

Part 3: Provincial Program Summaries

Beverage container recycling programs in Canada are varied. Despite some commonalities, each program is different when it comes to which materials are covered by the regulations, what agents are responsible for managing the program, the collection method used, and the funding model. Programs also differ in the methods used to calculate collection and recycling rates. All of these factors can make it difficult to collect and analyze data and to compare the effectiveness of recycling programs from one province to another.

The following section provides a summary of each provincial program, including: a description of the supporting regulatory framework and which containers are covered; a listing of key performance targets; a description of the entities responsible for managing and operating the program; a description of the program funding model; and a description of the collection methods used and recycling rates achieved. Some provinces also include a “What’s New” section to highlight some important updates since the last version of *Who Pays What*[™].

British Columbia

Beverage Container Recycling Program

SUPPORTING REGULATORY FRAMEWORK



POPULATION: 4,683,100
POPULATION DENSITY: 4.8 PERSONS/KM²

Adopted in 1970 under the province's *Litter Act*, British Columbia (BC)'s beverage container recovery program is the oldest in North America. In 1997, to address changes in beverage container packaging, the province replaced the

outdated *Litter Act* with the *Beverage Container Stewardship Program Regulation*. While the original legislation covered only carbonated soft drinks and beer, this regulation expanded the deposit-refund system to include any ready-to-serve beverage sold in container that is sealed by its manufacturer (e.g. bottled water, juice, new age drinks, and alcohol), excluding milk and milk substitutes.

This regulation was repealed and replaced in 2004 with the *Recycling Regulation*, which consolidated all BC stewardship regulations (including the *Beverage Container Stewardship Program Regulation*) into one. The *Recycling Regulation* contains key requirements that apply to all producers and stewardship programs with specific product category provisions listed in schedules. With the enactment of this regulation, stewardship agencies were required to submit revised stewardship plans consistent with the regulation by October 2008, which describe the development and operation of the beverage container program, including how the program provides customers with an efficient and convenient system.

In 2011, the *Recycling Regulation* was amended to make businesses supplying printed paper and packaging (PPP) into the province responsible for the costs of collecting, sorting, recycling their products. The amendments to the Regulation required every producer of PPP in BC to operate, or become a member of, an approved stewardship plan for the end-of-life management of their products by November 2012.

PERFORMANCE TARGETS

The *Recycling Regulation* establishes a minimum recovery target (collection rate) of 75% and requires that redeemed containers be either refilled or recycled.

In its latest Stewardship Plan, Encorp sets recovery rate targets for 2014-2018 as follows: 80.1% for 2014; 80.6% for 2015; 81.0% for 2016; 81.5% for 2017; and 82.0% by 2018.¹⁶

WHO IS RESPONSIBLE?

There are currently two stewardship agencies in BC that carry out deposit-refund obligations on behalf of producers (brand owners or first importers of all non-refillable beverages sold in the province): Encorp Pacific (Canada) and Brewers Distributor Ltd. (BDL). BDL represents brand owners of domestic coolers, beers, and ciders, while Encorp represents brand owners of all other beverage types, including non-alcoholic beverages, wine, spirits, some ciders, coolers, as well as some import beer. Province-wide, about 77% of containers are recovered by Encorp (77%) and 23% by BDL.¹⁷

As of May 2014, the *Recycling Regulation* also targets producers of PPP that supply material into the BC residential marketplace. Multi-Material British Columbia (MMBC) is the stewardship organization responsible for delivering an efficient and effective PPP stewardship program on behalf of the producers that have opted to become members.

PROGRAM FINANCING

The total cost of running the deposit-return program in 2014 was \$91 million. Of this, \$53.9 million (59%) was spent on container handling fees (both Encorp Pacific and BDL pay per-unit fees to authorized depots and contracted retailers for handling the containers and preparing them for shipment¹⁸); \$28.5 million (31%) on operating expenses (e.g. transportation and processing); \$4.7 million (5%) on administration; and \$3.9 million (4%) on consumer education and awareness initiatives.

The funds to pay for the costs of the program come from three sources: 1) unredeemed deposits (representing about 19% of the funds Encorp receives); 2) revenues generated from the sale of material (about 17%); and 3) container recycling fees (CRF) paid at the point of sale by consumers (about 64%).¹⁹

All beverage containers covered by the program carry a deposit. These deposits, which vary based on container type and size, are set through government legislation. Non-alcohol beverage containers up to and including 1L carry a deposit of 5-cents, while those over 1L have a 20-cents deposit. Deposits for alcohol containers are higher; alcohol containers up to and including 1L carry a 10-cents deposit, while those over 1L have a 20-cents deposit. Customers can redeem these deposits by returning empty containers to depots.

Any unredeemed deposits are kept by Encorp to cover collection and recycling costs; in 2014, there was a total of \$15.9 million in unredeemed deposits (\$84,483,769 in total deposits - \$68,524,319 refunds issued). In addition to unredeemed deposits, a portion of program costs are offset by the sale of processed containers, particularly aluminum and plastic. Thanks to strong commodity prices in 2014, a total of \$14.3 million revenue was generated from material sales.

When the revenues from unredeemed deposits and from sales of collected material are depleted, a non-refundable CRF is added to the container to make up for the deficit. In 2014, revenue from CRFs totaled \$50.4 million. Implemented by the beverage industry (excluding the domestic beer industry), CRFs are charged based on the net cost of collection and recycling specific container types (gross costs minus the unredeemed deposit and any material revenue) and vary depending on the value of the material and the collection rate for a particular container. These fees are adjusted on an annual basis and are rounded up to the nearest penny. To illustrate, if the net system cost to recover an aluminum can is 0.95-cents, the CRF will be 1-cent per can.

As of July 2016, per unit CRFs range from 1-cent for aluminum cans to 40-cents for large (<1L) glass containers. For some containers (e.g. bi-metal cans > 1L, gable top containers < 1L, bag-in-box), collection/recycling rates are so low that the unredeemed deposits are sufficient to cover program costs, and thus a CRF is not necessary.

Since the implementation of the CRF, the beverage industry bears no direct costs for the operation of the Beverage Container Recovery Program. Any funds that remain after all expenses are paid are placed into reserves. A minimum level of reserves must be maintained in order to ensure the long-term financial viability of the system. If these reserves accumulate beyond targeted levels, Encorp can do one of two things; it can reduce or eliminate CRFs until the reserve is reduced to an appropriate level, or it can reduce the reserve by spending more money on activities designed to increase collection of a specific container type. As of 2014, Encorp's total reserve was \$33.8 million.

On the other hand, individual brewers internalize their stewardship (collection, transporting, refilling, and recycling) costs.

As of May 2014, municipal residential PPP recycling programs are financed 100% by industry stewards. MMBC, a non-profit organization funded by the businesses that are responsible for

the PPP they put on the BC market, provides municipalities a fixed fee per household to collect blue box materials curbside and/or to operate depots for residential drop-off.

COLLECTION SYSTEM

Encorp's collection network includes 173 independent depots (up from 171 in 2012) and over 500 retail outlets, providing access to recycling of beverage containers to 99.4% of the population. This exceeds the target set in the approved stewardship plan, which is 97%.²⁰ Ninety-two percent of containers collected are returned to depots, with the remaining 8% going to retailers.

As of June 2015, BDL provides for container returns at 1,135²¹ locations, including 648 private liquor stores, 195 government-run liquor stores, 221 rural agency stores, and 71 contracted bottle depots. In addition to managing the containers designated under its stewardship plan, BDL also collects and recycles all secondary packaging associated with its containers. This includes, for example, cardboard cases, bottle caps, plastic can rings, and plastic shrink-wrap. Seventy-five percent of BC's population lives within a 10-minute drive of an authorized BDL return depot, while 92% (over 4 million residents) are within a 15-minute drive.²²

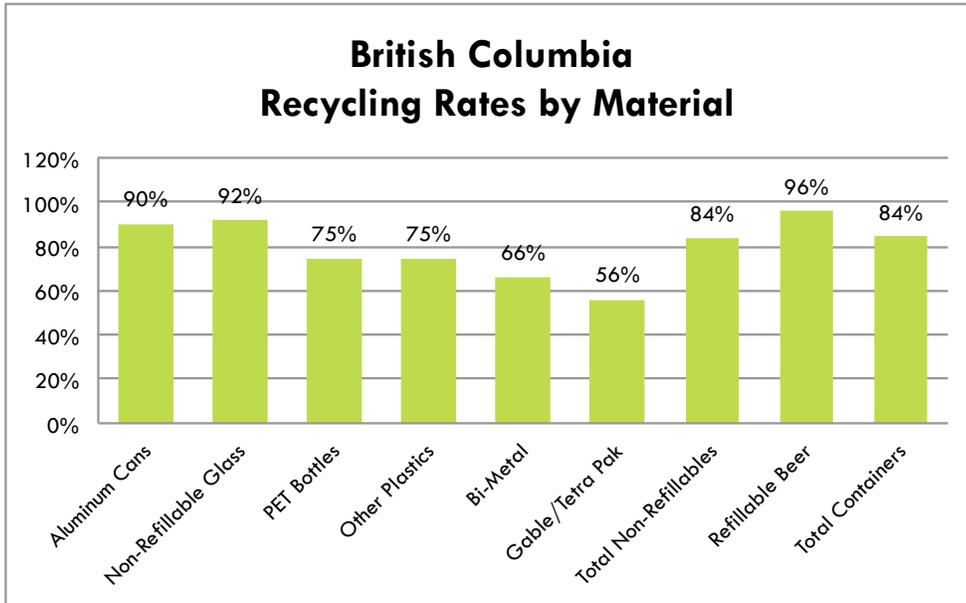
Over 30 contracted transport companies collect containers from depots and retailers and transport them to more than 17 central processing sites across BC, where they are compacted for shipment. Processors receive bags of mixed containers and prepare them for the appropriate recycling market by sorting, crushing, and baling the glass, aluminum, plastic, and other materials. Baled aluminum cans are shipped to a re-melt facility in the United States (US) where they are turned back into sheet stock for new cans. Plastics (i.e. PET and HDPE) are sent to different facilities in Calgary (AB) and Vancouver to be cleaned and pelletized to become secondary feedstock for manufacturers of various plastic products including new containers, strapping material, and fibres. Glass is shipped to various end markets, including a recycling plant in Alberta that makes fibreglass insulation; a facility in Seattle, Washington (US) that produces wine bottles; and a facility in BC that produces sandblasting material.²³ Some glass is also sent to municipal sites and used as construction aggregate. In the case of domestic beer containers, refillable bottles are sorted and sent back to the brewers for washing and refill. Polycoat containers are sent to paper recycling mills in South Korea and the US, where they are ultimately used in the production of new cardboard boxes and tissue paper.

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 the MMBC residential recycling program, meaning that consumers can recycle them at the curb.²⁴

PROGRAM PERFORMANCE

In 2014, 968.5 million beverage containers were recycled through the beverage container program (209.1 units per capita), for an overall recycling rate of 84%. This represents a slight increase from 2013 (83%). Gable/Tetra Pak containers showed the lowest performance with a recycling rate of only 56%. Non-refillable glass, on the other hand, had a high overall rate of 92%.

FIGURE 20 BRITISH COLUMBIA RECYCLING RATES BY MATERIAL (2014)



Recycling rates for containers recovered under BDL's deposit program were much higher. In 2014, BDL collected close to 580.5 million containers, for an overall recycling rate of 93.1%.²⁵ Refillable beer bottles saw the highest return rate at 96%, while aluminum beverage cans were recycled at a rate of 93%.²⁶

With respect to program awareness, 99% of BC residents surveyed were aware that most beverage containers could be returned for a refund of the deposit. Ninety-two percent were aware of at least one location where they could return beverage containers for recycling.²⁷

WHAT'S NEW?



Encorp Develops New "Mini Depot" Concept

In order to offer consumers a faster and more efficient "in depot" experience, Encorp developed the Return-It™ EXPRESS 'drop-and-go' service, with online refunding of deposit returns. Following a successful launch of the program in September 2013, Encorp expanded its drop-and-go service to nine other depots, where it continues to pilot the program.²⁸

In 2014, Encorp opened a new concept drop-and-go-only Express outlet in Yaletown.²⁹ Unlike the other Return-It depots, this 'mini-depot' location is cashless and containers are counted off-site. Encorp sees this as an important step towards increasing the return rate of beverage containers in BC, especially in urban areas, such as high-density residential neighbourhoods lacking appropriate zoning, or where lease rates are unaffordable.³⁰

Multi-Material British Columbia (MMBC) Program Launched

After more than two years of planning and consultation, Multi-Material British Columbia (MMBC) submitted its Packaging and Printed Paper Stewardship Plan to the BC Ministry of Environment. The plan was approved in April 2013, and on May 19, 2014, MMBC's recycling program was officially launched. Because containers regulated under the *Recycling Regulation* are not considered packaging for the purposes of MMBC's Stewardship Plan, the MMBC program does not replace the existing DRS for beverage containers in BC. However, if consumers choose to place deposit-bearing containers in MMBC's blue boxes, MMBC will return them to Encorp Pacific and receive the deposit value for those containers. The revenue from these deposits will be applied against the appropriate materials.³¹

Alberta

Beverage Container Recycling Program

SUPPORTING REGULATORY FRAMEWORK

Alberta's Beverage Container Recycling Program is regulated under the provisions of the *Beverage Container Recycling Regulation of the Environmental Protection and Enhancement Act*.

First introduced in 1972, the Regulation was expanded in 1989 and again in 1997 to cover other beverages, including Tetra Pak and gable top containers. A further expansion in 2001 included all domestic beer containers; domestic beer producers were now subject to the same obligations as other beverage producers. Further amendments to the Regulation came into force in November 2008, increasing deposit levels to 10- and 25-cents. Another change came on June 1, 2009, when Alberta became the first jurisdiction in North America to accept and charge a deposit on containers for milk and milk products. As a result of this amendment, every beverage container sold in Alberta is now part of the deposit-refund system.

In 1997, regulatory authority for the program was given to the Beverage Container Management Board (BCMB). Incorporated under the *Societies Act*, the BCMB operates in accordance with the following by-laws set by the Board of Directors: the *Beverage Container Management Board Administrative By-Law*, the *Beverage Container Management Board Fee*



POPULATION: 4,196,500
POPULATION DENSITY: 5.7 PERSONS/KM²

By-Law, and the Beverage Container Management Board Administrative Compliance By-Law. The BCMB is required to report to and operate within the policy parameters established by the Minister of Alberta Environment and Water.

PERFORMANCE TARGETS

No targets are specified in the legislation; however, the BCMB's 2015-2017 Business Plan includes an overall collection target of 83.7% for 2014. The BCMB has also set targets by container type; for example, 90.6% for non-refillable glass and 87.2% for aluminum. Overall collection targets have also been set for 2015 (83.4%), 2016 (84.2%), and 2017 (85.0%).

WHO IS RESPONSIBLE?

The province requires beverage producers and brand owners to operate a common collection system to recover containers from the bottle depots and retail locations for beer.

The BCMB administers the *Beverage Container Recycling Regulation*. The BCMB is a not-for-profit association consisting of representatives of Alberta beverage manufacturers, container depots and the public (environmental organizations, municipalities and concerned citizens) that reports directly to Alberta Environment and Minister of Environment, and reports on program performance in its annual report. Alberta Environment is ultimately responsible for monitoring program performance and compliance with the regulation.

As the system regulator, the BCMB is responsible for ensuring the collection and recycling of beverage containers throughout Alberta. To fulfill this obligation, the BCMB works in partnership with its collection system agent (CSA) – the Alberta Beverage Container Recycling Corporation (ABCRC) – or a collection service provider (CSP) to collect containers from depots. The Board's main responsibilities include registering containers and manufacturers; permitting and monitoring deposits; setting handling fees; and overseeing aspects of the relations between manufacturers, depots, the ABCRC, and CSPs.

The Alberta Beer Container Corporation (ABCC) acts as a CSP for beer manufacturers and is responsible for ensuring that beer containers are collected, transported, processed, and recycled as per the requirements of the regulation. ABCC directly manages the collection of refillable beer containers, and subcontracts the management of non-refillable beer containers to the ABCRC. The ABCRC outsources 100% of its transportation services to facilitate container collection.

A provincial government agency – the Alberta Gaming and Liquor Commission (AGLC) – represents the producers of alcoholic beverages. The AGLC uses ABCRC to manage its wine and spirit containers and the ABCC to manage its beer containers.

PROGRAM FINANCING

The Alberta Beverage Container Recycling Program is funded through revenues from three sources: unredeemed deposits (36%), container recycling fees (CRFs) (34%), and the sale of collected material (30%). The provincial government does not supply or obtain any funding for or from the operation of the program.

In 2014, the program generated \$45 million in unredeemed deposits. Deposits of 10-cents (for containers 1L or smaller) and 25-cents (for container larger than 1L) are charged on each non-refillable container sold. Customers can obtain a refund of their deposit by returning used beverage containers to a recycling depot. Beverage manufacturers (through the ABCRC or a CSP) pay a handling fee to the depots for each of their containers returned and for which a refund was paid out.

In addition to the fully refundable deposit, some beverage containers are subject to a non-refundable container recycling fee (CRF). The CRF is a fee beverage manufacturers are required to pay the ABCRC in order to cover the net costs of recycling that remain after the funds from the unredeemed deposits and from the sale of recyclable materials are depleted.

More often than not, the CRF is passed down to the consumer; however, the decisions by manufacturers to pass on the CRF to retailers and by retailers to pass it on to consumers are made independently. While the CRF is often shown (visible) on the sales receipt so that customers are aware of the direct net costs of recycling each type of container, some retailers may show it separately. Since the CRF's implementation, the beverage industry bears no direct costs for the operation of the program.

Administered by the ABCRC, the CRF varies depending on the value of the material and the collection rate for a particular container. Materials with higher collection rates generate less revenue from unredeemed deposits and therefore carry a higher CRF. In contrast, materials with lower collection rates generate greater unredeemed deposit revenue and therefore carry a lower CRF. Some containers, like aluminum cans, do not have a CRF because high material revenue and unredeemed deposits cover the collection costs. Similarly, drink pouches and bag-in-box containers over 1L do not have a fee.

In 2014, the CRF ranged from no charge to 10-cents, depending on the size and material used for the container. These fees are adjusted every year (usually on February 1st) to reflect the actual cost of recycling a specific beverage container.³² In 2014, nearly \$43 million in revenue was generated from CRFs. For a complete list of refundable deposits and CRF values, see Table 8 in the Financing section of this report.

All revenues generated go towards the cost of running the program: handling commissions, BCMB fees, transport, and processing (91%); administration (3.7%); marketing (2.7%); and other (e.g. financing charges, depreciation, etc.), (2.4%).

Individual domestic brewers internalize their stewardship (collection, transportation, refilling, and recycling) costs.

COLLECTION SYSTEM

Alberta's collection network for beverage container recycling is one of the largest in Canada. As of 2014, there are 216³³ independently owned "universal" (accepting all beverage containers) depots and 21 Class D depots (accepting beer containers only) across the province at which consumers can return their registered containers for a full refund of the deposit. Approximately 51% of the province's population lives within a 10-minute drive of a depot, and 34% within a 11-20 minute drive.³⁴

The Alberta Bottle Depot Association (ABDA) represents all depots across Alberta. Depot operators are responsible for collecting, sorting, and counting containers for the Alberta Beverage Container Recycling Corporation (ABCRC). Wine and spirit containers are sorted by color; refillables are sorted by size and manufacturer; and non-refillables are sorted by material type (aluminum, glass, plastic, composite, etc.), size, and color where applicable.³⁵ Once sorted, containers are placed into mega bags for pick-up.

Pick-up from depots is carried out by the ABCRC (non-refillable containers) and the ABCC (refillable containers) on behalf of beverage manufacturers. Empty containers are transported to processing facilities where the materials are prepared for shipment to end markets or to brewers for reuse (in the case of refillable beer bottles). In 2014, over 11,000 containers were processed per hour (a slight decrease from the previous year).³⁶ One facility in Lethbridge is responsible for 9.6% of total annual processing capacity. All other processing is completed in ABCRC-operated facilities in Edmonton and Calgary.³⁷

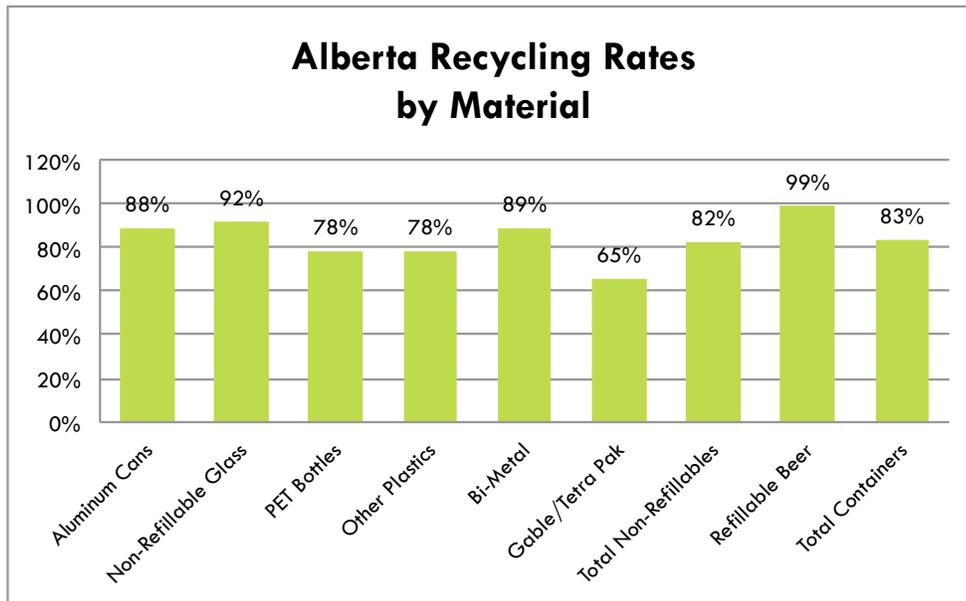
PROGRAM PERFORMANCE

In total, over 2 billion beverage containers were returned to Alberta depots in 2014, resulting in an overall return rate of 83%.

In 2014, Alberta's non-refillable containers recycling rate was 82% (a slight increase over 2013). Non-refillable glass containers showed the highest rates at 92%, followed by aluminum cans at 88%. At the other end of the spectrum, only 65% of gable/Tetra Pak containers were collected for recycling.

Refillable beer bottles were recycled at a rate of 99%.

FIGURE 21 ALBERTA RECYCLING RATES BY MATERIAL (2014)



In 2014, 97% of Albertans reported being aware that they could return beverage containers for a refund. Despite this, the participation rate was estimated at 91%.³⁸

WHAT'S NEW?



Update on the Designated Materials Recycling Regulation

In late 2013, Alberta Environment and Sustainable Resource Development (AESRD) consulted with industry stakeholders regarding its proposal to consolidate all eight of Alberta's existing recycling regulations (for beverage containers, used oil, tires, electronics, and paint) into one regulation – the “Designated Materials Recycling Regulation.” The proposed regulatory amendments are intended to reduce waste, streamline the regulatory framework, and shift the costs of waste management from taxpayers to producers and consumers. In addition to consolidating existing regulations for recycling designated materials, the new regulation would remove environmental fees from regulation and introduce extended producer responsibility (EPR) for PPP and household hazardous waste. A regulatory package for decision makers' review was expected to be complete by Winter 2015, but it appears that this may be delayed.

10-Cent Deposit on Non-Dairy Liquid Coffee Creamers

Effective November 1, 2015, non-dairy liquid coffee creamers (all sizes) are subject to a 10-cent deposit and can be returned to Alberta bottle depots for a refund. Containers with an expiry date before October 31, 2015 are not eligible for a refund and can only be recycled through municipal recycling programs.³⁹

Point-of-Return Software

Starting January 1, 2016, all depots handling more than 10 million containers are required to have in place an industry-approved point-of-return system, which provides to the customer an automated count of containers at each refund rate, and the total refund payable. In addition to raising consumer confidence in the system, the software helps to streamline financial processes.⁴⁰

Saskatchewan

Beverage Container Collection and Recycling Program

SUPPORTING REGULATORY FRAMEWORK

Established in 1988, Saskatchewan's beverage container recycling program was originally supported by the *Litter Control Act* (1978) and the *Designated Container Regulations* (1990). In 2010, matters formerly covered by the *Litter Control Act* and the *Environmental Management and Protection Act* (2002)—whose “Litter Control” section, amended in 2009, was also relevant to the collection of beverage containers—were repealed and became regulated under Part VI, Division 1 of the *Environmental Management and Protection Act* (2010). Refillable beer bottles are governed by the *Saskatchewan Litter Act* and the *Liquor and Gaming Act*.



POPULATION: 1,133,600
POPULATION DENSITY: 1.8 PERSONS/KM²

Initially, only soft drink and beer cans were recovered under the program, but due to a 1999 amendment to the *Litter Control Act*, the program was expanded to include all ready-to-serve beverage containers – except those for milk, milk substitutes, flavored milk, infant formulas, meal replacements or dietary supplements.

In February 2013, the Government of Saskatchewan approved the *Household Packaging and Paper Stewardship Program Regulations*. These new regulations require brand owners and first importers of printed paper and packaging (PPP) to develop a product management program, or join a stewardship agency to submit one on their behalf. These regulations cover any container (including beverage containers) made of glass, metal, paper, boxboard, cardboard, paper fibre, or plastic (or any combination of those materials), but do not include containers that are regulated under the *Litter Control Act* and that are under deposit.

PERFORMANCE TARGETS

No targets have been set with regards to SARCAN's beverage container recycling program or the recently launched Multi-Material Recycling Program (MMRP).

WHO IS RESPONSIBLE?

SARCAN Recycling, a division of the Saskatchewan Association of Rehabilitation Centres (SARC), is responsible for administering the deposit-return program and operates under contract to the Saskatchewan Ministry of Environment. The Ministry is responsible for designating containers that can be collected for recycling, and for establishing the value of the deposit and environmental handling charge (EHC) that consumers pay when purchasing a beverage.

Multi-Material Stewardship Western Inc. (MMSW) is the stewardship organization established to design and operate the Multi-Material Recycling Program (MMRP), which provides Saskatchewan residents with increased access to beverage container recycling on a province-wide basis. Acting on behalf of industry stewards, MMSW is a not-for-profit agency similar to those developed for packaging in other jurisdictions, like Stewardship Ontario and Éco-Entreprises Québec.

PROGRAM FINANCING

The total cost to operate Saskatchewan's DRS in 2014-2015 was \$29 million, while total revenues amounted to \$33.4 million.⁴¹

In Saskatchewan, the majority of program revenue comes from environmental handling charges (EHCs) and unredeemed deposits. As of August 2016, the EHC ranges from 3-cents to 7-cents per unit sold. Unlike the deposit, EHCs are not refundable but are used by the provincial government to offset SARCAN's contract cost and to contribute to general revenues (excess funds generated by the provincial government are put into general revenues.). In 2013-2014, SARCAN's recycling contract for beverage containers was worth \$22.7 million.⁴² Additional funding comes from the revenue generated from material sales (\$6.8 million in fiscal 2013-2014) and from a provincial grant awarded (\$1.7 million in fiscal 2013-2014).

Up until July 2016, SARCAN was also paid a handling fee for all milk containers collected through its depots or through municipalities on a per tonne basis. Although they were never part of the deposit program, SARCAN would accept the containers in lieu of other recycling solutions being available. The dairy industry financed these costs (plus management and advertising) through a levy on milk containers. In 2014-15, handling fees paid to SARCAN for milk container collection totaled \$571,000.⁴³ Now that these containers are considered part of Saskatchewan's MMRP, SARCAN no longer receives these payments.

The new MMRP, which started on January 1, 2016, is modeled after the industry-funding programs currently operating in Ontario, Québec, and BC. Under this program, stewards (brand owners or first importers) of packaging, including all beverage-related consumer packaging, are obliged to finance 75% of the costs associated with the residential recycling program. Municipalities that join MMSW receive compensation in the form of a set fee per household served, as long as MMSW standards are met.⁴⁴

COLLECTION SYSTEM

Saskatchewan residents can take their empty containers back to any one of 71 SARCAN depots in 66 communities across the province. After the containers have been sorted, the depots flatten and compact the material using multi-material flatteners, a technology pioneered by SARCAN employees. Once baled, the containers are picked up by SARCAN trucks, transported to one of the company's processing facilities, and sent to recycling end markets.

Clear glass is shipped to a facility in Moose Jaw, Saskatchewan, while colored glass is sent to a facility in Airdrie, Alberta where it is primarily recycled into new glass bottles and jars or fibreglass insulation. Depending on the resin type, plastics are sent to either Calgary (PET) or Vancouver (HDPE and other). Aseptic containers are shipped off to Cheboygan, Michigan (US), where they are hydropulped and used in the production of various products such as napkins, facial tissue, fences, and decks. Steel/tin containers are shipped to Regina (SK), where they are melted down and recycled into other steel products, such as rebar and pipe, while aluminum cans are sent to the Coca-Cola recycling facility in Kentucky (US), where they are recycled into new aluminum cans.⁴⁵

Refillable beer containers can be returned to Saskatchewan Liquor and Gaming Authority (SLGA) stores, hotels, and four depots. (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 then sent back to Brewers Distributor Ltd. (BDL) for the full refund and for washing and refill.

Municipalities that operate residential collection programs for waste packaging and paper can choose to participate in the new Multi-Material Recycling Program (MMRP). Municipalities enrolled in the program will have the choice of what type of collection system they will use – curbside pickup or a central depot – depending on the size of their community and the associated costs. If customers choose to put their beverage containers in their curbside bins, the containers will still come to SARCAN, although the customer will forgo deposit.

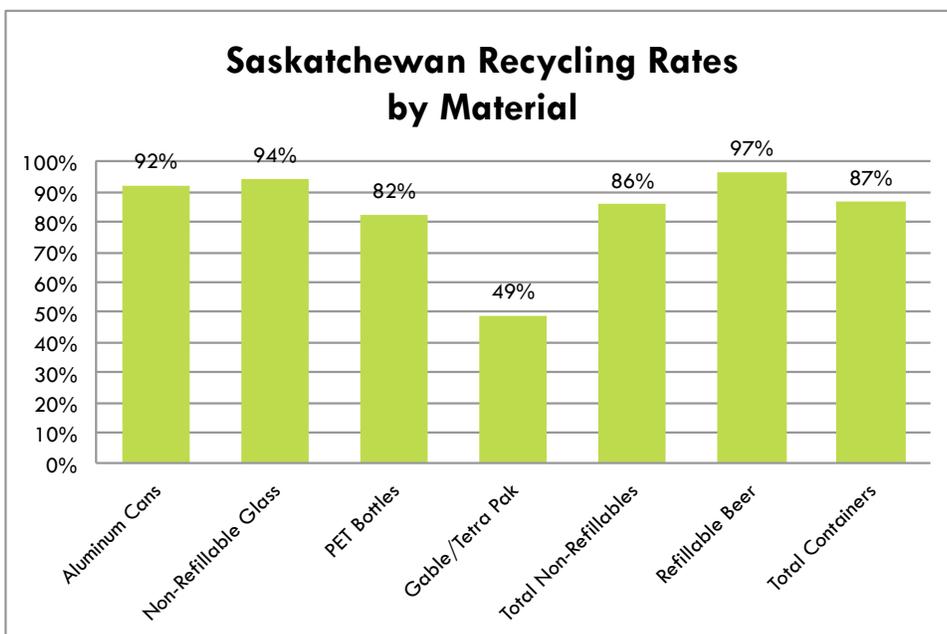
Up until this year, beverage containers of dairy products were collected voluntarily under the Unified Dairy Recycling System (UDRS). Launched in 1999, the UDRS was a program whereby the Saskatchewan dairy industry contracted with SARCAN Recycling to provide a collection and recycling option for non-deposit plastic milk jugs and paper milk cartons in beverage

container depots. Starting January 1, 2016, the recycling of milk containers is covered under the new MMRP.

PROGRAM PERFORMANCE

In fiscal 2014-2015, a total of 405.6 million beverage containers were returned to SARCAN recycling depots, for an overall container recycling rate of 87% (up 4-percentage points from the previous report). Non-refillable glass and metal containers showed the highest return rates at 94% and 92% (up from 87% and 87% in 2013-2014, respectively), followed by PET bottles at 82%. Juice boxes (i.e. Tetra Paks) were returned at a much lower rate at 49%.

FIGURE 22 SASKATCHEWAN RECYCLING RATES BY MATERIAL (2014)



WHAT'S NEW?



Multi-Material Recycling Program (MMRP) Launched

In February 2013, the provincial government approved the *Household Packaging and Paper Stewardship Program Regulations*, requiring industry to finance up to 75% of the net cost of municipal recycling programs for residential waste packaging and paper (PPP) in Saskatchewan. In addition to requiring brand owners and first importers of PPP to share the cost of recycling their material with municipalities, the new regulations require them to develop a product management plan, or be part of a plan submitted on their behalf.

In response to the regulation, Multi-Material Stewardship Western (MMSW) was established to represent industry stewards and fulfill their stewardship obligations. MMSW submitted a

stewardship plan to the Ministry of Environment in August 2013, which was approved in December of the same year.

While implementation of the Multi-Material Recycling Program (MMRP) was initially set to commence by January 1, 2015, last minute Ministerial changes to MMSW's approved operational/financial plan necessitated revisions to the plan, resulting in significant delays.

In July 2015, MMSW submitted a revised program plan which reflected several key differences for stewards, including government exemptions for certain stewards (e.g. stewards that generate less than \$2 million in gross revenue per year, less than 1 tonne/year of paper, or operate as a single point of retail are permanently exempt from participating in the MMRP). Another key change to the plan focuses on a new method for calculating municipal funding. The revised plan was approved in October and launched on January 1, 2016.⁴⁶

It is important to note that the MMRP does not replace the collection program operated under SARCAN because containers regulated under the *Litter Control Act* and that are under deposit are not considered packaging for the purposes of the WPP Stewardship Plan. If consumers choose to place their deposit-bearing beverage containers in their curbside bins, the containers will still go to SARCAN (they will be sorted by the recyclers), but they will lose their deposit refund.⁴⁷

SARCAN Phases Out Milk Container Collection

Starting January 1, 2016, the collection and recycling of milk containers will be covered by the new provincial program for household packaging and printed paper operated by MMSW. As a result of this new program, SARCAN has begun a 6-month phase-out of its milk recycling program, and will only continue to recycle milk containers that are received between January 1, 2016 and July 1, 2016.⁴⁸

Drop N Go

As part of a pilot project to improve efficiencies, SARCAN Recycling launched a new service in 2014 called Drop N Go, which allows customers to drop off their deposit beverage containers at the depot, and have the refunds sent to them via PayPal. Customers simply create an account, either online or with the touch pad service at the depot; note the number of identification tags they need; attach the tags to their bags; place the bags of containers in a special receiving area; and leave. The Drop N Go option is currently offered at two depots (Martensville and Saskatoon Sutherland depots), but will be expanded to the other 16 Extra Large depots in Saskatchewan in 2015-2016⁴⁹.

Manitoba

MMSM's Packaging and Printed Paper Program Plan and CBCRA's RecycleEverywhere Program

SUPPORTING REGULATORY FRAMEWORK

Manitoba's *Waste Reduction and Prevention Act (WRAP)* (1990) provides the legislative framework for introducing beverage container collection and recycling programs. The first initiative was the *Beverage Container and Packaging Regulation* (1992). This regulation was repealed and replaced by the *Multi-Material Stewardship (Interim Measures) Regulation* in 1995, which created the Manitoba Product Stewardship Corporation (MPSC). One of the main mandates of the MPSC was to establish and administer a waste reduction and prevention program for designated packaging and printed materials for Manitoba.⁵⁰



POPULATION: 1,293,400
POPULATION DENSITY: 2.2 PERSONS/KM²

In December 2008, the province introduced a new *Packaging and Paper Stewardship Regulation*. In response to this regulation, in September 2009 Manitoba's Minister for Conservation approved a program plan for PPP collection in the province. Packaging in the regulation is defined as "any package or container, or any part of a package or container, that is comprised of glass, metal, paper or plastic, or any combination of any of those materials and includes, but is not limited to, service packaging." This initiative began on April 1, 2010, and is run by Multi-Material Stewardship Manitoba (MMSM).

At the same time, the beverage industry created the Canadian Beverage Container Recycling Association (CBCRA), which takes responsibility for the collection of all beverage containers consumed both at home and away-from-home (AfH). The CBCRA's first program plan was approved August 31, 2011, and a second plan was approved in 2013 (until 2016). All used, sealed ready-to-serve beverage containers are included under the program; this includes aluminum, PET, HDPE, aseptic packages, and gable-top containers. The CBCRA has agreed that containers containing dairy products will be phased in at a later date.

PERFORMANCE TARGETS

Included in the Guideline accompanying the *Packaging and Printed Paper Stewardship Regulation* is a requirement that obligated beverage producers achieve a 75% recovery

(collection) rate for all used, ready-to-serve beverage containers supplied into Manitoba by 2016. Once that target is achieved, Government will work with industry to set targets for future years.⁵¹

WHO IS RESPONSIBLE?

Manitoba's *Packaging and Printed Paper Stewardship Regulation* targets stewards (brand-owners and first importers) of designated printed paper and packaging (PPP) that are resident in Manitoba. Under the regulation, stewards are required to contribute funds to municipalities to help cover up to 80% of the net cost of PPP recycling programs. In 2006, representatives of obligated companies established Multi-Material Stewardship Manitoba (MMSM) – a not-for-profit, industry-funded organization – to design, implement, and operate the province-wide residential recycling program on their behalf. To do this, it receives funding from the CBCRA.

Founded in 2010, the CBCRA is a non-profit, industry-funded organization comprised of beverage producers and distributors (excluding beer). While its members and stewards are also stewards of MMSM and are obligated to remit fees to MMSM on all their packaging, it 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 which was signed in 2010.). According to its website, the CBCRA represents approximately 90% of the beverage containers sold into Manitoba.

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. CBCRA buys the bins, provides technical support and best practices information, and finances the province-wide promotion and educational campaign called "Recycle Everywhere." Participating generators get new recycling bins and free educational materials from Recycle Everywhere to support their recycling programs. In return, they must pay for their recycling program and use a registered program processor for this service. These generators or their processors receive all the revenue from the PET and aluminum collected.

In addition to remitting fees to MMSM, the CBCRA reports to MMSM all its members' packaging (i.e. tonnes of aluminum cans; PET bottles; glass; Tetra Pak, etc.) sold into the province and pays the total fees for that year.

The AfH program targets municipalities and businesses that generate beverage containers. These could include libraries, community centers, golf courses, arenas, events venues, and other establishments.

PROGRAM FINANCING

All stewards of PPP in Manitoba are responsible for financing 80% of the total net cost of municipal recycling programs across the province. Steward fees are set by MMSM and are based on a number of factors including program costs, recovery rates, and a penalization factor for materials with poor collection rates.

Producers of beverages are charged a 2-cent Container Recycling Fee (CRF) for every non-alcoholic, non-dairy beverage container they supply into Manitoba. Producers remit these fees to the CBCRA on a monthly basis, who then pays MMSM (on behalf of each member) on a quarterly basis. Alcohol distributors pay MMSM directly for their Blue Box obligation. In most cases, beverage producers pass the CRF to the retailer, who then passes it on directly to the consumer. This fee is visible on most store receipts and is consistent across the province.

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.

This fee is used to pay for the entire AfH recycling program, including infrastructure, signage, technical support, and P&E.⁵² The CRF is also used 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 charged to beverage producers covers the cost of recycling beverage containers from all collection streams.

In 2014, CRF revenue totaled \$8.8 million, \$1.2 million of which was used to pay MMSM for residential collection. CBCRA uses the remaining revenue to purchase and distribute recycling bins (free of charge) to its partners across Manitoba (e.g. municipalities, IC&I buildings, government buildings and other provincially-run locations such as parks and schools); provide technical support; conduct waste audits; and to pay for its promotion and educational campaign ("Recycle Everywhere").

COLLECTION SYSTEM

Beverage containers from the residential sector are collected via curbside recycling or depot drop-off centers. PET, glass, aluminum, and steel containers are collected in most programs, whereas aseptic, gable top, HDPE, and other less common containers are collected in approximately 90% of the programs. Municipalities either perform the collections themselves or contract these services out to private companies. 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. As of December 2015, over 20,000 Recycle Everywhere bins have been placed with partners in more than 736 communities across the province. Bins have also been installed in more than 586 IC&I buildings, and 487 schools.

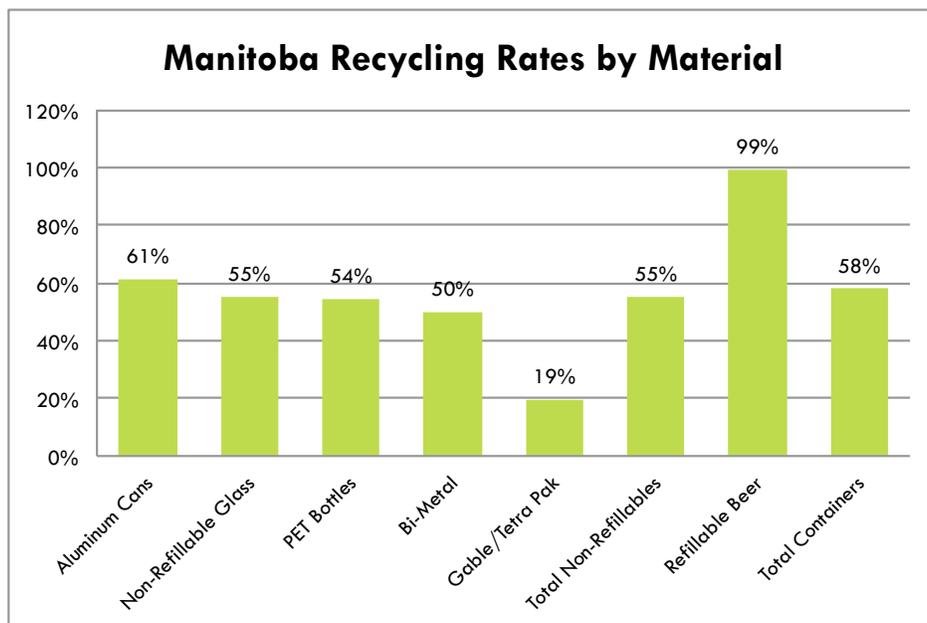
Refillable and non-refillable beer cans are collected via retail beer vendors, the Manitoba Liquor Commission, and rural agency stores. Brewers Distributor Limited (BDL) collects empty domestic beer containers and back-hauls them to various distribution centres where recyclables are baled and shipped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

PROGRAM PERFORMANCE

In 2014, the CBCRA reported an overall collection rate of 64% based on tonnes collected. To determine the recycling rate, CM Consulting applied assumed process loss rates (see Appendix for assumptions used). With these losses factored in, the recycling rate is 55% of all non-refillable beverage containers (excluding beer) sold in Manitoba.

It should be noted that the recycling rate for aluminum cans includes beer cans (recycled at a rate of 79%) and soft drink cans (recycled at a rate of 49%).

FIGURE 23 MANITOBA RECYCLING RATES, BY MATERIAL (2014)



WHAT'S NEW?



In December 2014, the Government of Manitoba released a Recycling and Waste Reduction discussion paper, which proposes to reduce the amount of waste going to landfills by 50% by 2020. Among the options for action are establishing a new target for recovering beverage containers (up from the current 75% target) and phasing in disposal bans of products and materials currently managed under the province's EPR programs. If implemented, both of these proposals – as well as several others in the discussion document – could have an impact on stewards.

Ontario

Blue Box Program and the Ontario Deposit Return Program (ODRP)

SUPPORTING REGULATORY FRAMEWORK

Established in 1994, Ontario's Blue Box Program is one of the oldest and most comprehensive curbside recycling systems in North America. 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.



POPULATION: 13,792,100
POPULATION DENSITY: 14.1 PERSONS/KM²

Ontario's Blue Box Program was developed under the *Waste Diversion Act* (WDA) (2002) in response to a 2003 request by the Ontario Minister of the Environment for such a program. The WDA obligates companies that introduce printed paper and packaging (PPP), managed through the municipal waste system, to contribute 50% of the share of the net cost of operating municipal curbside recycling programs. The Act establishes Waste Diversion Ontario (WDO) as the non-crown corporation responsible for developing, implementing, and operating waste diversion programs in the province, including one for designated Blue Box wastes (see O. Reg 273/02). Eligible waste materials and the Industry Funding Organization (IFO) are designated in the *Blue Box Waste Regulation* under the WDA.

In addition to the WDA, municipal recycling programs are legislated under the *Environmental Protection Act* (EPA) (1990). Specific regulations of relevance to recycling are the 3Rs Regulations, namely *Regulation 101/94 (Recycling and Composting of Municipal Waste)*. *Regulation 101/94*, in place since 1994, requires every municipality with a population of at least 5,000 to operate a Blue Box program that collects at least five mandatory materials (newspapers, PET bottles, aluminum and steel cans, glass containers), as well as a minimum of two other materials made from metal, plastic, or glass. Also relevant is *Regulation 103/94 (Industrial, Commercial and Institutional Source Separation Programs)*, which mandates IC&I

recycling for most commercial sectors and for some basic recyclables (excluding multi-laminate containers).

The EPA also includes a number of beverage-specific regulations such as: *Refillable Containers for Carbonated Soft Drink Containers* (O. Reg 357), *Disposable Paper Containers for Milk* (O. Reg 345), and *Disposable Containers for Milk* (O. Reg 344). All of these regulations have been consolidated into the *Revised Regulations of Ontario (1990)* (R.R.O. 1990).

On June 1, 2016, the Ontario Government passed Bill 151 – the *Waste Free Ontario Act* (WFOA), comprised of two schedules: 1) the *Waste Diversion Transition Act* (WDTA) and 2) the *Resource Recovery and Circular Economy Act* (RRCEA). Together, these Acts will replace the current WDA—which utilizes industry funding organizations, like Stewardship Ontario, and industry stewardship plans—and transition to the new producer responsibility framework. At this point, the Act is high level, enabling legislation that will see much of the details on how the new system will work determined later through regulations⁵³.

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 2004 Blue Box Program Plan set an overall diversion target of 60% for Blue Box waste by 2008, which was reached ahead of schedule. No targets have been set for waste diversion from the IC&I sector.

Regulations also call for 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. The ministry is looking at several alternatives to the 30% refillable quota, and is considering repealing it altogether.

WHO IS RESPONSIBLE?

Under the new *Waste-Free Ontario Act* (2016), which is scheduled to take effect in January 2017, individual producers (not an agent) will be held legally responsible for achieving resource recovery and waste reduction requirements.⁵⁴ Although they will not be able to

transfer their liability, producers will have flexibility to determine how to best meet their obligations, subject to the regulations and the restrictions of the *Competitions Act*.

Obligated producers will report directly to the Resource Productivity and Recovery Authority (RPRA). The RPRA will replace Waste Diversion Ontario (WDO) and will be directly accountable to the Ontario Ministry of Environment and Climate Change. The Authority is responsible for providing independent oversight of producer requirements, operating as a data clearinghouse for producer responsibility programs, and undertaking compliance and enforcement activities related to waste diversion and recycling programs. Compliance and enforcement tools could include inspections, compliance orders, administrative penalties, and offence provisions.

Under the old waste diversion regime, municipalities with a population of 5,000 or more were responsible for operating multi-material curbside recycling programs for beverage containers and other PPP materials. Under the new legislation, there is no legislated role for municipalities. Rather, municipalities are considered a potential service provider to producers.⁵⁵ 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.⁵⁶

With regards to the ODRP for wine, spirits, and imported beer containers, the LCBO is the responsible entity. When the provincial government decided to establish the program, The Beer Store (TBS) already had a successful deposit-return 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, WDO conducts a Municipal Datacall, requiring municipalities to submit tonnage and financial information for residential Blue Box material collected in their recycling programs. Along with material generation estimates, Stewardship Ontario (SO) uses this data 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.

Prior to Bill 151, PPP stewards (represented by SO) were responsible for paying 50% of the annual share of the net costs of the Blue Box program, as per the agreement under the *Waste Diversion Act (WDA)* (2002). Under Ontario's new waste diversion regime, producers' responsibility for blue box costs could increase from 50% to 100% (full producer responsibility). A decision on whether to raise the current funding cap beyond 50% will be made during the Blue Box transition period, which is expected to take anywhere from three to five years.⁵⁷

In 2014, over 1,000 stewards reported into the Blue Box program and paid a total of \$106.2 million in fees to SO. About 135 stewards account for 80% of the fees.⁵⁸ Of the total stewardship fees, \$104.4 million was transferred to municipalities for operation of the Blue Box program. This amount includes program delivery, administration, and HST. Some of these funds were also used to support continuous improvement (\$3.3 million), R&D (\$914,000), and promotion and education (\$5,500).

The ODRP is financed through unredeemed deposits and government revenue. Refundable deposits currently range 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, 2015, expenditures related to service fees paid to TBS totaled \$38.0 million (including \$4.4 million of HST).⁵⁹ It is worth noting that the service fee – 80% of which is collected for handling large glass bottles – has decreased since the beginning of the program. A contract with TBS, in effect since February 2012, sets the fee at 10.5-cents for 2016.

COLLECTION SYSTEM

Ontario has a hybrid collection system in which beverage containers are recovered via two streams.

Alcoholic beverage containers, as well as any associated packaging, can be returned to 443 beer store locations, 113 breweries (beer containers only), 141 retail partner stores, 63 LCBO northern agency stores, 4 additional LCBO stores, and 115 empty bottle dealers (small independent depots contracted in more remote locations where beer retailers are not available), for a total of 879 redemption locations. TBS trucks collect these empty containers and back-haul them to various distribution centres where recyclables are sent to a processing facility for sorting, baling, and shipping to market. Refillable bottles are sent back to the brewers for washing and refill.

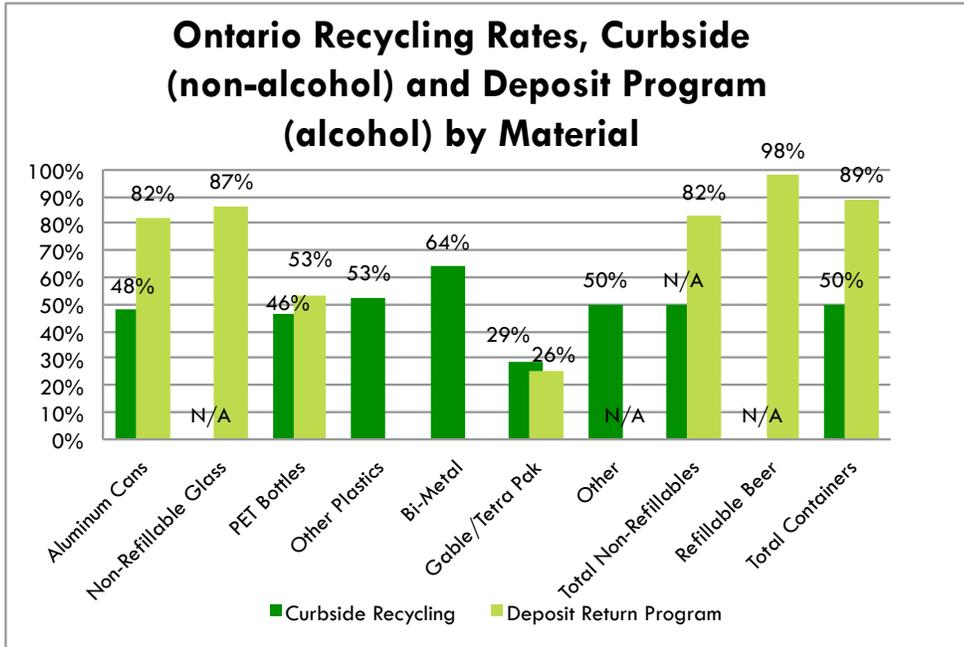
Beverage containers from the residential sector are collected via curbside recycling or drop-off depots. Municipalities are required by law to collect PET, glass, aluminum, and steel containers, whereas the collection of Tetra Pak, gable top, HDPE and other less common containers is voluntary. Municipalities may perform collection themselves or may contract it out to private companies. Generally, after collection, containers are transported to MRFs where they are sorted, baled, and shipped to their respective end markets for recycling.

PROGRAM PERFORMANCE

Containers returned through Ontario's deposit-return system show a total recycling rate of 89% for 2014-2015. This rate is higher than that in other deposit programs in Canada because of a combination of the high rate for the refillable beer bottle (98%) and a high market share for that bottle in the province (56% of all beer containers sold). The rate for non-refillable alcoholic

beverage and beer containers is also high at 82%. Of all alcoholic beverage containers, gable/Tetra Pak cartons achieved the lowest collection rate at 26%.

FIGURE 24 ONTARIO RECYCLING RATES BY MATERIAL – CURBSIDE (NON-ALCOHOL) AND DEPOSIT PROGRAM (ALCOHOL) (2014)



Non-alcoholic beverage containers collected via the Blue Box program show an overall recycling rate of approximately 50% (down from 56% in 2012-2013).

WHAT'S NEW?



Ontario Introduces New Waste Legislation and Strategy

On June 1, 2016, the Ontario government passed the *Resource Recovery and Circular Economy Act (2016)* and the *Waste Diversion Transition Act (2016)*, otherwise known as the *Waste-Free Ontario Act (Bill 151)*. This new legislation replaces the *Waste Diversion Act* under which producers are required to split the costs (50/50) of recycling PPP with municipalities. The Act also replaces WDO with the Resource Productivity and Recovery Authority (RPRA), with additional oversight and enforcement powers. Bill 151 also allows the government, through regulation, to increase producers' funding of the Blue Box program beyond the current 50% funding cap during the transition process.⁶⁰ The Blue Box program is proposed to transition to full EPR in 2016-2017.

Under Ontario's new waste diversion regime, individual producers' obligations will extend beyond the current requirement to remit fees, giving producers the flexibility to achieve

resource recovery and waste reduction requirements individually or in collectives.⁶¹ Another core feature of Bill 151 related to the collection and recycling of beverage containers is that unlike the previous legislation, there are no provisions to require 'reasonable compensation' for municipalities - instead this will be dictated by the market.⁶² Part of the Blue Box transition will also include consultation on changes to Regulation 101/94 to remove requirements for municipalities to collect materials at the curb.⁶³ By placing a heavier burden on producers, it is the province's intention to encourage the production of more reusable and recyclable products.

Along with the proposed legislation, the Ontario government released its draft *Strategy for a Waste-Free Ontario: Building the Circular Economy*. This strategy document identifies the province's key objectives with respect to waste recovery, which include increasing resource productivity to reduce waste, promoting a more efficient and effective recycling system, and creating conditions to support sustainable end-markets.⁶⁴ To achieve these objectives, the draft Strategy prioritizes a number of actions, including for example, implementing disposal bans and recycling standards, designating new products and packaging, and enhancing requirements for waste generators and service providers. A key aspect of the draft strategy is the government's focus on *outcomes* and *requirements* for designated products and packaging. These could include, for example, minimum collection rates.⁶⁵

Québec

Collecte sélective Québec, programme pour la récupération hors foyer, programme de consignation

SUPPORTING REGULATORY FRAMEWORK

Québec's DRS was established in 1984 under the *Environment Quality Act*. The program covers all non-refillable soft-drink and beer containers. Other beverage containers, such as those containing 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%).



POPULATION: 8,263,600
POPULATION DENSITY: 5.8 PERSONS/KM²

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, 2014, and which was in effect until December 31, 2015. This agreement was first reached on December 1, 1999 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*. New agreements are currently being negotiated for both industries (separately).

In addition to the above agreements, the beer and soft-drink industries are governed under the *Beer and Soft Drinks Distributors' Permits Regulation under An Act Respecting the Sale and Distribution of Beer and Soft Drinks in Non-Returnable Containers*. This Act requires that anyone selling or distributing beer and soft drinks in Québec in non-refillable containers must obtain a permit to do so 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*.

PERFORMANCE TARGETS

The government's *Québec Residual Materials Management Policy and 2011-2015 Action Plan* includes a target to recycle 70% of paper, cardboard, plastic, glass, and metal waste by 2015.

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, 2015.⁶⁶ 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 program is overseen by the *Société québécoise de récupération et de Recyclage* (also known as "Recyc-Québec"), a crown agency founded in 1990 responsible for promoting, developing, and encouraging the reduction, reuse, recuperation, and recycling of containers, products, and packaging in Québec. The Ministry responsible for carrying out the provisions of the *Act respecting the Société québécoise de récupération et de Recyclage* – which lays out the mission and mandates of Recyc-Québec – is the Ministry of Sustainable Development, Environment, and Action against Climate Change (MDDELCC) (Ministère de Développement durable, de l'Environnement et de la Lutte contre les changements climatiques).

BGE – a non-profit organization established by the Québec soft-drink industry – administers the deposit-return program for non-refillable soft drink containers on behalf of the industry. BGE took over this role from Recyc-Québec on December 1, 1999.

Recyc-Québec oversees the beer container collection program. 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 put PPP on Québec's market. 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 in Québec. In 2014, ÉEQ represented over 3,000 companies selling paper and food and consumer packaging.

PROGRAM FINANCING

The two programs in Québec are funded via different streams.

The DRS for beer and soft drinks containers is almost entirely funded by the wasting consumer through unredeemed deposits. In 2014, nearly 30% of deposits paid by consumers were not redeemed.⁶⁷ Because the cost data for the transport and recovery operations are proprietary, the actual share of costs is unavailable. Depending on program expenses and material revenues for a given year, the percentage of the cost borne by the beverage industry versus the consumer can change, but the wasting consumer typically bears the lion's share.

Industry contributes a much larger share to the municipal curbside program. Since November 2004, municipalities with multi-material recycling programs are entitled to receive compensation for their services under the *Environment Quality Act* and the *Regulation Respecting Compensation for Municipal Services provided to Recover and Reclaim Residual Materials*. As of 2013, beverage producers (except those for non-refillable soft-drinks and beer which are on deposit) are legally obligated to finance 100% of the net costs to collect, transport, and process the materials, plus 8.55% of that amount to cover administrative costs (e.g. overhead, P&E, etc.) and the cost of collection equipment (e.g. recycling bins).⁶⁸ The total compensation paid to municipalities (561 municipal agencies) in 2014 was \$156.5 million.⁶⁹ (Note: While soft-drinks and beer containers themselves are not subject to the regulation, any associated packaging is (e.g. boxboard cases, film plastic)).

COLLECTION SYSTEM

Similar to Ontario, Québec has a hybrid collection system in which beverage containers are recovered via two streams.

Containers of carbonated beverages (including beer, soft-drinks, and carbonated energy drinks) are collected via the deposit-return program, which is based on a return-to-retail collection system. Consumers can return their empty containers for a refund of their deposit to approximately 10,000⁷⁰ licensed grocers, service stations, pharmacies, and other retail outlets located throughout Québec. By law, anyone that sells these containers must take them back.

Approximately 70% of returned deposit-bearing containers are managed through reverse vending machines (RVMs) using dedicated transport by distributors and bottlers. A significant portion of the remaining 30% is collected using the same side-load trucks that deliver full goods (reverse logistics). These 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 used for wine, spirits, water, non-carbonated flavoured drinks, juices, and milk are collected via municipal curbside recycling programs, available in over 1,100 municipalities (representing 99% of the population)⁷¹ throughout Québec.

In addition to the above, Québec residents can recycle empty beverage containers through the Away-From-Home Recovery Program managed by ÉEQ. Between its creation in 2008 and December 31, 2014, this program has resulted in the installation of 10,100 pieces of materials recovery equipment in indoor and outdoor municipal public spaces across Québec.⁷²

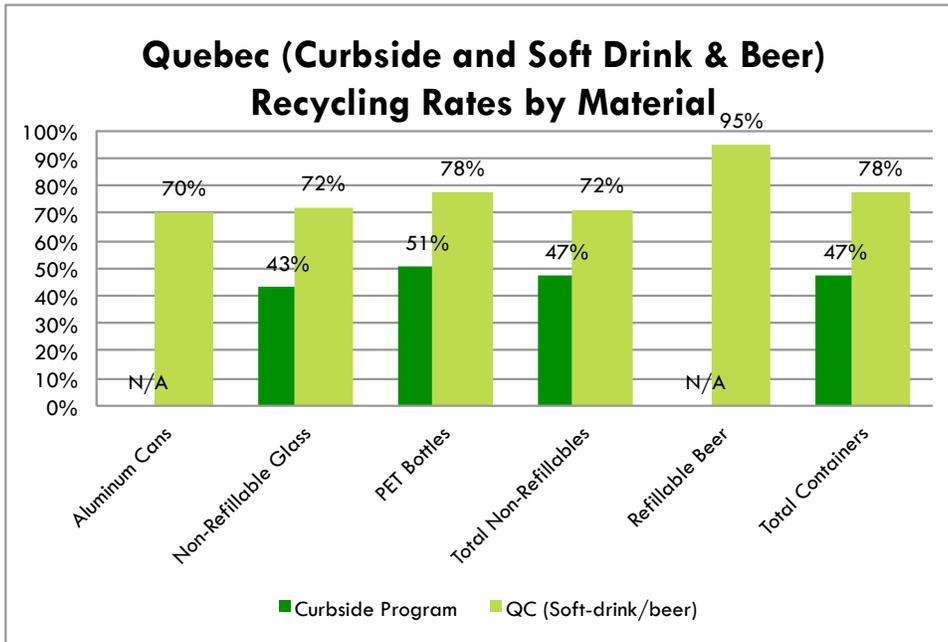
Other AfH recycling initiatives are pursued by those outside government or the beverage industry, including *La Table pour la récupération hors foyer* (Issue table for out-of-home recycling). Formed in 2007 by stakeholders in the public, private, and voluntary sectors, the non-for-profit organization's mission is to initiate, develop, and implement large-scale programs to increase AfH recycling. To date, the organization has distributed \$4.7 million to municipal organizations for the installation of 10,300⁷³ multi-material recycling bins, and \$1.2 million to over 3000 restaurants, bars and hotels that now recover all their recyclable materials.

The program is now being operated by ÉEQ to supplement curbside collection. Funding for the program (\$8 million) is provided in equal parts through voluntary contributions from the ÉEQ, the MDDELCC, and through the Green Fund.

PROGRAM PERFORMANCE

In 2014, the recycling rate for containers recovered via the deposit-return system was 78% (this rate includes data for refillable bottles). During the same period, the rate for containers collected through the municipal curbside recycling program was 47%.

FIGURE 25 QUEBEC RECYCLING RATES FOR DEPOSIT PROGRAM (SOFT DRINK & BEER) AND CURBSIDE PROGRAM (ALL NON-CARBONATED BEVERAGES) BY MATERIAL (2014)



WHAT'S NEW?



Québec Considers Program Expansion

The Québec government is seriously considering expanding its deposit-return program to include beverages sold in plastic, metal, and other containers that currently don't currently 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 5-cents refund to 10-cents, as well as increasing the handling fee offered to retailers for their collection efforts to 2.5-cents (up from 2-cents). The announcement is expected in the last quarter of 2016.

New Brunswick

Beverage Container Recovery Program

SUPPORTING REGULATORY FRAMEWORK

Established in 1992 under the *Beverage Containers Act* (1991) and the *General Regulation – Beverage Containers Act* (1992), this province-wide program covers all ready-to-drink, non-refillable beverage containers 5L and under. This includes soft-drinks; beer, wine and spirits; flavoured waters; fruit juices; vegetable juices; and low alcohol drinks. The regulation also covers refillable beer bottles. Containers for milk and milk products (and substitutes) as well as processed apple cider are exempt from the program at this time.



POPULATION: 753,900
POPULATION DENSITY: 10.5 PERSONS/KM²

PERFORMANCE TARGETS

There is no collection target established in the Act or the regulation. However, the Department of Environment has established an unofficial target of 80%.

WHO IS RESPONSIBLE?

Encorp Atlantic Inc. – a stewardship agency originally created by the soft-drinks industry – is responsible for managing the collection, transportation, and partial processing of non-alcoholic beverage containers on behalf of obligated brand owners. It does this through a contract with Gilbert M. Rioux & Fils Ltd.⁷⁴ In addition to managing the operational aspects of the program, Encorp is responsible for collecting all deposits from the distributors, reimbursing redemption centres for the refunds paid out, remitting a portion of the fees to the Environmental Trust Fund, and paying redemption centres a handling fee.

New Brunswick Liquor (NB Liquor) is responsible for the collection of alcoholic beverage containers (wine, beer, spirits, and coolers), and contracts the transportation and processing of these containers to Neighborhood Recycling (Rayan Investments Ltd.). NB Liquor collects the deposits and remits the provincial share of the environmental fee directly to the Environmental Trust Fund.

Program oversight is the responsibility of the Department of Environment. Distributors of containers sold in the province must register with the Department and submit a plan describing how the container will be managed after the beverage has been consumed.

PROGRAM FINANCING

New Brunswick's beverage container program operates under a "half-back" model. Under this system, residents who purchase non-refillable beverage containers are refunded only half (50%) of their deposit when they return the containers for recycling. To illustrate, a consumer who paid a 10-cent deposit on a non-alcoholic (ready-to-drink) beverage, of any size, would only receive a 5-cent refund upon redemption of this container. Likewise, a consumer who paid a 10-cent or 20-cent deposit (depending on size) on an alcoholic beverage container would only receive back half that amount. The exception to this half-back system is refillable beer bottles. When returning these bottles to a redemption center, consumers are refunded the full 10-cent deposit.

The unrefunded portion of each deposit (2.5- or 5-cents depending on the container), plus the revenue generated from unredeemed deposits and from the sale of material, is used to cover the costs of administering the program. These costs include sorting, transporting, and processing the containers. They also include a handling fee paid to redemption centres; handling fees are currently set at \$0.04059 per empty beverage container (except for empty refillable beer containers).⁷⁵ Handling fees are paid to redemption centres as compensation for receiving, paying out refunds for, sorting, and storing redeemed beverage containers. These fees are paid directly to redemption centres without government involvement.

In addition to covering program expenses, some of the revenue from the unrefunded portion of the deposit goes into New Brunswick's Environmental Trust Fund, which is used for environmental conservation, education, protection, and other provincial environmental initiatives aimed at reducing waste. In fiscal year 2015, a total of \$6.7 million was paid to the fund. This fund is managed by the Department of Environment.

COLLECTION SYSTEM

As of February 2016, New Brunswick residents can return their empty beverage containers for a refund to any one of the 72⁷⁶ individually owned and operated redemption centres throughout the province. All redemption centres must be registered with the New Brunswick Department of Environment.

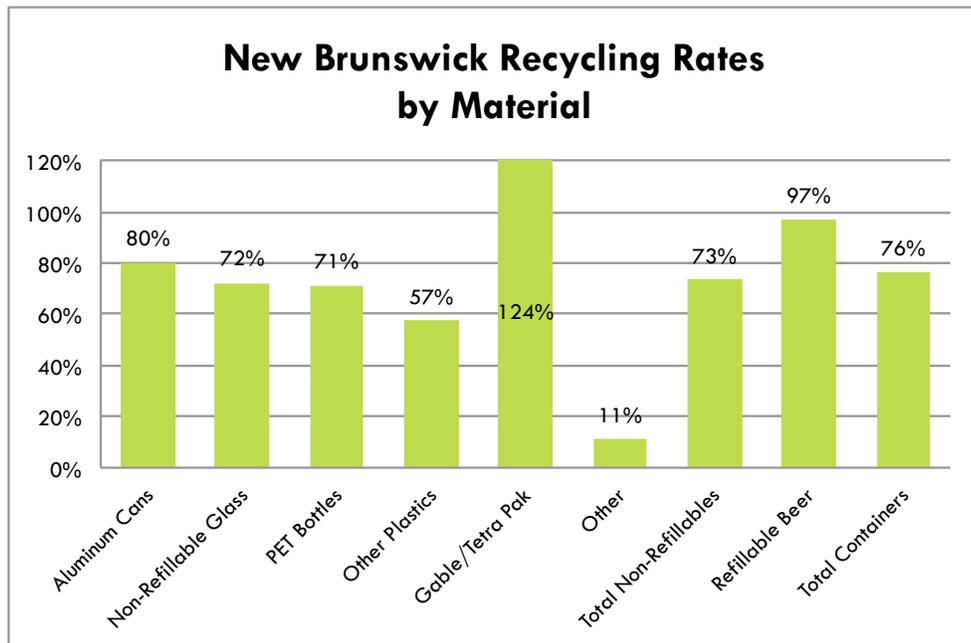
At the redemption center, containers are sorted by material type (and for certain plastic and glass containers, by colour also), placed into bulk bags, and then transported to one of two processing facilities: Neighborhood Recycling or Encorp Atlantic. The former processes all alcoholic beverage containers (on contract to the N.B. Liquor Corporation), while the latter processes all non-alcoholic containers. Refillable beer bottles are returned directly to the breweries where they are washed and refilled.

PROGRAM PERFORMANCE

In 2014, New Brunswick's recycling rate for non-refillable containers was 73%, an increase of three-percentage points over 2012. Since 2012, aluminum cans have seen their rate increase

from 71% to 80%, while non-refillable glass has seen its rate decrease from 83% to 72%. There has been little change in PET bottle recycling rates.

FIGURE 26 NEW BRUNSWICK RECYCLING RATES BY MATERIAL (2014)



In New Brunswick, some cartons sold are being categorized as ‘other’ sold by distributors, leading to a situation where the denominator for gable/Tetra Pak containers sold is lower than it should be, while the denominator for ‘other’ sold is higher. (This is possible because New Brunswick law does not require the distributor to provide a detailed breakdown of container types sold, and only the total number of containers sold). This helps to explain why the collection rate for gable/Tetra Pak cartons is so high while ‘other’ is so low.

WHAT'S NEW?

Encorp Atlantic Launches Series of Pilot Projects to Modernize Recycling System

As part of a series of pilot projects aimed at increasing recycling rates and implementing best practices and technology to make recycling more convenient, Encorp Atlantic launched **(re)** in April 2014, a new self-serve drop-off service offered exclusively in the Greater Moncton region. Similar to other drop-and-go programs, consumers register online and get a card linked to their account.⁷⁷ After signing up, consumers collect empty beverage containers, drop them off at one of two unmanned solar-powered/off-the-grid re-centres, and receive their deposit refund via an online payment system.⁷⁸ As of September 2015, 2058 households were enrolled in the pilot project.⁷⁹ After the 36-month trial run, Encorp will evaluate the success of the model to see how it can eventually be expanded to the rest of the province. Data for the 12-month

period ending September 2015 shows that most containers returned are PET clear bottles (25.6%) and aluminum non-alcohol containers (21.4%).⁸⁰

The new Express Service Bag concept is another pilot project launched by Encorp with the aim of modernizing beverage container recycling in New Brunswick. The two-year pilot project, which started in June 2015, is being implemented at four redemption centres in the Fredericton and Shediac regions.⁸¹ Customers who sign up for the free service collect their deposit-bearing containers in the specially designed Express Service Bags and are given first priority when dropping them off at the redemption centre, as the containers don't need to be counted or sorted in front of them. The initial express bag being tested is a medium size bag designed to hold 40 containers that will entitle the consumer to a \$2 cash refund. Later in the trial period, Encorp plans to test a larger bag with a capacity of 60 containers for a \$3 payout. Based on data and feedback received from participants (only 2500-3000 households will be accepted in this trial run), Encorp hopes to improve the service and eventually expand it to other redemption centres in the province. So far, results are positive: from June 1 to September 12, 2015, a total of 7521 express bags were processed (average of 100 bags daily).⁸²

New Trucks and Technology Increase System Efficiency

In Fall 2015, Encorp Atlantic and its new collection and transportation contractor unveiled a new fleet of trucks and compaction trailers, which have had a number of positive effects on the efficiency of the beverage container program. In addition to reduced greenhouse gas emissions, this new generation of trucks has enabled Encorp Atlantic to increase the number of beverage containers it can ship in each load (up to 650 bulk bags) and ship its plastics directly to market. The new technology has also allowed Encorp to reduce the number of sorts, from 13 to 8. This means faster service for customers at redemption centres as well as lower operating costs and increased fuel economy for the program.⁸³

Nova Scotia

Nova Scotia Deposit Refund Program

SUPPORTING REGULATORY FRAMEWORK

Launched on April 1, 1996, Nova Scotia's deposit-return program for beverage containers is regulated under the *Solid Waste-Resource Management Regulations* made under Section 102 of the *Environment Act* (1994-1995).

In addition to banning certain beverage containers from disposal in provincial landfills, these regulations require beverage distributors or retailers to charge consumers a deposit on all regulated beverage containers sold in Nova Scotia. The regulations apply to all ready-to-drink beverage containers, excluding milk, milk



POPULATION: 943,000
POPULATION DENSITY: 17.4 PERSONS/KM²

products, soya milk, and rice beverages. Other containers exempt from the DRS are certain meal replacements, formulated liquid diets, foods for very low energy diets, thickened juices, baby formulas, concentrates, and non-alcoholic beverages in containers of 5L or more.

The *Solid Waste-Resource Management Regulations* also established the Resource Recovery Fund Board Inc. (RRFB) as the independent agency responsible for managing the province's deposit-return program, including the operation of a collection network for the recycling of regulated containers.

The collection of milk containers is carried out under a voluntary agreement between Nova Scotia Environment, the Nova Scotia Solid Waste Management Regions (there are 7), and the Atlantic Dairy Council (ADC). Signed in February 2000, the *Nova Scotia Milk Packaging Stewardship Agreement* transfers the costs of recycling milk packaging from taxpayers to producers.

PERFORMANCE TARGETS

There are no specific targets relating to beverage container collection and recycling under either program. However, since 1996, the provincial government has been committed to achieving 50% overall waste diversion. Through an amendment to the *Environment Act* in 2006, the province also set a disposal target of no more than 300 kg of waste per person per year by 2015. No new targets have been set for 2016 onwards.

WHO IS RESPONSIBLE?

Since its inception, the organization responsible for managing the province's DRS has been Resource Recovery Fund Board (RRFB) (now Divert NS). Created by legislation in 1996, RRFB Nova Scotia is a not-for-profit organization, operating at "arms length" from government. In addition to the beverage container program, it is also responsible for administering the province's tire and paint recycling programs.

Under the *Solid Waste-Resource Management Regulations*, all distributors of designated beverage containers must register with RRFB in order to sell these products legally within the province. Other distributor obligations include reporting sales data and remitting applicable deposits directly to RRFB on a monthly basis. According to RRFB's 2015 Annual Report, there are currently 105 beverage distributors and 27 liquor distributors selling approximately 142,500 products in Nova Scotia.⁸⁴

The Regulations also impose requirements upon retailers. By law, retailers are required to charge a deposit on designated beverage containers and display the deposit amount on the sales receipt. Retailers are also required to display a notice stating that a deposit will be charged on beverage containers and to identify the location of the nearest depot where beverage containers can be returned for a refund.⁸⁵

Depot owners and operators are also subject to obligations under the Regulations. For example, in order to become a licensed Enviro-Depot™, operators must sign a standard form agreement with RRFB. If the depot fails to comply with the standards established by the Board, their license can be revoked.

Responsibility for the milk container recycling program is shared between the ADC, who provides the funding, and Nova Scotia's Solid Waste Management Regions, who operates residential curbside programs and municipal recycling facilities, in which milk packaging is collected. Municipalities are required to submit volumes of milk packaging collected, processed and recycled annually to Nova Scotia Environment.

PROGRAM FINANCING

The two programs in Nova Scotia receive their funding from different streams.

The DRS is based on a "halfback" model. Under this system, a deposit is paid on all non-refillable containers, but only half of that deposit (50%) is refunded to the consumer. The deposits are currently set at 10-cents for non-alcoholic containers less than 5L; 10-cents for alcoholic containers 500ml or less; and 20-cents for alcoholic containers 500ml or larger. The exception to Nova Scotia's halfback system is refillable domestic beer bottles. Unlike non-refillables, the deposits paid on these containers are 100% refundable (\$1.20/dozen). All deposits received by beverage distributors (105 in fiscal 2015) are remitted to RRFB Nova Scotia.

The non-refundable portion of the deposit (5-cents or 10-cents, depending on container type and size) is used as revenue by the RRFB. In fiscal 2015, revenue from deposits amounted to \$40 million. Revenues are also generated from the sale of recyclable materials. Combined, this revenue is used to help pay for program costs. These costs include, among other things, the handling fees to Enviro-Depots™ and municipal waste management facilities, transportation, processing, program awareness, compliance audits, and administration.⁸⁶ As of January 2014, the handling fee for empty beverage containers (except for empty refillable beer containers) was 4.03-cents per container. A portion of the unredeemed deposits is also distributed to municipalities to help offset the costs of their waste-diversion initiatives. In fiscal 2015, RRFB Nova Scotia provided \$7.4 million in funding to Nova Scotia's 54 municipalities.⁸⁷

Unlike the DRS, which is funded mostly by consumers, the voluntary collection and recycling of milk containers is financed entirely by industry. Through the *Nova Scotia Milk Packaging Stewardship Agreement*, the Atlantic Dairy Council (ADC) provides funding to Nova Scotia's Solid Waste Management Regions, based on the number of milk containers collected for recycling through municipal recycling programs. Municipalities receive compensation based on the average cost to recycle (including collection, processing, education, enforcement,

and administration costs) and quantities collected.⁸⁸ 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 2014 was not available.

COLLECTION SYSTEM

Nova Scotians can return empty beverage containers for a refund of the deposit to any one of the province's 78 privately owned and operated Enviro-Depot™ locations. Consumers also have the option of forgoing the refund and recycling used beverage containers through their municipal curbside "blue bag" programs. In these cases, non-public buy backs (waste management facilities operated either directly by municipalities or for municipalities via private contract) recover the containers from the blue bags and are compensated for them (As of November 2015, there were 10 of these facilities strategically located around the province⁸⁹).⁹⁰

At each Enviro-Depot™ and non-public buy back, empty beverage containers are stored in large bags (for all container types except glass), or large plastic tubs (for glass only).⁹¹ Containers are sorted so that each bag or tub contains only a specific material type, for example, aluminum, plastic, glass, etc. For certain product types, 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.⁹²

After sorting, RRFB Nova Scotia's contracted local carrier collects and transports the containers to the nearest of four processing facilities in the province. Three of these facilities handle all beverage container types, and each is designated as a Regional Processing Centre (RPC) (The other facility handles beverage container plastics only). At the RPCs, aluminum and plastic beverage containers are separated and then compressed in a baler. Once baled, the RRFB sells the material on the commodity market. (Compaction trailer aluminum and plastics is transported directly to market.). Glass is crushed at a facility that has an arrangement with RRFB Nova Scotia to directly pick up and process all beverage container glass received, and is temporarily stored at the RPCs.⁹³

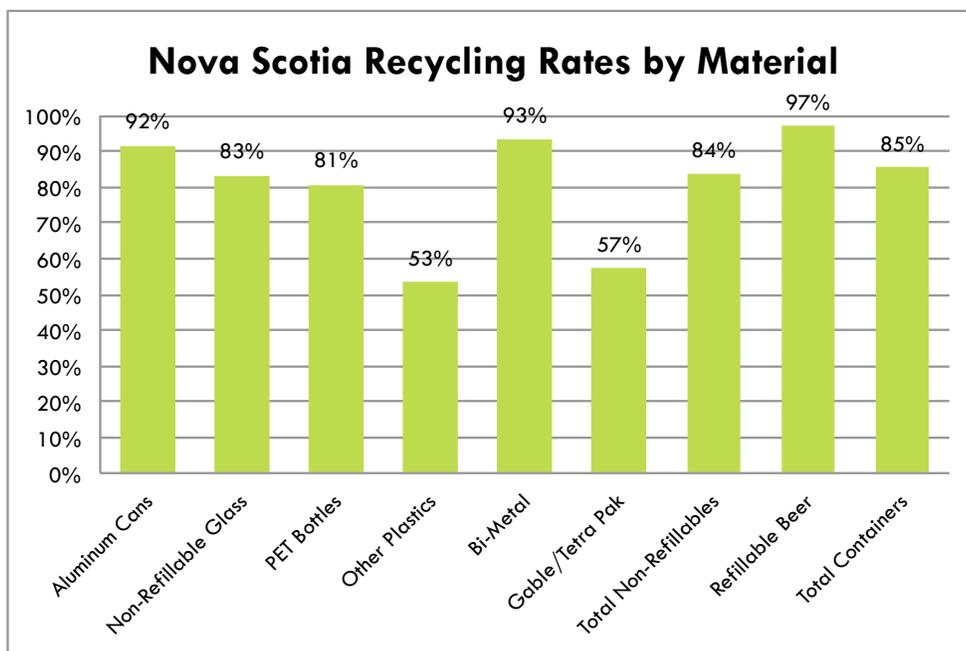
With regards to beer, containers are returned either to the liquor stores at which they were purchased, or to Enviro-Depots™. There are several bottle dealers who operate Enviro-Depots and pick up beer bottles from other depot operators. In fact, just over half of the Enviro-Depots are licensed Brewers' bottle dealers. These licensees are paid a handling fee for each container received, but are required to have a trailer load of empties before the Brewers will accept them for pick-up, where they will be washed and refilled. Beer cans are sent directly to Encorp.⁹⁴

Milk packaging is collected separately via municipal curbside recycling programs. According to the Nova Scotia government, milk packaging is approximately 3% of the current municipal recycling stream.⁹⁵

PROGRAM PERFORMANCE

In 2014, 334 million non-refillable beverage containers were returned to depots for recycling, for a recycling rate of 84%. Bi-metal and aluminum cans saw the highest rates, at 93% and 92%, respectively. With the exceptions of “other plastics” and gable/Tetra Paks, all other materials had rates over 80%.

FIGURE 27 NOVA SCOTIA RECYCLING RATES BY MATERIAL (2014)



In 2012, the milk container recycling program achieved a total collection rate of 70%. Updated figures are not available.

WHAT'S NEW?



Compaction Trailer Project Expanded

In July 2012, RRFB Nova Scotia introduced a new compaction trailer for beverage container collection and launched a pilot project at 18 high-volume Enviro-Depots in Halifax. The trailer, which combines a compaction auger on a 53-foot tractor-trailer, allows Depots to compact beverage containers and transport them directly to market; previously, these containers were transported to one of four processing centres before going to market.

With the capacity to hold up to 30,000 lbs of PET or aluminum,⁹⁶ and loading bags at a rate of approximately four bags per minute, the 53' trailer is able to transport more than 5x as many beverage containers in one load than was possible using the former, regular trailers (78 then vs. 500 today). During the 2-year pilot project alone, this translates into a 62% reduction in the number of kilometers driven, and 548 tonnes of GHG emissions avoided.⁹⁷

After the pilot ended on August 31, 2014—and after receiving positive feedback from participating depots and end market processors—RRFB Nova Scotia purchased three new compaction trailers, and in September 2014 began servicing the majority of Enviro-Depots along main highway routes throughout the province.⁹⁸

As of summer 2015, the compaction trailers have transported 191 loads of PET and 158 loads of aluminum direct to market, which would have been 1,019 loads and 465 loads, respectively, using the former system.⁹⁹ In addition to reducing GHG emissions by over 230 tonnes, the trailers are expected to reduce costs by \$500,000 to \$1 million annually.¹⁰⁰

Proposed Changes to Beverage Container Program

With the aim of providing a high level of environmental protection and ensuring that diversion programs are efficient and sustainable, Nova Scotia Environment (NSE) has been examining revisions to the solid waste regulations. As outlined in its discussion document, *“Revising Our Path Forward: A Public Discussion Paper About Solid Waste Regulation in Nova Scotia,”* the department is proposing amendments in seven key areas, one of which is the beverage container refund program.¹⁰¹

In order to allow more flexibility to respond to future changes (increases) in recycling costs, NSE is proposing to make changes to the regulations that would result in 1) a container recycling fee (CRF) of 5-cents, and 2) a separate deposit refund of 5-cents.¹⁰² It is important to note that this change will not impact consumers in the short-term, but rather is an internal administrative change to ensure that the program remains sustainable.

Under the existing regulations, consumers pay a 10-cent deposit when purchasing a beverage container; half of that, or 5-cents, is refunded to the consumer when the container is returned to an Enviro-Depot, while the other half is used to cover program costs (i.e. collection, transportation, processing, marketing, promotion and education, R&D, etc.). If this change is approved, residents of Nova Scotia would still pay a 10-cent deposit on each beverage container purchased and receive a 5-cent refund. The difference is that in this new system—which would not necessarily be a half-back system—the other 5-cents would be called a “container recycling fee” that is designated to pay for program costs. By making this change, the CRF could be increased/decreased in the future based on changing market conditions and could harmonize with other provinces.¹⁰³

Prince Edward Island

Beverage Container Management System

SUPPORTING REGULATORY FRAMEWORK

As part of its efforts to reduce litter, in 1973, the province passed regulations banning the sale of beer in non-refillable containers. This was followed, in 1984, by a ban on the sale of *all* non-refillable soft-drink containers. Both these bans were authorized under the *Environmental Protection Act*

(1988) and the *Litter Control Regulations* (1973), and effectively required that all carbonated beer and soft drinks were to be packaged in refillable containers.



POPULATION: 146,400
POPULATION DENSITY: 24.7 PERSONS/KM²

In late 2007, the government repealed the law prohibiting the sale of non-refillable soft drink containers, and in its place, launched a DRS on May 3, 2008. Regulated under the provisions of the *General Regulations* and the *Recyclable Beverage Container Deposit Regulations* made under the *Beverage Containers Act* (2008), this program covers all ready-to-drink beverage containers up to 5L, except those used for dairy products, milk substitutes, or nutritional supplements.

In addition to establishing minimum deposits and minimum refund levels for different sizes of containers and requiring retailers to take-back any product that they sell, PEI's regulations prohibit the sale of beverage containers that are connected by plastic rings, or any other connecting device that is not biodegradable or photodegradable.

PERFORMANCE TARGETS

The legislation does not include any official targets.

WHO IS RESPONSIBLE?

The deposit-return program is overseen and administered by the Department of Environment, Energy, and Forestry.

PROGRAM FINANCING

Similar to those in the other Atlantic Provinces, PEI's deposit-return program is based on a "half-back" model. Under this system, the consumer pays a deposit on all designated beverage containers (10-cents for non-alcoholic containers 5L or less; 10-cents for alcoholic containers 500ml or less; and 20-cents for alcoholic containers larger than 500ml), and receives a refund of that deposit when he/she returns the empty container to a depot. If the container being

returned is a refillable domestic beer bottle, the consumer will receive a full refund of their deposit (\$1.20 per dozen). In contrast, if the container being returned is non-refillable, the consumer will only receive a portion (50%) of the deposit back.

Fifty-percent of this "half-back" revenue—that is, the unrefunded portion of the deposit— plus revenue generated from unredeemed deposits, is used to fund environmental projects carried out by the provincial government, like watershed protection and pollution prevention. The other half is used to pay for system costs.

In 2014-2015, total costs for the program amounted to \$5.2 million.¹⁰⁴ In addition to things like system administration, these costs include the handling fee paid per container to depot operators as compensation for receiving, paying out refunds for, sorting, and storing returned beverage containers. As of January 2016, the handling fee for empty beverage containers (except for empty refillable beer containers) was \$0.04047 per unit.¹⁰⁵ In fiscal year 2014-2015, a total of \$1.76 million in handling fees was paid to depot operators (representing 33% of total program costs).¹⁰⁶

Any surplus arising from the deposit program supports solid waste management and/or environmental programs in PEI. The program's surplus was \$1.8 million in 2014-2015 (total revenues of \$7 million minus total expenses of \$5.2 million).¹⁰⁷

The recycling of milk containers, which is part of the Island's Waste Watch program, is financed by the provincial government.

COLLECTION SYSTEM

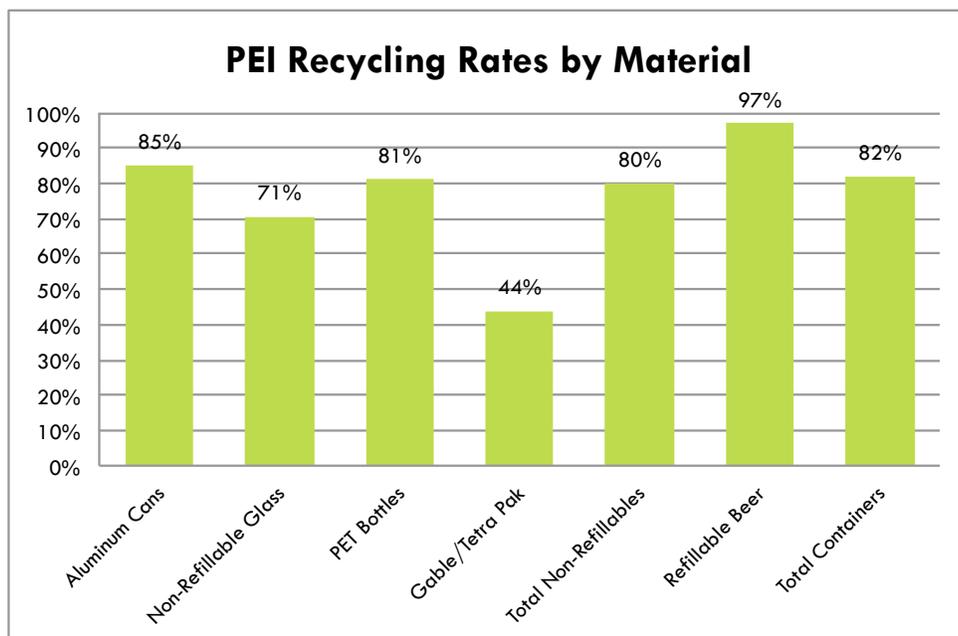
Residents of PEI can return designated empty beverage containers to 10 privately run depots throughout the province. The collection, sorting, transportation and processing of containers is contracted out to a local private supplier. A computerized inventory control system is used to track containers from the point of consumer refund, through processing, and material sales.

Milk packaging and other containers exempt from regulations made under the *Beverage Containers Act* (i.e. food containers) are collected separately through the Island Waste Management Corporations (IWMC)'s Waste Watch program, a mandatory curbside recycling program available to all Island residents. The Waste Watch program requires residents, visitors, and businesses to separate the waste they produce into 3 streams: recyclables, compost, and waste.

PROGRAM PERFORMANCE

In fiscal 2014-2015, PEI had a non-refillable container recycling rate of 80%¹⁰⁸ and a total container recycling rate of 82%. In the non-refillable categories, aluminum containers saw the highest rate at 85%, followed by plastic PET bottles at 81%.¹⁰⁹

FIGURE 28 PEI RECYCLING RATES BY MATERIAL (2014)



Newfoundland and Labrador

Used Beverage Container Recycling Program

SUPPORTING REGULATORY FRAMEWORK

Established in 1997, Newfoundland and Labrador's Used Beverage Container Recycling Program is administered as a deposit-refund system in accordance with specific provisions as prescribed in the province's *Waste Management Regulations (2003)*, made under the *Environmental Protection Act (2002)*. The regulations apply to all ready-to-drink beverage containers 5L or smaller, with the exception of milk¹¹⁰ and milk substitutes (soy milk, rice milk, and almond milk), infant formula, concentrated liquids (including syrup and frozen juice), and medicinal/nutritional supplements. Refillable bottles (including domestic beer bottles) are also exempt from the regulations.



POPULATION: 527,800
POPULATION DENSITY: 1.4 PERSONS/KM²

PERFORMANCE TARGETS

There are no official collection targets for beverage containers in the Act or regulations. However, the Provincial Solid Waste Management Strategy of 2002 and its associated implementation plan of 2007 includes a goal to reduce the amount of material going to provincial landfills by 50% by 2020.¹¹¹

WHO IS RESPONSIBLE?

The program is administered by the Multi-Materials Stewardship Board (MMSB), a Crown agency established in 1996 to develop, implement, and manage waste diversion and recycling programs across the province for waste streams designated by the government. MMSB operates at arms-length from government and is governed by an independent Board of Directors appointed by the Minister of Environment and Conservation. The delivery of its mandate, which is derived from the *Environmental Protection Act* and pursuant *Waste Management Regulations*, is achieved in partnership with stakeholders such as regional waste management authorities, municipalities, and third-party contracted service providers such as Green Depot operators.

By law, beverage distributors and retailers are obligated to register with and remit deposits charged on the sale of all beverage containers to MMSB. Green Depots must also register with MMSB.

PROGRAM FINANCING

Newfoundland's beverage container program is a derivative of the "half-back" model common to Atlantic Provinces. On the purchase of a non-alcoholic beverage, consumers pay an 8-cent deposit and receive a 5-cent refund when they return the container to a Green Depot. 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.

Part of the revenue generated from the non-refunded portion of the deposit (3-cents for non-alcoholic containers and 10-cents for alcoholic containers) is used to pay for the cost of the recycling program, including administration, handling, transportation, and processing costs. Unredeemed beverage container deposits, as well as revenue generated from the sale of material, are used to supplement the cost of running the program. After all expenses are paid, any excess revenue is placed in the province's Waste Management Trust Fund to support the implementation of the Provincial Solid Waste Management Strategy. The MMSB does not receive any direct funding from the provincial government.

COLLECTION SYSTEM

Beverage containers that are part of the DRS are collected through a network of privately owned and operated Green Depots. As of February 2016, there are 40 main depots, 16 sub depots, and 20 mobile collection services located throughout the province.¹¹²

Green Depots, which are licensed by the MMSB to help carry out the program, receive a per-unit handling fee of 4.25-cents¹¹³ from MMSB as compensation for receiving, sorting, and paying out refunds for empty beverage containers that are returned. (In 2013-2014, a total of

\$6.75 million in handling fees were paid to redemption centers)¹¹⁴. After the containers are sorted, they are transported to a processing centre on the east coast where they are prepared for shipment to markets in Canada and the US.

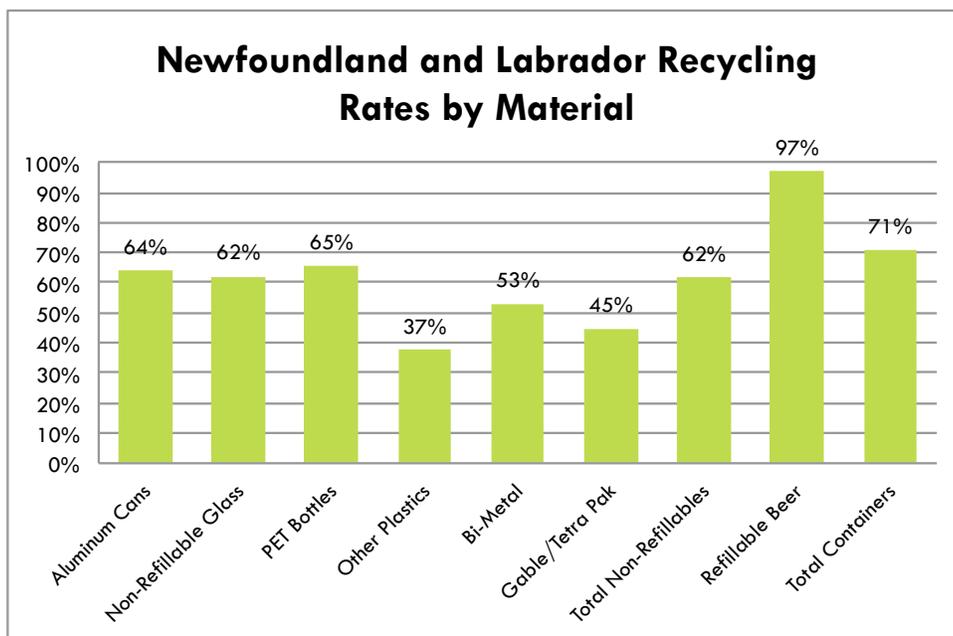
Because local brewers operate their own DRS, domestic beer bottles (such as Labatt, Molson and Quidi Vidi) must be returned to a beer retailer or to a Brewers Bottle Depot to receive a refund (Note: Containers are fully refunded at these locations). Even though they are not part of MMSB's beverage container recycling program, some Green Depots – as an added service to their customers – will also accept domestic beer bottles for recycling (possibly at a reduced refund to cover their cost of handling the material).

In 2014, refillable beer bottles are sold through corner stores and two Brewers Retail Inc. (BRI) stores in St. Johns. Beer is sent to 27 wholesalers who then deliver to the corner stores and the BRI outlets. The wholesalers are paid a handling fee for the empties, which are picked up at the retailer.

PROGRAM PERFORMANCE

In 2014-2015, more than 165 million used non-refillable beverage containers were collected and recycled through Newfoundland's network of collection depots, for a recycling rate of 62%. Aluminum, non-refillable glass, and PET bottles each had rates over 60%.

FIGURE 29 NEWFOUNDLAND AND LABRADOR RECYCLING RATES BY MATERIAL (2014)



Northwest Territories

Beverage Container Program

SUPPORTING REGULATORY FRAMEWORK

Launched on November 1, 2005 to help reduce the number of beverage containers being littered or ending up in provincial landfills, NT's beverage container program is regulated under the *Beverage Container Regulations of the Waste Reduction and Recovery Act (2003)*. These regulations cover all ready-to-serve beverage containers made of glass, plastics, aluminum, bi-metal, and mixed materials, including juice, milk and liquid milk products (added February 2010), pop, water, beer, wine, liquor and other alcoholic beverages. Excluded from the deposit-return program are containers for infant formula; containers for milk and liquid milk products smaller than 30 ml; and powder milk.



POPULATION: 44,100
POPULATION DENSITY: 0.0 PERSONS/KM²

On February 1, 2016, the *Beverage Container Regulations* were amended and include changes to CHFs, as well as additional tools to enforce compliance. Additionally, to create a simpler system, the new Regulations include only two categories of beverage containers: containers 1L or less, and container more than 1L in size.

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.¹¹⁵ The ENR also has the authority to create an advisory committee to provide advice and assistance relating to recycling programs established under the Act.¹¹⁶ This Committee was established in 2004 and currently consists of beverage distributors, retailers, municipalities, recyclers, environmental organizations, transportation industry, and the general public.

The *Beverage Container Regulations* also impose requirements on beverage distributors and retailers. Under the program, companies importing and distributing beverage containers in the territory are obligated to register with ENR and submit regular reports and payments. As of March 31, 2014, there were 38 beverage container distributors registered in the program.¹¹⁷

Depots must obtain a license to operate from ENR. These licenses contain several terms and conditions that depot operators must follow, such as: the manner in which containers must be received, collected, stored, and disposed; and how to keep records and books.

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 Northwest Territories. Effective February 1, 2016, the total surcharge per container ranges from 15-cents to 38-cents, depending on container size and material type.¹¹⁸ The surcharge consists of both a refundable deposit and a non-refundable handling fee.

More often than not, the surcharge is passed from beverage distributors down to the retailer, who then passes it on to consumers. Retailers are encouraged to display the surcharge on the consumers' receipt, but it is not mandatory.

Whereas the refundable deposit is returned to the consumer when they return the beverage container to a depot (\$2.9 million in 2014¹¹⁹), the non-refundable handling fees, which makes up approximately 43% of the total surcharge, are put into the Environment Fund and are used to help cover program costs.¹²⁰ This includes paying depots and processing centres, paying for the transportation of containers from depots to processing centres (or to breweries for refillable glass), storage, advertising, general program operations and maintenance, and program improvements.¹²¹ The ENR provides an approximate breakdown of the non-refundable handling 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)

All unredeemed deposits also go into the Environment Fund. Combined, unredeemed deposits and container handling fees generated a total of \$5 million in program revenue in 2014.¹²²

The Environment Fund is a special fund set up under the *Waste Reduction and Recovery Act* and, as such, is separate from the general government account. All revenue received and all

expenses incurred for the beverage container program are paid out of this fund. Any surplus is used by the government to implement new waste reduction and recovery initiatives.

COLLECTION SYSTEM

As of March 2014, there were 23 locally operated beverage container depots and 6 temporary satellite depots at which residents could return their empty beverage containers for a refund of the deposit. Depot operators could be individuals, local businesses, schools, non-profit organizations, and municipal governments/local bands.

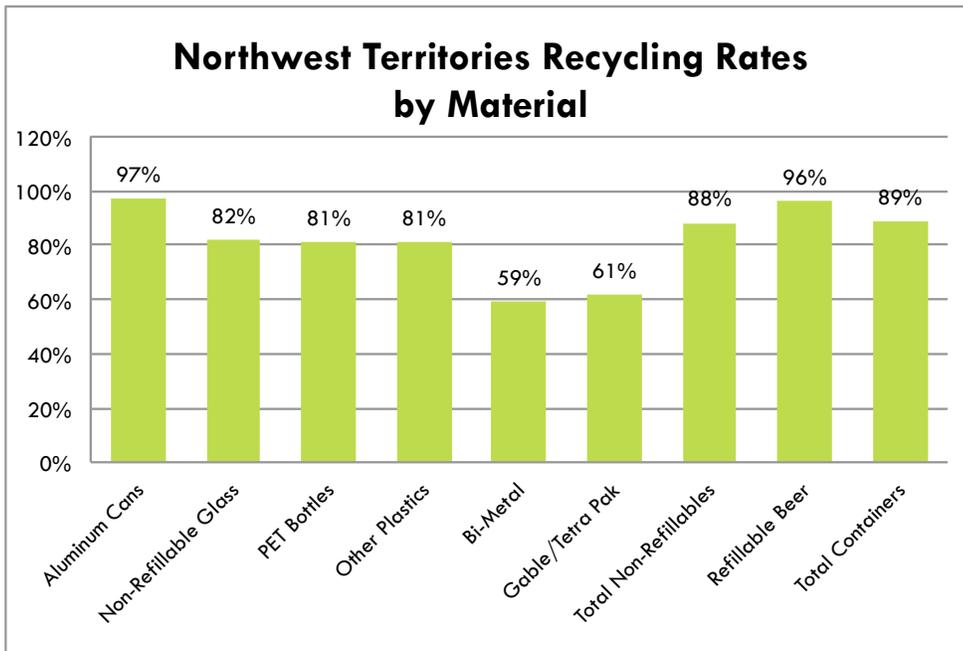
Local depots collect, sort, and bag or box the redeemed containers, then ship them to one of three regional processing centres in Inuvik, Yellowknife, and Hay River. From there, aluminum and plastic containers are compacted and sent to recycling markets in Alberta and the US. Multi-material containers, such as gable tops, are baled and shipped to southern markets, then onto the US along with multi-material containers collected in Alberta's program. Non-refillable glass is converted to cullet, some of which is used as construction aggregate, with the remainder going to Alberta where it is processed into fibreglass.

The collection of domestic refillable beer and cooler glass bottles is carried out under an agreement with Brewers Distributor Ltd. in Edmonton. Under this agreement, refillable glass bottles are returned to breweries, where they are cleaned and refilled an average of 15 times.¹²³

PROGRAM PERFORMANCE

In fiscal 2014, approximately 26 million beverage containers were returned for reuse or recycling, translating into an overall recycling rate of 89%. When broken down by material type, aluminum containers (alcohol and non-alcohol) showed the highest rates at 97%, followed by non-refillable glass (82%) and plastic containers (81%). Refillable glass also showed a very high rate of 96%.

FIGURE 30 NORTHWEST TERRITORIES RECYCLING RATES BY MATERIAL (2014)



WHAT'S NEW?

Drop N Go Collection Service

Following the trend of some other provinces, the NT government launched a Drop and Go service in August 2015 to reduce customer wait times and increase efficiencies. The service is currently offered at the Yellowknife and Hay River depots. Customers simply create 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.¹²⁴

Amendments to the Beverage Container Regulations

On February 1, 2016, the Government of the Northwest Territories amended the *Beverage Container Regulations* in an effort to make the program simpler and more effective. One of the key changes to the program that will affect consumers 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, container categories were based not only on the type of material and size of container, but also on the contents of the container, with alcohol containers being a different category. The new *Regulations* make it easier for the public, depot staff, and distributors to sort containers by including only two categories: containers up to 1L and containers greater than 1L in size.¹²⁵

Yukon

Beverage Container Recycling Program

SUPPORTING REGULATORY FRAMEWORK

Yukon's deposit-return program for beverage containers was introduced in 1992 and is regulated under the *Environment Act* and the pursuant *Beverage Container Regulation (1992)* and *Recycling Fund Regulation (1992)*. Originally, the regulations covered only aluminum cans and refillable beer bottles, but have since been amended (in 1996 and 1998) to cover all ready-to-drink beverage containers (glass, plastic, steel, aluminum, and Tetra Pak), excluding those containing milk and milk substitutes (e.g. soy and rice milk).



POPULATION: 37,400
POPULATION DENSITY: 0.1 PERSONS/KM²

In May 2016, the Yukon government announced changes to the *Beverage Container Regulation*. These changes, which are expected to be implemented next year (August 1, 2017), will affect the surcharges and refunds applicable to beverage containers including milk and milk substitutes, and will simplify the regulation. Once the territory's new regulations kick in, all beverage containers will fall into two categories: (1) 750ml and less, including all milk & milk substitutes (surcharge 10-cents, refund 5-cents), and (2) 750ml and more (surcharge 35-cents, refund 25-cents).¹²⁶

PERFORMANCE TARGETS

There are no official 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.

PROGRAM FINANCING

Consumers pay a surcharge on the purchase of certain beverage containers, which includes a refundable deposit and a non-refundable recycling fund fee (RFF). Currently, the surcharge on designated beverage containers sold in Yukon ranges from 10-cents to 35-cents, depending on the size and material of the container.

Upon return of the empty container to a depot or processor, a portion of the surcharge (the refundable deposit) is refunded to the consumer. The remainder of the surcharge – the non-

refundable RFF – is collected by the retailer and remitted to the territorial Recycling Fund on a monthly basis. Unredeemed deposits also go into this fund.

The Recycling Fund is a revolving fund that is administered by the government but is kept separate from general government revenue. It is used entirely to support recycling activities, such as collection, processing, and shipping costs. Recycling depots receive handling fees per container and also receive a monthly operating allowance. Processing fees and handling fees are also paid to registered processors for each container received. The fund is also used to promote container returns (e.g. the Yukon Recycling Club, a program aimed at encouraging recycling habits in youth aged 4-16), improve recycling facilities and community depots, and pay part-time wages for depot staff.

COLLECTION SYSTEM

Consumers return empty beverage containers to one of 22¹²⁷ community recycling depots to receive a partial refund of their deposit. Depots are run 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 dealers and markets for recycling.

PROGRAM PERFORMANCE

In 2014, Yukon had a non-refillable recycling rate of 82%. No breakdown of recycling rates by material is available due to lack of data.

WHAT'S NEW?

Proposed Amendments to the Beverage Container Regulation

As part of its plan to fall in line with other jurisdictions across Canada, the Yukon government has recently announced changes to the territory's *Beverage Container Regulation*. In addition to expanding the list of materials subject to the recycling surcharge to dairy products and dairy substitutes, the government has proposed to simplify the regulation by having beverage containers fall into two categories: (1) containers 750ml and less (including dairy and dairy substitutes regardless of size), and (2) containers 750ml and more.¹²⁸ These changes were supposed to take effect in August 2016; however, the government is postponing implementation of the amended recycling regulations until August 1, 2017, in order to allow additional consultation with stakeholders.¹²⁹

Nunavut

In 2007, Nunavut's Department of Environment established three Pilot Recycling Projects in the communities of Iqaluit, Kugluktuk, and Rankin Inlet.¹³⁰ The purpose of these projects was to examine the feasibility of implementing a beverage container recycling program across the territory.

During the pilot program, residents in these communities could drop off their beverage containers at depots that would sort and prepare the recyclables for shipment to processing facilities in southern Canada. The three-year pilot ended in December 2010 after an independent evaluation found that the costs of operating the programs were very high, while the amount of waste they diverted was minimal (2-3%).¹³¹



POPULATION: 36,900
POPULATION DENSITY: 0.0
 PERSONS/KM²

The major challenges in Nunavut include infrastructure, transportation, depot management and operations, and the development of recycling legislation. While there is no formal territory-wide recycling program, the Department of Environment and the Department of Community and Government Services are working together to evaluate the territory's solid waste management practices as a whole. The Department of Community and Government Services is also working on establishing a Nunavut-wide solid waste management strategy.