses Environnement (BGE), and its registrants. A similar but separate agreement was reached with the beer industry called the *Agreement Relating to the Consignment, Recovery, and Recycling of Non-Refillable Beer Containers*.

In addition to the above agreements, beer and soft-drink producers are governed by the *Beer and Soft Drinks Distributors' Permits Regulation* under the *Act Respecting the Sale and Distribution of Beer and Soft Drinks in Non-Returnable Containers*. This Act requires anyone selling or distributing beer and soft drinks in Québec in non-refillable containers to obtain a permit from the MDDELCC. To receive a permit, the applicant must do one of two things: 1) enter into an agreement with Recyc-Québec and the Minister of MDDELCC for beer, and BGE and the Minister of MDDELCC for soft drinks, or 2) comply with beverage container regulations set out in Section 70 of the *Environment Quality Act*.

Other beverage containers, such as those used for water, sports drinks, and juice, are managed through curbside multi-material recycling programs ("collecte sélective"). Under the *Environment Quality Act* and the *Regulation respecting compensation for municipal services provided to recover and reclaim residual*

materials,” municipalities that operate these programs are entitled to compensation for their services in the order of a percentage of the net costs incurred (100%).

Performance Targets

The 2011-2015 Action Plan of the *Québec Residual Materials Management Policy* includes a target to recycle 70% of paper, cardboard, plastic, glass, and metal waste by 2015. No new targets have been set for the future.

The *Agreement Relating to the Consignment, Recovery, and Recycling of Non-Refillable Soft Drink Containers* includes a 75% collection target for soft-drinks containers for the twelve-month period ending December 31, 2018. The same 75% collection target is set for beer containers under the *Agreement Relating to the Consignment, Recovery, and Recycling of Non-Refillable Beer Containers*.

Who is Responsible?

The beer and soft drink container deposit program is managed by the MDDELCC through Recyc-Quebec. Founded in 1990, Recyc-Quebec is a crown agency responsible for the promotion and development of reduction, reuse, recovery, and recycling programs for containers and packaging in Quebec. Its main responsibility is program oversight. Recyc-Quebec reports to the Minister and is responsible for interpreting the applicable regulations and for monitoring program performance.

Boissons Gazeuses Environnement (BGE), a non-profit organization established by the Quebec soft-drink industry, is responsible for administering the deposit-refund system for non-refillable soft drink containers on behalf of its members. BGE took over this role from Recyc-Quebec on December 1, 1999.

The deposit system for beer containers is managed by the brewers themselves, but is overseen by Recyc-Quebec. Brewers and bottlers operate the recovery of containers at the retailers' facilities.

Financial responsibility for the collection of all beverage containers belongs to Éco-Entreprises Québec (ÉEQ), a private, non-profit organization created by companies that supply PPP material to Québec (As of 2016, ÉEQ represents over 3,300 companies selling paper and food and consumer packaging). Akin to Stewardship Ontario in Ontario, ÉEQ is certified by the Government of Québec to develop a fee structure and collect contributions from companies in order to finance municipal curbside recycling programs. ÉEQ is also responsible for managing the province's Away-from-Home Recovery program, which came to an end on December 31, 2016.

Program Financing

The DRS for beer and soft drinks containers is almost entirely funded from unredeemed deposits (\$35 million in 2016). Since the program began, the deposit on aluminum, glass, and plastic soft drink and beer cans has been 5-cents. Beer cans and bottles larger than 450ml are subject to a 20-cent deposit. Information on program costs is not available because it is proprietary.

Industry contributes a much larger share to the municipal curbside program. Since 2005, the compensation plan enacted by Quebec's *Environment Quality Act* and the *Regulation Respecting Compensation for Municipal Services provided to Recover and Reclaim Residual Materials* has meant that targeted businesses are required by law to provide compensation to municipalities for the net costs to collect, transport, and process materials in a curbside recycling system. The financing of these costs is achieved through contributions by obligated

stewards, calculated based on the materials and quantities generated. In 2011, significant changes were made to the compensation plan, which increased the rate of compensation payable to municipalities from 50% to 70% for the year 2010, 80% for 2011, 90% for 2012, and 100% for 2013 and following years. Municipalities also receive a flat amount equal to 8.55% of costs to cover management costs relating to recycling activities, including for example overhead, P&E, and the cost of recycling bins.⁴⁷ Including the 2017 Schedule of Contributions for reference year 2016, the total compensation paid out to municipalities (561 municipal agencies) since 2005 is over \$1 billion.⁴⁸ (Note: Although soft drinks and beer containers themselves are not subject to the compensation plan, any associated packaging is (e.g. boxboard cases, film plastic)).

The Away-from-Home (AfH) Recovery Program has a total budget of \$8 million that is jointly financed by a voluntary contribution by ÉEQ and the MDDELCC (through the Green Fund). This program reimburses municipalities for 70% of the costs of the recovery equipment they install in public spaces and municipal buildings, up to a maximum of \$840/unit.

Collection System & Facilities

Québec has a hybrid collection system in which beverage containers are recovered via two separate channels.

Carbonated beverage containers (including beer, soft-drinks, and carbonated energy drinks) are recovered through the province's DRS, which is based on a return-to-retail collection system. Empty beverage containers can be returned to approximately 10,000 licensed grocers, service stations, pharmacies, and other retail outlets located throughout Québec. By law, anyone that sells these containers must take them back.

As of 2016, approximately 70% of returned deposit-bearing containers are managed through reverse vending machines (RVMs). The rest is collected manually by retail staff. Following collection, the containers are sent to a processing centre where they are sorted and prepared for shipment to end-markets. Refillable beer bottles are sent back to brewers for washing and refill. (Note: the recovery of refillable and non-refillable containers are two distinct operations and are performed by different trucks).

All other beverage containers, including those for wine, spirits, water, non-carbonated flavoured drinks, juices, and milk are collected via curbside recycling programs. Municipal curbside recycling in Quebec serves 99% of the population—the highest coverage rate of all provincial curbside recycling systems in Canada.⁴⁹

Program Performance

In 2016, the recycling rate for containers recovered via the DRS was 77% (this includes data for refillable bottles). Precise recycling rates for containers recovered through the curbside system are unavailable.

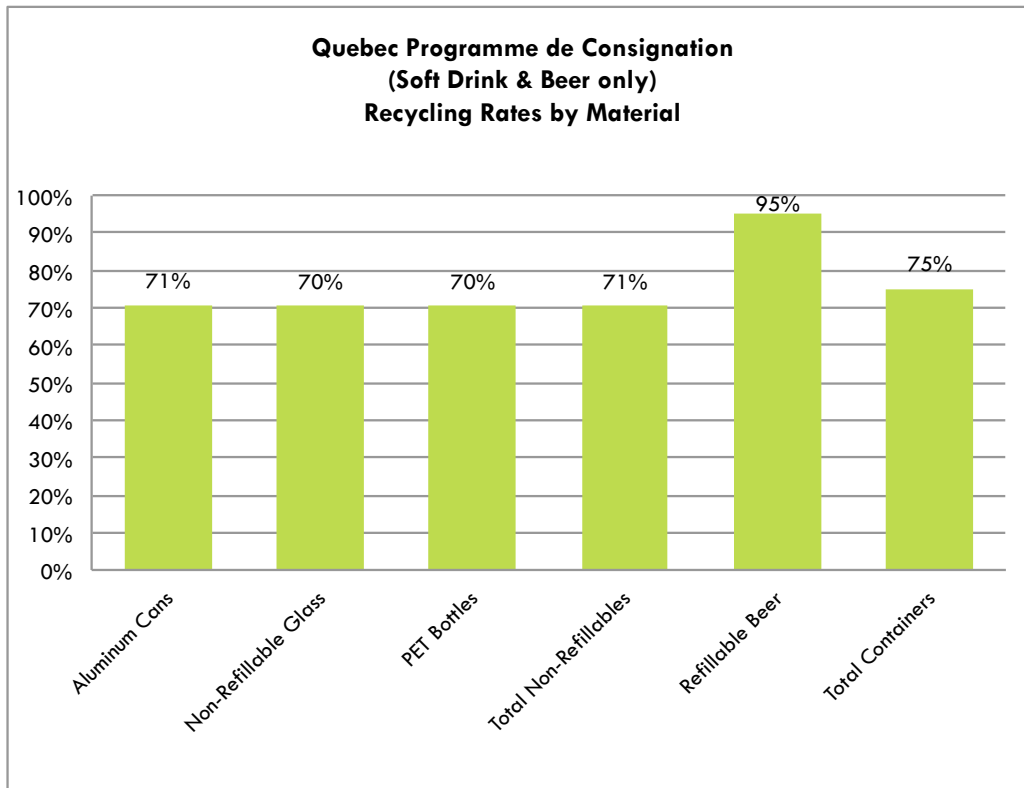


Figure 24 Quebec Recycling Rates for Deposit Program (Soft Drink & Beer Only) by Material (2016)

What's New?

Quebec Considers Program Expansion

The Québec government is seriously considering expanding its DRS to include beverages sold in plastic, metal, and other containers that currently don't have a deposit, like water and sports drinks (wine and liquor bottles are not included in the proposal). The government is also considering increasing the deposit value from 5-cents to 10-cents.

During 2017 and 2018, the Government, via Recyc-Québec, has been negotiating elements of system design with the industry. Further action has been delayed with the call of an election in Fall 2018.

New Brunswick



Regulatory Framework

Established in 1992, New Brunswick's beverage container recycling program was implemented to reduce the amount of waste going to landfills or being littered along the province's roadways and waterways. The program is regulated under the *General Regulation – Beverage Containers* (1992) made under the *Beverage Containers Act* (1991).

Section 1 of the Act defines a beverage container as any ready-to-drink container that holds 5L or less of a beverage. This includes soft drinks, beer, wine and spirits, flavored waters, fruit juices, vegetables juices, and low

alcohol drinks that are packaged in aluminum/metal, plastic, glass, Tetra Pak, gable top, bag-in-box or pouch containers. The regulation also covers refillable beer bottles. Milk and milk products, milk substitutes, infant formula, and meal replacements are exempt and therefore do not have a deposit.

Performance Targets

There are no targets established in the Act or Regulation. However, at the time of its writing, the Department of Environment established an unofficial target recovery rate of 80% by year five (1997) of the program.

Who is Responsible?

Under the *Beverage Containers Act*, beverage container distributors (companies that sell deposit-bearing containers to retailers in New Brunswick) are required to package their beverages in containers that have a management plan approved by the Department of Environment. In this plan, distributors must indicate how their containers will be managed post-consumption, either through refilling or recycling. The Act also requires all distributors to be registered by the Department, which has responsibility for program oversight.

In order to fulfill these obligations, the soft drink industry created Encorp Atlantic Inc. in 1992 to act as its stewardship agent. Unlike many of the stewardship agencies in Canada, which are not-for-profit, Encorp Atlantic Inc. is a private company. As their agent, Encorp is responsible for managing the collection, transportation, and partial processing of its stewards' non-alcohol containers. It does this through its collection and transportation service provider, G.M. Rioux & Fils. Encorp is also required to manage the financial aspects of the program, which include collecting deposits from the distributors, paying handling fees, reimbursing redemption centers for the refunds paid out, and remitting a portion of the fees to the province.

As for alcohol containers (wine, beer, spirits, and coolers), New Brunswick Liquor (NB Liquor) is the responsible agent. NB Liquor collects the deposits from distributors and remits the provincial share of the environmental fee directly to the Environmental Trust Fund. To manage the operational aspects of the program (i.e. collection, transportation, and processing), the agency contracts with the Rayan Investments Ltd., a trucking company based on of Moncton.

Program Financing

New Brunswick's beverage container program operates as a "half-back" system, meaning that residents who purchase non-refillable containers are refunded only half (50%) of their deposit when they return them for recycling. To illustrate, a consumer that pays a 10-cent deposit on the purchase of a non-alcoholic beverage

will only receive a 5-cent refund upon redemption of this container. Likewise, a consumer that pays a 10-cent or 20-cent deposit on an alcoholic beverage container (depending on size) will only get back 5- or 10-cents. The exception is refillable beer bottles, where consumers are refunded the full 10-cents when returning these containers to a redemption center.

The portion of the deposit that is not refunded to the consumer is considered an “environmental fee.” This fee, along with all of the unredeemed deposits and revenues generated from material sales, is used to cover program costs, which include costs for sorting, transportation, processing, and administration. Costs also include the handling fees paid to redemption centers as compensation for collecting, sorting, and storing redeemed beverage containers. Effective April 1, 2017, the handling fee for empty refillable beer containers is \$0.03120/unit, and \$0.04368 for all other empty containers. Beverage distributors pay these fees directly to redemption centres without any government involvement.

Part of the revenue from the unrefunded portion of the deposit goes into New Brunswick’s Environmental Trust Fund, which provides financial assistance for projects aimed at protecting, preserving, and enhancing the province’s natural environment. During the 2016-17 fiscal year, a total of \$8 million of fund money was invested in environmental projects.⁵⁰ This fund is managed by the Department of Environment.

Collection System & Facilities

Seventy-two individually owned and operated redemption centers are located throughout the province. In order to operate, every redemption center must be registered with the Ministry of Environment. These centers collect, sort, and pay refunds to consumers for empty beverage containers and store them until they are picked up and transported to one of two processing facilities: Rayan Investments (for alcohol containers) or Encorp Atlantic (for non-alcohol containers). Refillable beer bottles are transported directly to the breweries to be washed and refilled.

From May 2015 to May 2017, three redemption centres implemented a trial run of “Express Bags,” which allowed customers to collect their containers in specially designed bags, and then drop them off at one of the participating redemption centres for a quick cash refund. Because of the pre-determined cash value (40 deposit-bearing containers for a fixed refund of \$2), customers with express bags were given priority service, as the containers did not need to be counted or sorted in front of them. The pilot project proved successful, with approximately 1000 participants and over 57,000 bags processed from June 1, 2015 to December 31, 2016 (average of 138 bags daily).⁵¹ Aside from reducing customer wait times, the fixed-count bags have allowed redemption centers to increase efficiencies which have resulted in lower labour costs.

Program Performance

In 2016, New Brunswick’s overall recycling rate for non-refillable beverage containers was 73%. This is unchanged from the rate reported in *Who Pays What 2016*.

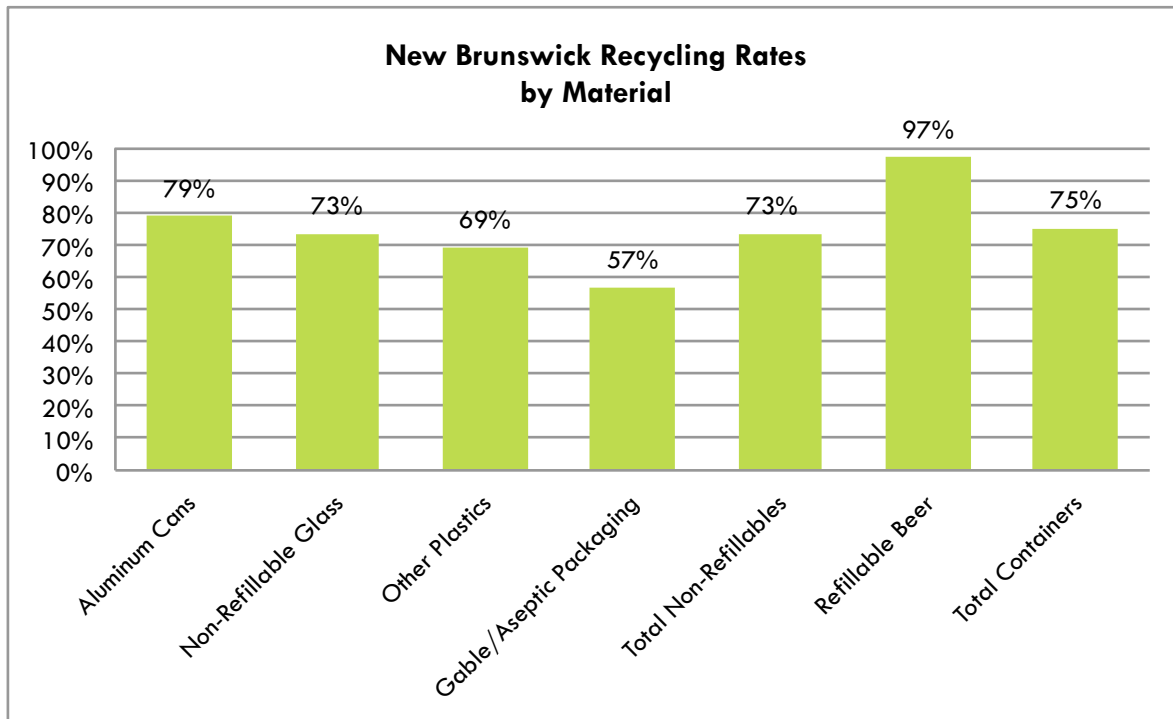


Figure 25 New Brunswick Recycling Rates by Material (2016)

In New Brunswick, PET and HDPE are reported together, so we have included these containers under “Other plastic.” It is likely that PET soft drink and water bottles make up the vast majority of this number.

What’s New?

Encorp Atlantic Launches New Pilot Project

As part of a series of pilot projects aimed at making the redemption process more convenient for its customers, Encorp Atlantic launched a new initiative in April 2017 called Re360. The Re360 recycling boxes, now being used at four redemption centers (one in Moncton, one in Dieppe, and two rural RCs), are a natural extension of the Express Bags, which were used in a pilot project from May 2015 to May 2017. The new boxes are made from recycled plastic and can hold up to 60 empty beverage containers. Customers who use the new green boxes are given priority service when they drop off their containers, and do not have to wait in line to receive a refund of their deposit. For each box filled with 60 containers, customers receive a \$3 cash payout on the spot. Those interested in signing up for the program can pick up a Re360 box at one of the participating redemption centres in exchange for a \$5 refundable deposit (limit of 2 boxes per household). As of July 2017, preliminary data showed that customers were satisfied with the convenience of the program while participating redemption centres stated that count accuracy levels were fine.⁵²

Re-Centre Pilot Project Extended and expanded

In April 2014, Encorp Atlantic launched Phase 1 of the Re-Centre pilot project at two redemption centres in the Greater Moncton region. A test group of 2,500 members of the public got to sign up for the automated bag-drop technology, collecting their empty beverage containers in bags and dropping them off whenever they pleased. At the Re-Centre depot, consumers print barcoded tags to attach to each of their bags to identify them, and then using their member card, unlock one of three drop doors to deposit their bags. Bags are picked

up and processed off-site by Re-Centre staff. Deposit refunds are handled through an online payment system, where customers can check their balances and request to receive a refund via cheque, direct deposit, PayPal or donation. Over the 36-month test period, the Re-Centre depots were able to serve customers with at least three bags (150 containers) in 30 seconds or less over 95% of the time. The pilot project also proved that customers preferred better hours of operation for redemption centres, as 50% of visits occurred when neighbouring redemption centres were closed.⁵³

Given the positive results achieved in Phase 1 of the project, the Re-Centre automated bag-drop technology will move to Phase 2 in the fall of 2017. Starting September 1st, existing Re-Centre depots will be managed by local redemption centre operators to allow for testing of the technology in a real-time environment. The rest of the program will remain unchanged: Encorp will continue to manage communications and all Re-Centre online accounts, and members will continue to see their balances via their online account. The service will also be made available to new members.

In 2018, Encorp decided to combine its unmanned bag drop-off recycling depot model with its fixed value bags concept, thus launching a new pilot project, Re-Express. Like for its Re-Centre counterpart, the goal of Re-Express is to make recycling empty beverage containers fast, easy and convenient. Customers register online to get a card linked to their account. They collect their used beverage containers, drop them off at their convenience at the automated Re-Express depot, and collect their refund via an online account. But with the addition of fixed value bags, participants are instructed to collect their containers in specially designed \$2/40 bags and fill these bags with 40 New Brunswick deposit-bearing beverage container for a \$2 refund per bag. Encorp will be closely monitoring the public's perception towards the \$2/40 bags and accuracy of container counts in this automated/unmanned drop-off recycling depot setting.

Nova Scotia



Regulatory Framework

Nova Scotia's DRS came into effect on April 1, 1996 and is regulated under the *Solid Waste-Resource Management Regulations* (1996) (promulgated under the *Environment Act*).

In addition to banning certain types of beverage containers from landfill, the regulations require distributors and retailers to charge a deposit on all designated beverage containers sold in the province. The regulations apply to all ready-to-drink beverages, excluding milk, milk products, soya milk, rice beverages, certain meal replacements, formulated liquid diets, baby

formulas, and beverage concentrates. Non-alcoholic beverage containers 5L or greater are also excluded.

The collection and recycling of milk containers is carried out under the *Nova Scotia Milk Packaging Stewardship Agreement*, a voluntary agreement signed in 2000 between Nova Scotia Environment, the Atlantic Dairy Council (ADC), and the province's seven solid waste-resource regions. Under the Agreement, the ADC voluntarily agreed to provide financial assistance to municipalities to manage milk packaging waste, effectively transferring the costs of recycling from taxpayers to producers. The agreement also states that in order to obtain a license in Nova Scotia, a milk distributor must either participate in this program or develop their own stewardship program and have it approved by the Department of Environment.⁵⁴

Performance Targets

Through the *Environment Act* and the *Environmental Goals and Sustainable Prosperity Act*, the provincial government is committed to achieving 50% waste diversion and to meet a per capita disposal target of 300kg per year by 2015. The per capita target has not been met.

No specific targets have been set for the beverage container DRS.

Who is Responsible?

Divert NS (previously known as the Resource Recovery Fund Board) is the not-for-profit organization responsible for operating Nova Scotia's non-refillable beverage container recycling program. The organization operates at arms-length from government and was established in 1996 under Section 4 of the *Solid Waste-Resource Management Regulations*. In addition to managing the beverage container program, Divert NS is also responsible for administering the province's used tire program, which diverts an average of 1 million tires a year from landfills.

Distributors of regulated beverages are required to register with Divert NS in order to sell their products on the Nova Scotia marketplace. The regulations also require distributors to submit sales and returns data as well as applicable deposits to Divert NS on a monthly basis. According to the Divert NS website, the deposit program includes approximately 99 registered beverage distributors and 34 liquor distributors, selling approximately 141,500 products in Nova Scotia.⁵⁵ The Regulations also place obligations on retailers. Retailers are required to charge a deposit on the purchase of designated beverage containers and to display the deposit amount on the sales receipt. They are also required to display a notice stating to customers that a deposit will be charged, and to identify the location of the nearest redemption location.

Depot owners and operators also have responsibilities under the Regulations. For example, in order to become a licensed Enviro-Depot, depot owners must register with Divert NS and sign a standard agreement, which lays out a number of rules and standards governing depot operation. Depots that fail to comply with these rules can have their licenses revoked.

Divert NS is not responsible for administering the beer bottle deposit program. This is managed by the Brewers Association.

Responsibility for the milk packaging recycling program is shared between the ADC, which provides the funding, and the province's solid waste-resource management regions, which operate the residential curbside programs and recycling facilities in which milk packaging is collected. Municipalities are required to submit data on volumes collected, processed, and recycled annually to Nova Scotia Environment.

Program Financing

Similar to the other Atlantic provinces, Nova Scotia's deposit program is based on a "halfback" model, where residents that purchase and return non-refillable beverage containers for recycling are refunded only half (50%) of the initial deposit paid. The deposits are currently set at 10-cents for non-alcohol containers less than 5L; 10-cents for alcohol containers 500ml or less; and 20-cents for alcohol containers greater than 500ml. All deposits received by beverage distributors are remitted to Divert NS. (*Note: The only exception to this halfback system is refillable domestic beer bottles. The deposits paid on these containers (\$1.20/dozen) are fully refundable, and are provided by the Brewers Association.*)

The non-refundable portion of the deposit (5- or 10-cents, depending on the container) is used as revenue by Divert NS. In fiscal 2016-17, revenue from deposits amounted to \$42.8 million. Revenues are also generated from the sale of recyclable materials (\$4.8 million in 2016-17). Combined, this revenue is used to cover program costs, which include, among other things, handling fees paid to Enviro-Depots™ and municipal waste management facilities, transportation, processing, and administration (*Note: A breakdown of costs is not available in Divert NS's annual report*). A portion of the unredeemed deposits is also distributed to municipalities to help offset the costs of their waste-diversion initiatives. In fiscal 2016-17, a total of more than \$8 million in funding was provided.⁵⁶

Unlike the deposit program, which is funded primarily by consumers, the milk packaging recycling program is 100% industry financed. Through the *Nova Scotia Milk Packaging Stewardship Agreement*, the ADC provides funding to Nova Scotia's solid waste-resource management regions based on the number of milk containers collected for recycling through municipal programs. Municipalities receive compensation based on the average cost to recycle (including collection, processing, education, enforcement, and administration costs) and quantities collected. In 2012, the ADC contributed \$434 per tonne to municipalities for a total of \$681,289. This amount equates to an industry cost of around 1-cent per milk container sold in Nova Scotia. Data for 2016 was not available.

Collection System & Facilities

Nova Scotia residents can return empty beverage containers to one of the 78 Enviro-Depot™ locations around the province for a refund. Residents also have the option of placing empty beverage containers in their blue bag for curbside collection, although doing so will mean they forgo the refund. In these cases, the containers are recovered by non-public buy backs, which are compensated for those containers by either Divert NS (for

non-refillable containers) or the brewers (for refillable bottles). Non-public buy-backs are waste management facilities operated either directly by municipalities or for municipalities under private contract.⁵⁷

At each Enviro-Depot™ and non-public buy back, empty beverage containers (except glass) are stored in large bags or large plastic tubs (for glass only).⁵⁸ Containers are sorted so that each bag or tub contains one material type only, for example, aluminum, plastic, glass, etc. For certain containers, materials undergo additional sorting by colour or size. In Spring 2015, RRFB Nova Scotia reduced the number of required beverage container sorts, and as a result, Enviro-Depots now combine HDPE and clear, colored, and blue PET into one sort.⁵⁹

Divert NS contracts two local carriers to collect and transport the containers to one of four local processing facilities. A compaction trailer is used for dedicated product types (either aluminum only or plastic only), and a dry van trailer is used for mixed loads, including glass. Three of the facilities (Kentville, Sydney, and Kemptown) process all beverage container types, while the other handles non-refillable plastics only. All containers undergo some form of processing, whether it is baling (all container types except for glass), flaking (for either baled or compaction trailer plastic), or crushing (glass only). After processing, Divert NS sells the material to end-markets.

As for refillable beer bottles, these containers can be returned to either the liquor store at which they were purchased or to Enviro-Depots™. Several bottle dealers operate Enviro-Depots and pick up beer bottles from other depot operators. In fact, just over half of the depots are licensed Brewers' bottle dealers. These licensees are paid a handling fee for each container received, but are required to have a truck-load of empties before the brewers will accept them for pick-up. Beer cans are sent directly to Encorp.⁶⁰

Milk packaging is collected separately via municipal curbside recycling programs.

Program Performance

Three hundred and fifty million non-refillable beverage containers were returned to depots in fiscal 2016-2017, for an overall recycling rate of 80.8%. This is a small decrease from the previous year, when the recycling rate was 83.6%. Aluminum beverage cans saw the highest recycling rate (89%), followed by non-refillable glass (86%) and PET/HDPE beverage containers (78%).

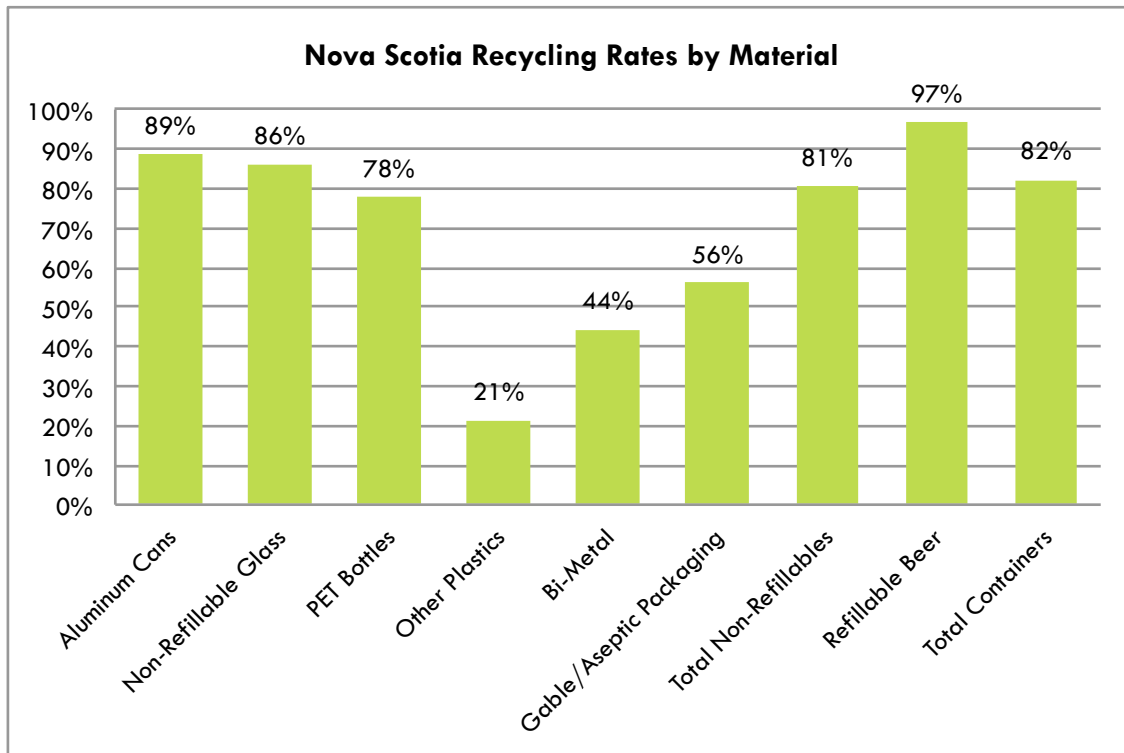


Figure 26 Nova Scotia Recycling Rates by Material (2016)

What's New?

In June 2016, Divert NS installed a quality control machine at the Kemptown processing facility that counts one bag of containers in 10 minutes (220 containers/minute) compared to 45 minutes per bag when counted manually. This piece of equipment has increased productivity significantly and has improved the efficiency and accuracy of Divert NS's quality control program, in which bags are statistically selected for audit prior to pick up and then audited.

Prince Edward Island



Regulatory Framework

In 1973, the government of Prince Edward Island passed the *Litter Control Regulations* (1973) under the *Environmental Protection Act* (1988), which banned the sale of beer in non-refillable containers. In 1984, the ban was extended to all non-refillable soft drink containers. As a result, all carbonated beer and soft drinks for sale in the province were to be packaged in refillable containers.

In late 2007, the law prohibiting the sale of non-refillable soft-drink containers was repealed and deposit-return legislation was enacted in its place. The beverage container program was launched in May 2008 under the provisions of the *General Regulations* and the *Recyclable Beverage Container Deposit Regulations*, and covers all ready-to-drink beverage containers 5L or less (except dairy products, milk substitutes, or nutritional supplements). In addition to defining producer obligations and establishing minimum deposit levels, the Regulations make it illegal to sell beverage containers that are connected by plastic rings or any other connecting device, unless it is biodegradable or photodegradable.

Performance Targets

The legislation does not specify any targets for the program.

Who is Responsible?

PEI's DRS is overseen and administered by the province's Department of Communities, Land, and Environment (previously known as the Department of Environment, Energy, and Forestry).

All beverage distributors are obliged to register each product sold or distributed into the province by completing a registration form. The form must indicate the return for refund message, the product name, and the type and size of container. Distributors must also indicate how they plan to recover empty beverage containers from beverage container depots, and to list the facilities used for refilling or recycling their empty containers.

Program Financing

PEI's beverage container program operates in a similar way to that of the other Atlantic provinces in that it is a "half-back" system. Under this system, a consumer that purchases a non-refillable beverage container and pays a deposit of 10-cents (for non-alcohol containers 5L or less or alcohol containers 500ml or less) or 20-cents (for alcohol containers larger than 500ml) will only receive half of that money back when they return the container for recycling. The only exception to this half-back system is the refillable domestic beer bottle. Consumers who return these containers for recycling are eligible for a full refund of their initial deposit (\$1.20 per dozen).

Together, 50% of the revenues generated from the non-refunded portion of the deposit, as well as from unredeemed deposits, is used to fund environmental projects carried out by the provincial government, such as watershed protection and pollution prevention. The other 50% is used to cover system costs.

In 2016-2017, the total cost to operate PEI's deposit program was \$5.6 million. In addition to expenses related to administration, transportation, and processing, this cost includes the handling fees paid to depot operators as compensation for handling returned beverage containers. As of 2017, the handling fee for empty beverage containers (except for refillable beer containers) was 4.13 cents per unit. In fiscal year 2016-2017, just under \$2.2 million in handling fees were paid out (38% of total program costs).

If there are funds that remain after all program costs are paid, the surplus goes towards solid waste management and/or environmental programs in PEI. The program's surplus in 2016-2017 was \$1.6 million.

The collection and recycling of milk packaging is part of the Island's Waste Watch program and is financed by the provincial government.

Collection System & Facilities

Residents can return their empty beverage containers to any one of 11 privately run depots located throughout the province. The collection, sorting, transportation, and processing of containers is contracted out to a local private supplier. A computerized inventory control system is used to track containers from the point of consumer refund, through processing and material sales.

Milk packaging and other containers that do not fall under the Regulations (i.e. food containers) are collected separately through the Island Waste Management Corporation (IWMC)'s Waste Watch Program, a mandatory curbside recycling program available to all residents. The program requires all residents, visitors, and businesses in PEI to separate the waste they produce into three streams: recyclables, compost, and waste.

Program Performance

In fiscal 2016-2017, PEI had a non-refillable container recycling rate of 80% and a total container recycling rate of 82%. This is effectively unchanged since 2010.

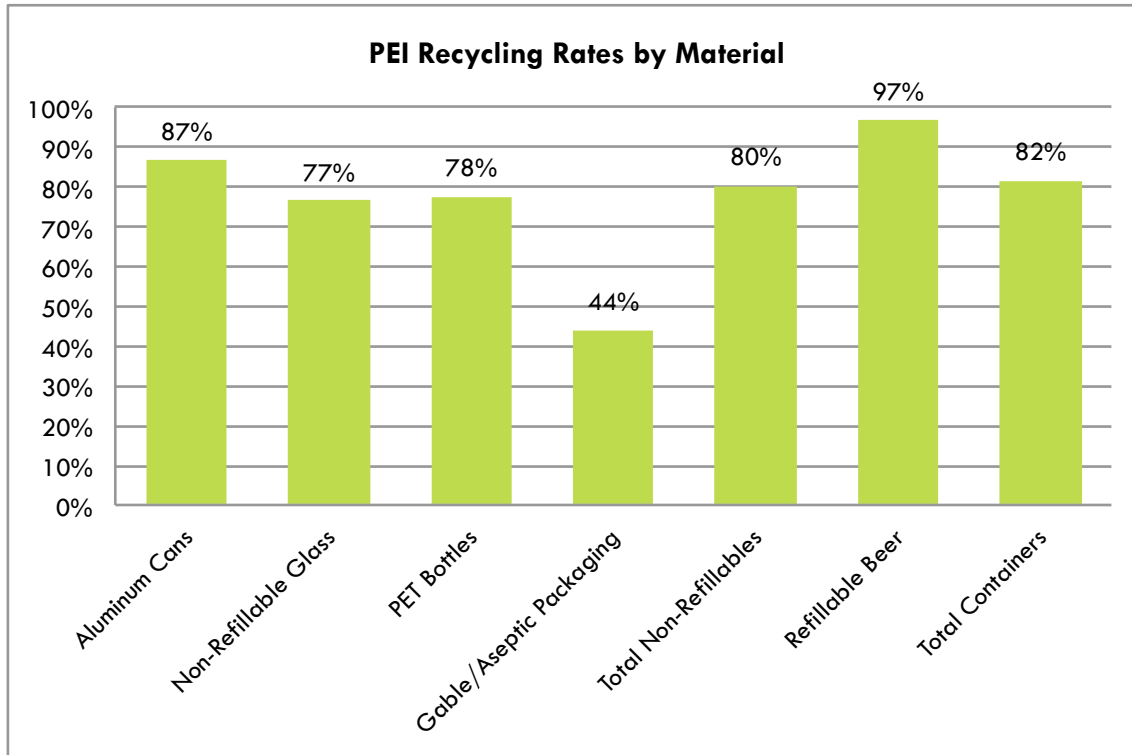


Figure 27 Prince Edward Island Recycling Rates by Material (2016)

Newfoundland and Labrador



Regulatory Framework

Newfoundland and Labrador's DRS was established in 1997 by the province's *Beverage Container Control Regulations* (1996), enacted under the *Packaging Material Act* (1996). These regulations established an Environmental Trust Fund and gave regulatory authority to the Multi Materials Stewardship Board (MMSB) to operate the program.

In 2003, in order to allow for the development of other stewardship programs beyond beverage containers, the province repealed and replaced these regulations with the *Waste Management Regulations* (2003), made under the *Environmental Protection Act* (2002). Part 1 of the Regulations sets out the composition and duties of the MMSB, and also continues the Waste Management Trust Fund established under section 4 of the *Beverage Container Regulations*. Part 2 defines the program's scope, the minimum deposit/refund amounts to be applied, and the responsibilities of beverage distributors. It also prohibits the sale of any beverage container that is not refillable or recyclable.

The *Waste Management Regulations* apply to all ready-to-drink beverage containers sold or distributed in Newfoundland and Labrador that are 5L or less, with the exception of milk and milk substitutes, infant formula, meal replacements, and concentrated products. Refillable beer bottles (including domestic beer) are also exempt.

Performance Targets

The government's Provincial Solid Waste Management Strategy (2002) establishes the goal to divert 50% of solid waste from disposal in landfills. The target date for meeting this goal is the year 2020.⁶¹ Although MMSB has stated that it will work towards this target, it has not set any specific goals for the beverage container program as there are no specific targets set out in the Act or regulations.

Who is Responsible?

Newfoundland and Labrador's beverage container program is administered by the MMSB. Established in 1996, the MMSB is a provincial Crown agency that reports to the Minister of Municipal Affairs and Environment. MMSB's mandate is threefold: 1) develop/manage province-wide waste reduction and recycling programs, 2) develop/implement public education and awareness programs, and 3) utilize the Waste Management Trust Fund to support the implementation of the province's waste strategy. To deliver its mandate, MMSB works in partnership with stakeholders such as regional waste management authorities, municipalities, and third-party service providers such as Green Depot operators. The organization is governed by a Board of Directors, which consists of members representing industry, consumer stakeholder organizations, and the provincial government.

Aside from the MMSB, the *Waste Management Regulations* impose obligations on beverage distributors, retailers, and Green Depots. For example, distributors and retailers are required to register with and remit deposits to MMSB on a regular basis. Green Depots are required to register with MMSB and to operate within

the terms and conditions of their permit. This includes accepting used beverage containers from consumers and paying out refunds.

Program Financing

The MMSB is a self-financed agency that does not receive any direct funding from the government. The program is financed nearly 100% through consumer-based deposits on beverage containers (collected through distributors).

Newfoundland's DRS is similar to that of other Atlantic provinces, but is not exactly a "half-back" model. Consumers pay an 8-cent deposit when purchasing a designated beverage container and receive a refund of 5-cents when they return it for recycling. The deposit/refund is the same for beer cans, imported beer bottles, and alcoholic miniatures. For all other alcoholic beverage containers, consumers pay a 20-cent deposit and get a 10-cent refund (half-back).

Part of the revenue generated from the non-refunded portion of the deposit (3-cents for non-alcohol containers and 10-cents for alcohol containers) is used to cover program costs. Other sources of revenue include unredeemed deposits (\$22.8 million in fiscal 2016-17) and the proceeds from the sale of recovered material (\$2.1 million in fiscal 2016-17). Funds that remain after program costs are paid are placed in the province's Waste Management Trust Fund, where they are used to support the implementation of the Provincial Solid Waste Management Strategy.

The total cost to operate the beverage container program in fiscal 2016-2017 was \$20.8 million (\$20.9 million in 2015-2016). Handling fees alone totaled over \$7 million (MMSB pays depot operators 4.25-cents⁶² per container as compensation for collecting, sorting, and handling used containers). A further breakdown of costs by cost category (i.e. administration, processing, etc.) is not available, as this information is not provided in MMSB's annual report.

Collection System & Facilities

Deposit-bearing containers are collected through a network of privately owned and operated Green Depots, all of which are licensed by the MMSB. In 2016-2017, there were a total of 56 Green Depots located throughout the province (40 main depots, 16 sub depots, and 20 mobile collection services). When dropping off containers, customers have the option of signing up for an Xpress account, which allows them to drop their bags and go. Within five business days of being dropped off, their bags are processed and the refund is deposited into their Xpress account. As of January 2018, 30% of all transactions and 20% of all redeemed containers go through the Xpress system.⁶³

After the containers are sorted at the depots, they are transported to a processing facility where they are prepared for shipment to end-markets. Plastic is sent to a recycling plant in Amherst, Nova Scotia, where they are ground into chips that are used to make packaging and new plastic containers. Glass is sent to a recycling plant in New Brunswick, where it is crushed into cullet and then sold to markets in Canada and the US for the production of new glass bottles. Tetra and gable top containers are sent to a recycling plant in Hantsport, Nova Scotia, where the material undergoes a pulping process. The paper fibre, which makes up the majority of these containers, is made into boxboard. Aluminum cans are transported to a facility in New York where they are used in the production of new aluminum cans. Steel cans are sent to a local facility in St-John's where the steel is loaded onto trucks with other reclaimed steel and sent to markets through North America to be used in new steel products.

Because local brewers operate their own DRS, consumers must return domestic beer bottles (such as Labatt, Molson and Quidi Vidi) to a beer retailer or to a Brewers Bottle Depot if they want a refund of their deposit. Wholesalers are paid a handling fee for the empties, which are picked up at the retailer (corner stores and BRI outlets). These containers are returned to the brewers for washing and refill.

While some Green Depots may also accept domestic beer bottles for recycling, this is considered an added-service. MMSB does not pay them a handling fee to collect these containers, and so the amount of the refund might be reduced in order to cover these costs.

Program Performance

In 2016-2017, 177 million non-refillable containers were collected and recycled through MMSB's used beverage container recycling program, for a recycling rate of 62% (the same rate as 2014-2015). Although these are generally very low rates for a deposit program, Newfoundland and Labrador's low population density make it challenging to offer citizens quality access to recycling.

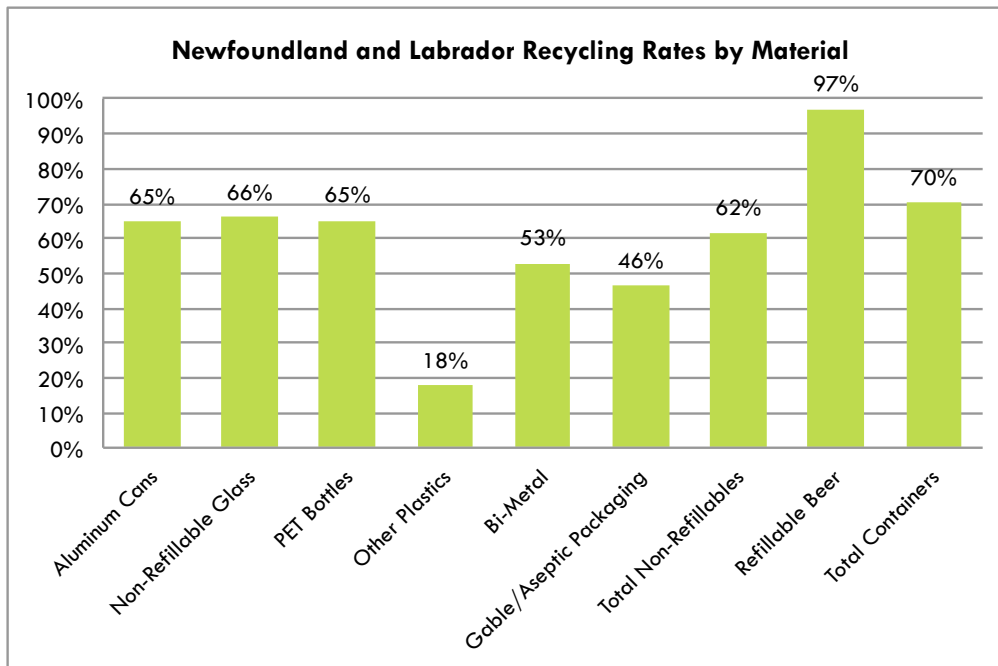


Figure 28 Newfoundland and Labrador Recycling Rates by Material (2016)

What's New?

Cups for Ca\$h

From May 1 to 27, 2017, the Newfoundland city of Corner Brook ran a *Cups for Ca\$h* campaign, aimed at encouraging people to pick up littered coffee cups around the city in exchange for 5-cents/cup. As an extra incentive, the city scattered four "surprise cups" around the city. Anyone who found and returned one of these specially marked cups could get an extra \$100. By May 27, members of the public cashed in a total of 45,000 paper cups in return for \$2,326.⁶⁴ The campaign was financed by corporate sponsors and not by the city.

Yukon



Regulatory Framework

Yukon's beverage container recycling program is regulated under the *Beverage Container Regulation* (1992) and *Recycling Fund Regulation* (1992) enacted under the *Environment Act* (1992).

When it was first passed in 1992, the *Beverage Container Regulation* applied only to aluminum cans and refillable beer bottles. Since then, it has undergone several amendments to expand the program's scope, including one in 1996 to include glass and plastic containers, and one in 1998 to

include tin and tetra pak containers. The last major amendment to the Regulation came into effect in August 2017 when containers for milk and milk substitutes were added to the program. As a result of this expansion, every beverage container sold or distributed in the Yukon is now part of the deposit system.

Performance Targets

There are no legislated targets for this program.

Who is Responsible?

Environment Yukon is responsible for enforcing the two regulations, while the Department of Community Services is responsible for managing the program. This is in contrast to most other beverage container programs, which are run and administered by non-profit organizations.

Distributors of designated beverages in Yukon must register with Environment Yukon and are required to submit sales and returns data to the Department of Community Services on a monthly basis.

Deposits/surcharges must also be remitted. There is also an obligation for depot operators to obtain a permit from the Department of Community Services in order to collect empty beverage containers from consumers.

Program Financing

The *Beverage Container Regulation* applies surcharges and refunds on beverage containers. There are two separate product categories that define the surcharge/refund that consumers pay and get back when returning an empty container for recycling. Beverage containers less than 750ml have a 10-cent surcharge with a 5-cent refund, and beverage containers of exactly 750ml or more come with a 35-cent surcharge and a 25-cent refund. As of August 1, 2017, containers for milk and milk substitutes also have the under 750ml surcharge added to them at checkout.

The money collected from the non-refundable portion of the surcharge is collected by the retailer and remitted to the territory's recycling fund. Unredeemed deposits also go into this fund. The recycling fund is administered by Yukon's Department of Community Services and is used entirely to support recycling activities. The fund is also used to promote container returns (e.g. the Yukon Recycling Club), make improvements to recycling facilities and depots, and pay staff wages.

In Yukon, the exact costs to run the program are unavailable. They include the cost of handling fees paid to recycling depots, as well as a monthly operating allowance that they receive. Processing and handling fees are

also paid to registered processors for each container received. Depending on the beverage container type, the non-refundable portion of the surcharge covers 40 to 96% of the cost of recycling.⁶⁵ The remainder is covered by territorial and municipal governments, which pay recyclers diversion credits to make up the difference.⁶⁶

Collection System & Facilities

Yukon residents can return their empty beverage containers to 22 recycling depots located throughout the territory. The depots are operated by individuals, private businesses, or non-profit organizations. At the depots, containers are sorted and placed in bags or boxes, and then transported to one of two processing facilities in the city of Whitehorse: Raven Recycling and P&M Recycling. From there, containers are processed and shipped south to various end-markets for recycling.

Program Performance

A breakdown of performance by container type is not available due to lack of data, but in 2016, the government of Yukon published that the program had an overall recycling rate of 82%.

What's New?

Changes to Beverage Container Regulation

As of August 1, 2017, the *Beverage Container Regulations* include containers for milk and milk substitutes, making Yukon one of the last jurisdictions in Canada to bring milk into its program. The new regulations also simplify beverage container refunds. There are only two main categories now, and it's based on size: less than 750ml and 750ml or more. In the old regulations, the higher surcharge was applied on containers of 1L or more. The old regulations also had different surcharge amounts for alcohol and non-alcohol containers; this designation has now been eliminated.

Northwest Territories



Regulatory Framework

Created in 2005, the Northwest Territories' (NT) beverage container program is regulated under the *Beverage Container Regulations* (2005) made under the *Waste Reduction and Recovery Act* (2003). These Regulations cover all ready-to-serve beverage containers sold or distributed in the NT, including soft drinks, energy drinks, water, juice, and alcohol containers, but not including power milk and infant formula. Milk containers (30ml or greater) were added to the program in February 2010.

Amended Regulations came into effect on February 1, 2016. These changes are intended to make the program simpler and more effective by simplifying container categories and increasing container handling fees. The amended regulations also include additional tools to enforce compliance. (Further detail is provided in the *What's New* section).

The Environment Fund, into which all surcharges from the beverage container program are paid, is a special purpose fund defined under the *Financial Administration Act*.

Performance Targets

There are no legislated targets for this program.

Who is Responsible?

The Department of Environment and Natural Resources (ENR) is responsible for administering the beverage container program. Its responsibilities include enforcing the Act and the accompanying regulations, coordinating and supporting local depots and regional processing centres, coordinating public information, ensuring continuous improvement of the program, producing an annual report on performance of the program, and undertaking audits of distributors, importers, stores, depots, and processing centres. The ENR also has the authority to create an advisory committee to provide advice and assistance relating to recycling programs established under the Act. This Committee was established in 2004 and consists of beverage distributors, retailers, community governments, the ENR, and the general public.

The *Beverage Container Regulations* also impose requirements on beverage distributors and manufacturers. Under the program, companies importing and distributing beverage containers in the territory are obligated to register with ENR and participate in the program. Distributors are also required to submit reports and remittances to the Environment Fund on a monthly basis, based on the number of containers that they distribute or sell. As of March 31, 2017, there were 24 beverage container distributors registered in the program.

Under the Regulations, retailers that purchase designated beverage containers from anyone that is not a registered distributor must register as a distributor with ENR. Retailers are encouraged to show the surcharge on the sales receipt when they sell ready-to-drink beverages, but are not required to.

Depot operators are responsible for collecting, sorting, and storing empty beverage containers. They pay out refunds to residents and send the containers to a processing centre or south for recycling. In order to operate, beverage container depots must have a licence, which they obtain from the ENR. Almost anyone can apply for a depot operator license, including individuals, businesses, schools, non-profit groups, community councils, and local development corporations. The licenses contain several terms and conditions that depot operators must follow, such as how to keep records and books, as well as minimum operating hours.

Processing centres must accept beverage containers from licensed depots and pay depot operators on a monthly basis for each beverage container received. The payment includes the refunds paid out to consumers as well as the depot's handling fee. Processing centres receive payment from the government, who reimburses them for the amount paid to depots plus their handling fee.

Program Financing

The program is financed through a surcharge applied to each beverage container sold in the territory. Effective February 1, 2016, the total surcharge per container ranges from 15-cents to 38-cents, depending on container type and size.⁶⁷ The surcharge consists of both a refundable deposit and a non-refundable container recycling fee. The surcharge is typically passed from the beverage distributor down to the retailer, who then passes it on to consumers.

Unlike the deposit which is refunded to the consumer when they return the empty beverage container for recycling, the container recycling fee—which makes up approximately 43% of the total surcharge—is placed into the Environment Fund where it is used to help cover program costs. The ENR provides an approximate breakdown of the non-refundable recycling fees as follows:

- 25% - depots and processing centres
- 6% - transportation and storage
- 6% - administration (advertising, P&E, equipment, maintenance, insurance, wages, etc.)
- 4% - contracts (satellite depots, audits, misc. contracts)
- 2% - grants and contribution (depot grants and contributions for operations and upgrades)

Deposits that are not redeemed by consumers also go into the Environment Fund. The Environment Fund is a special purpose fund set up under the *Waste Reduction and Recovery Act* that is separate from the general government account. All expenses incurred for the beverage container program are paid out of this fund. Surplus funds (if available) are used by the government to implement new waste reduction and recovery initiatives.

Collection System & Facilities

As of March 2016, there were 24 locally operated beverage container depots and five temporary satellite depots located throughout NT.⁶⁸ In an effort to reduce customer wait times and increase system efficiencies, Drop and Go service was introduced at two container depots (Yellowknife and Hay River) in August 2015. To use this service, customers register for an account, place their containers in a bag or box, attach a label, and drop them off. Refunds are automatically credited to the customers' accounts within 5 business days, at which time they may visit the depot to collect their cash.

Following collection and sorting, the territorial government pays for the containers to be picked up from the depots and sent to one of three processing centres (Yellowknife, Hay River, and Inuvik) where they are prepared for shipment to end-markets. Aluminum and paper-based containers are shipped to the US. Non-refillable glass and plastic are shipped to Alberta. Plastic jugs are baled and shipped to Alberta.

The collection of domestic refillable beer and cooler glass is not part of the deposit-system, but is carried out under an agreement with Brewers Distributor Ltd. in Edmonton. Under this agreement, refillable glass bottles are returned to breweries in Alberta, where they are washed and refilled an average of 15 times.⁶⁹

Program Performance

In fiscal 2016-2017, over 24 million beverage containers were returned for reuse or recycling, translating into an overall recycling rate of 83%. When broken down by material type, aluminum containers (alcohol and non-alcohol) showed rates of 84%, non-refillable glass 100% (likely explained by an error in categorization at some depots), and plastic containers 84%. Refillable beer also showed a return rate of over 100%.

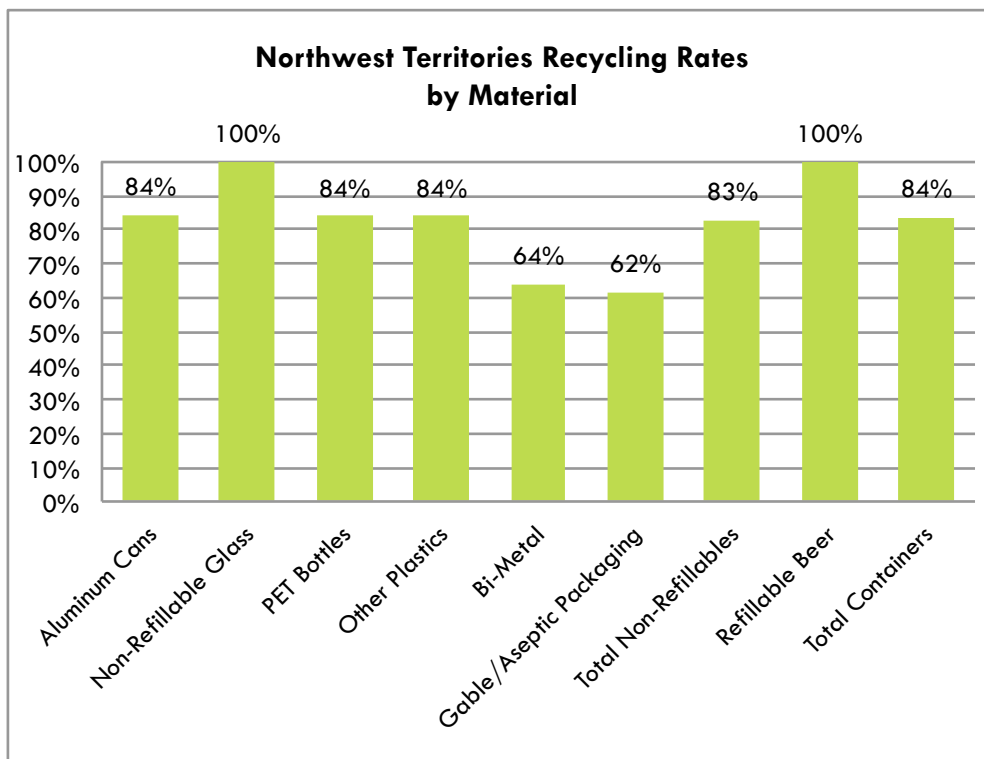


Figure 29 Northwest Territories Recycling Rates by Material (2016)

What's New?

Amended Beverage Container Regulations Come into Effect

On February 1, 2016, amended *Beverage Container Regulations* came into effect. One of the key changes to the program is a net increase to container handling fees. Changes to these fees were necessary in order to allow the program to be self-sustaining. The new Regulations also simplify container categories. In the past, surcharge amounts were based not only on the type and size of the container, but also on the contents, with

alcohol containers being a different category. There are only two main categories now, and it's based on size: up to 1L and more than 1L.

Nunavut



Nunavut's DRS is operated by the Southeast Nunavut Company, which collects and bales liquor bottles and beer cans returned through the Nunavut Liquor Commission.⁷⁰ The Commission charges a deposit on all liquor purchases made in the territory, whether bottle, can, or other, and accepts returned empty liquor containers at its one recycling center in Iqaluit. The Commission reported \$5.78 million in total sales in 2016-2017, the large majority (nearly 90%) of which is sold through Iqaluit.⁷¹ The deposit is 29-cents for spirit and wine containers (bottle or box) and 14-cents for beer and cooler containers (bottle or can).⁷² For each container returned, the recycler retains 4-cents of

the refund, which means that consumers returning spirit and wine containers receive 25-cents back (per container), while those returning beer and cooler containers receive 10-cents back. In 2016-2017, the Commission collected a total of \$213,009 in deposits and paid out \$180,697 in refunds. This translates to a deposit-value based return rate of 84.8% (Note: Because container returns are not tracked by material type or deposit level, it is impossible to calculate a recycling rate for this program). Although this is not an actual return rate, it does show that a substantial amount of the liquor containers sold in Nunavut are recovered.

In addition to the program described above, Nunavut has an unofficial recycling program for aluminum beverage cans. Arctic Co-operatives Limited (ACL). ACL is a service federation that is owned and operated by 31 independently owned and controlled Co-operatives located throughout Nunavut and the Northwest Territories.⁷³ ACL works with each Co-op to provide them with collection bags and boxes, as well as promotional materials. The ACL program is offered in 24 of Nunavut's 25 communities and allows residents to drop off their empty cans at individual co-op stores. There is no need to clean, crush, or count the cans, which makes the program manageable for local Co-ops and community groups to participate.⁷⁴

Although there is no official deposit/refund on these containers, ACL provides \$1,500 to any community-oriented non-profit group for each full shipping container collected (a typical container holds 40,000 cans). This equates to about 4-cents per container. What groups do with the money and how they collect the cans is up to them. Typically, schools and sports teams organize collection drives and use the money towards fundraisers.⁷⁵

Once collected, the containers are transported south for recycling via Nunavut Sealink and Supply, of which ACL is a majority owner. As of May 2013, the program had collected and shipped a total of 19 sealift containers full of aluminum cans out of Nunavut, for a total of approximately 750,000 soda, beer and other beverage cans. Updated data is not available. With regards to financing, some revenue is generated by the proceeds from the sale of the aluminum cans to recyclers. However, this revenue is nowhere near sufficient to cover program costs, and a levy charged on disposable plastic grocery bags is used to cover the rest.⁷⁶

The major challenges to introducing a territory-wide recycling program in Nunavut include infrastructure, transportation, depot management and operations, and the development of recycling legislation.