

**Who Pays What -  
An Analysis of Beverage Container Recovery and Costs in Canada  
2001-2002**



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Submitted by:  
CM Consulting



## A Primer

Across Canada, beverage container recovery continues to emerge as a challenging and highly political issue for industry and governments. As the recycling sector has evolved, so too has a range of recovery initiatives, each emphasizing their own strategic value. In assessing these initiatives it's remarkable how varied the data is despite the common aspects of these programs – factors such as recycling performance, net costs, collection infrastructure, operating agencies, and the breakdown of who ultimately bears the costs of recovery.

*Who Pays What - An Analysis of Beverage Container Recovery and Costs in Canada* aims to report, clarify and offer some essential insight into the field of beverage container recovery programs. By offering current data, discerning analysis and identifying a number of trends in beverage container recovery, the report provides a comprehensive examination of container reuse and recycling programs in Canada today.

Developed by CM Consulting, *Who Pays What* features the most recent recovery and cost data concerning beverage container recovery programs - information that is thoroughly researched and clearly organized. Already, this report is embraced as an essential resource for professionals in the beverage industry and recycling field. It is a valuable tool and dependable reference guide that can ease the decision-making process. Judging from the welcome demand for this sort of detailed information, this edition of *Who Pays What* represents the second of what should now be considered an annual publication.

Principal of CM Consulting, Clarissa Morawski, is a waste minimization policy professional dedicated to the varied issues that comprise beverage container recovery. Morawski's expert understanding of the industry is further evidenced by the seventeen articles she has contributed to a variety of trade publications. She is also a noted speaker at environmental and recycling conferences throughout North America.

CM Consulting would like to thank the following sponsors of this report:

**Alcan Aluminum**  
**Brewers Association of Canada**  
**Beverage Container Management Board (Alberta)**  
**Refreshments Canada**  
**Recyc-Quebec**  
**Spirits Canada**  
**Tomra North America**

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## Abbreviations

AB	Alberta
BC	British Columbia
CRF	Container Recycling Fee
EHC	Environmental Handling Charge
HDPE	High-Density Polyethylene
ICI	Industrial Commercial and Institutional
MB	Manitoba
NB	New Brunswick
NF	Newfoundland and Labrador
NS	Nova Scotia
ON	Ontario
PEI	Prince Edward Island
PET	Polyethylene Terephthalate
PQ	Quebec
PS	Polystyrene
PVC	Polyvinyl Chloride
SK	Saskatchewan

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## Introduction

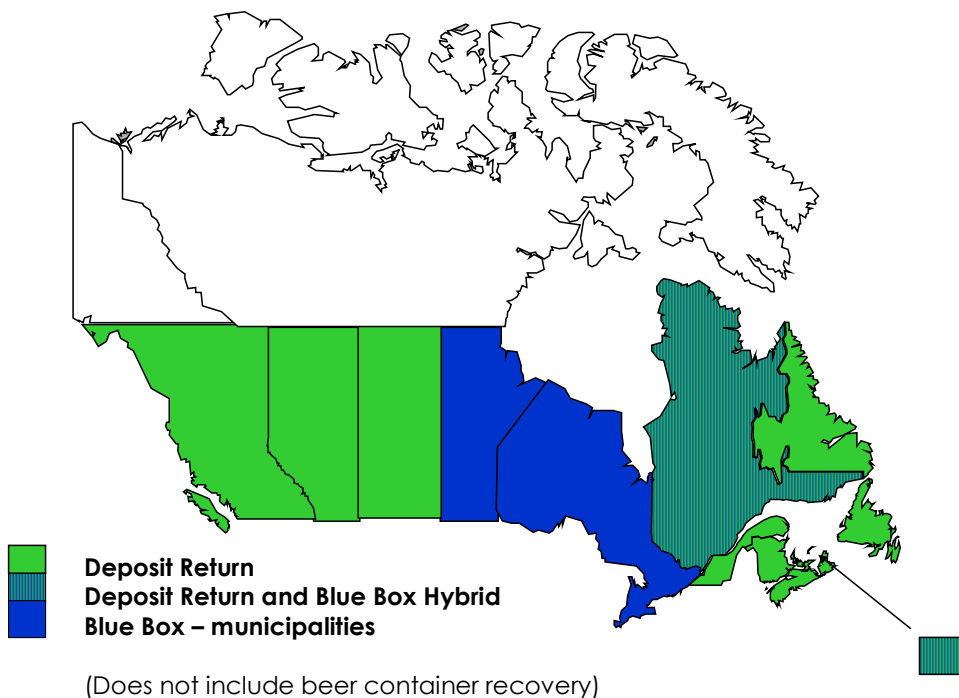
Throughout the world, responsibility for overseeing, management and/or financing of packaging recovery and recycling is shifting from local governments to producers and/or their consumers. This policy shift is referred to as producer responsibility. In most cases, this policy manifests itself through a regulatory framework usually at a state/provincial level.

With these new responsibilities in mind, beverage container recycling program components, such as performance, costs, markets and logistics are necessary pieces of information for beverage producing companies.

The following report is intended to provide information pertaining to recovery programs that currently exist in Canadian provinces.

In Canada empty beverage containers are recovered through provincially mandated systems. Of ten provinces, six maintain deposit return systems for all beverage containers (except milk), two maintain municipally operated curbside collection and two provinces maintain a hybrid system with a deposit return program on soft-drink beverages and curbside collection for wine, spirits, juice, water, and new age beverages. Beer containers are collected through a deposit return program in every Canadian province.

### Beverage Container Recovery Systems



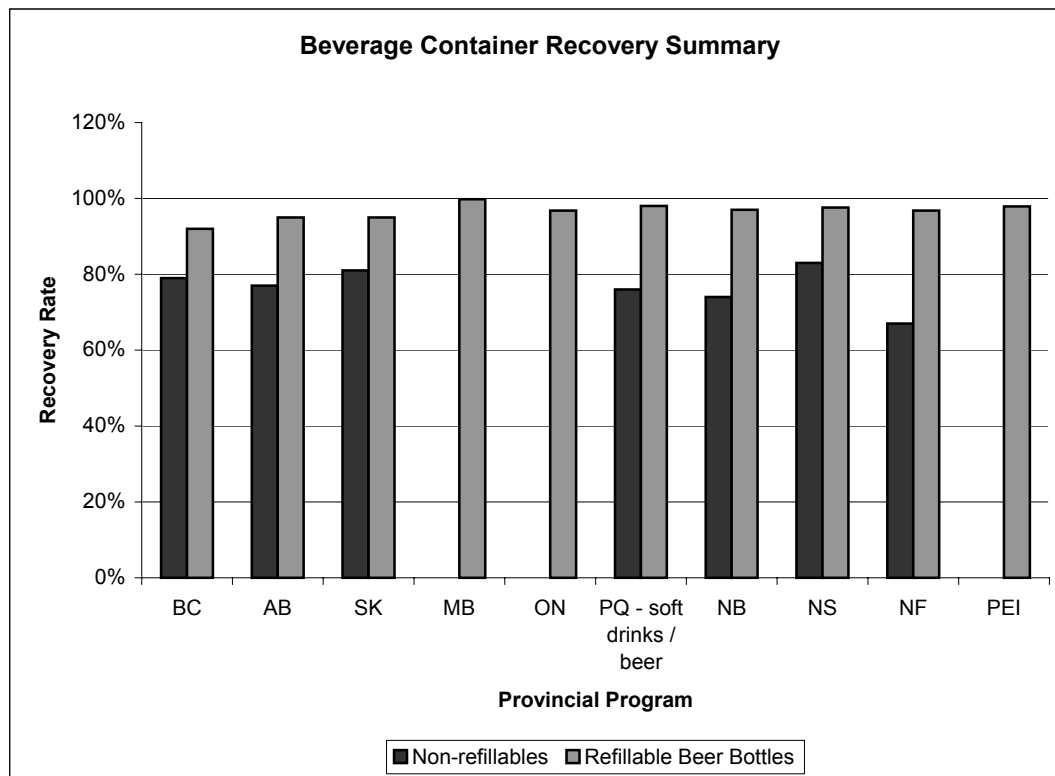
## Cross-Canada Recovery Rates for Beverage Containers

Monitoring the recovery or recycling rate for beverage containers in Canada is done on a province-by-province basis annually. In all deposit return jurisdictions, recovery rates are based on units returned divided by the units sold in that year.

The table below summarizes the recovery rates for the various categories of containers collected through the provincial systems. In provinces where liquor containers are managed by the same agency as non-alcohol containers (AB, SK, NS, and NF) the recovery rates shown include alcohol containers. The data presented is for operating the year 2001-2002 (Note: Operating years vary from January 1 – December 31; March 31 – April 1; April 30 – May 1.)

Provinces	BC	AB	SK	MB	ON	PQ - soft drinks / beer	NB	NS	NF	PEI
<b>Non-Refillables</b>	<b>79%</b>	<b>77%</b>	<b>81%</b>	<b>n/a</b>	<b>n/a</b>	<b>76%</b>	<b>74%</b>	<b>83%</b>	<b>67%</b>	<b>n/a</b>
<b>Refillable Beer Bottles</b>	<b>92%</b>	<b>95%</b>	<b>95%</b>	<b>100%</b>	<b>97%</b>	<b>98%</b>	<b>97%</b>	<b>98%</b>	<b>97%</b>	<b>98%</b>

In Quebec, only soft drinks are collected through the deposit return system. Non-alcohol. Non-soft-drink beverages are collected through the municipal Blue Box program. Recovery rates for the Blue Box program are not available for Quebec.

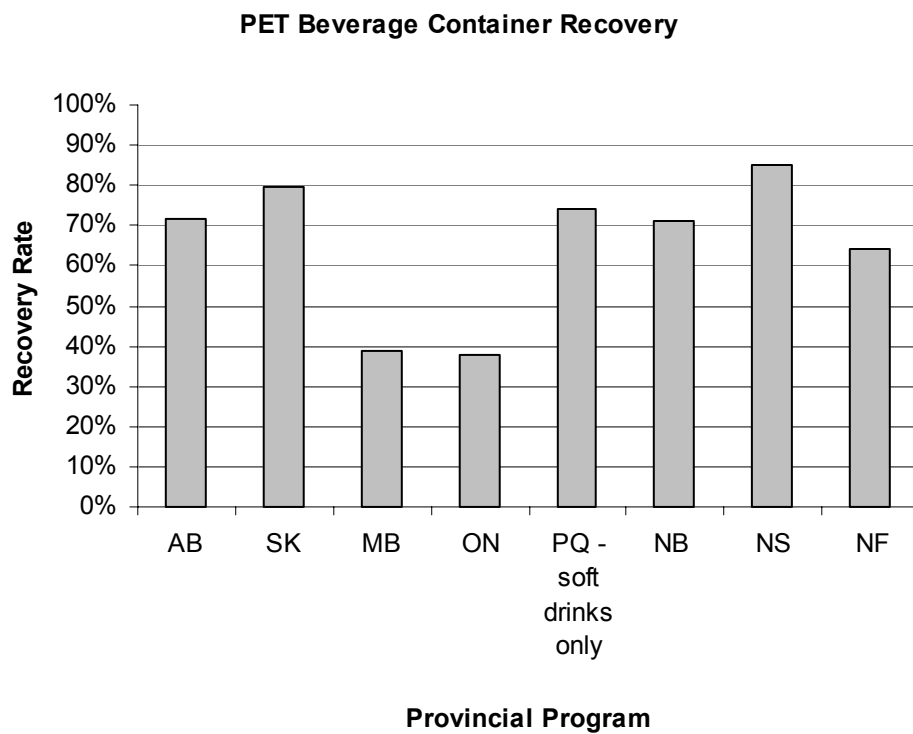
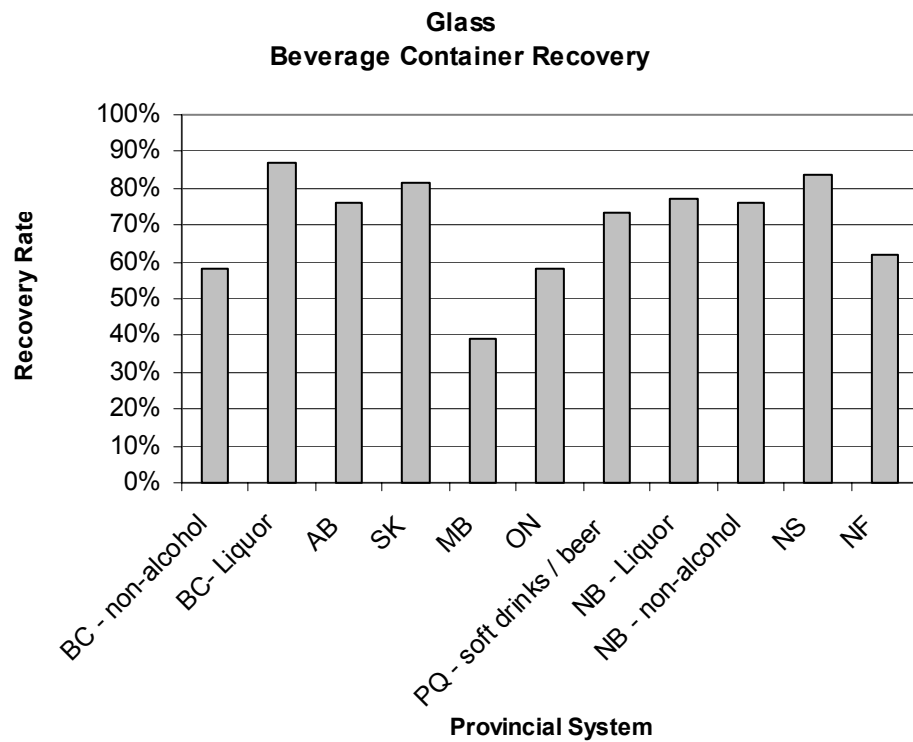


### Beverage Container Recovery by Material Type

Provinces	BC - non-alcohol	BC- Liquor	BC - Beer	AB	SK	MB	ON	PQ - soft drinks / beer	NB - Liquor	NB - non-alcohol	NS	NF	PEI
Glass	58%	87%	-	76%	82%	39%	58%	73%	77%	76%	84%	62%	n/a
PET	-	-	-	71%	80%	39%	38%	74%	-	71%	85%	64%	n/a
Bi-Metal	44%	-	-	53%	91%	27%	48%	n/a	-	-	n/a	-	n/a
Aluminum	83%	-	94%	84%	91%	33%	40%	76%	-	78%	79%	66%	n/a
Pure/Tetra Pak/Polycoat	47%	-	-	51%	46%	18%	5%	n/a	-	-	n/a	-	n/a
Plastics / Other	72%	76%	-	57%	80%	n/a	n/a	n/a	-	64%	73%	83%	n/a
Bag-in-the-Box	55%	41%	-	41%	-	18%	5%	n/a	-	-	n/a	-	n/a
Refillable Beer Bottles	-	-	92%	95%	95%	100%	97%	98%	-	97%	98%	97%	98%

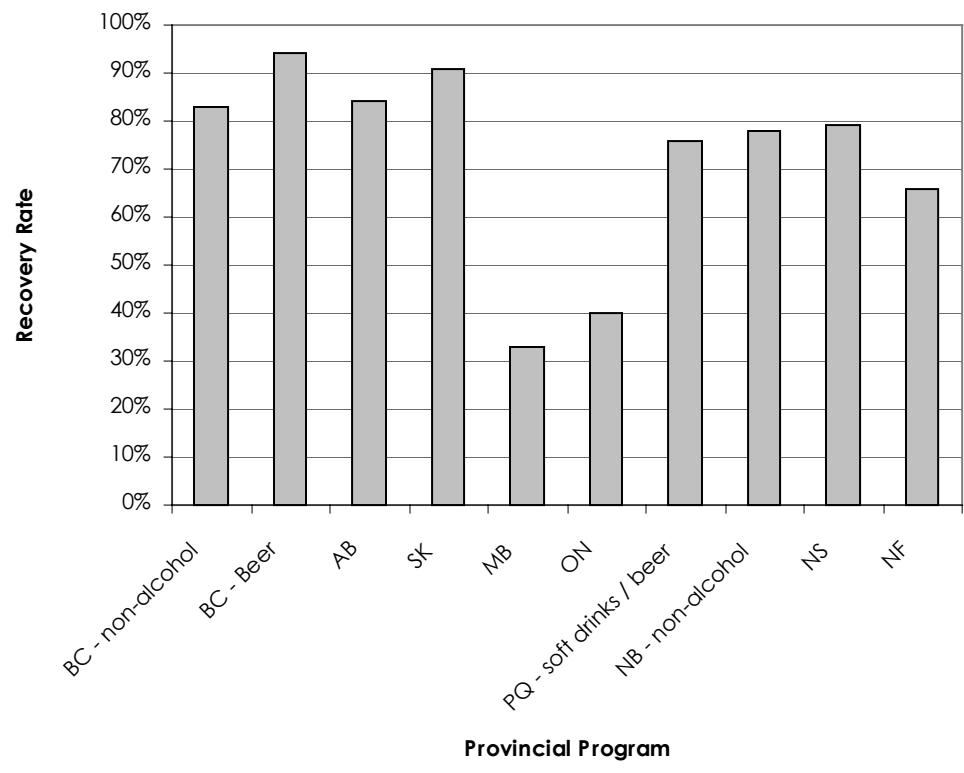
Notes on chart and graphs.

- 1) In BC PET is included in "Plastics/Other" category.
- 2) In NF and NB bi-metal, pure pak /gable top / polycoat / TetraPak and Bag-in-the-Box are included in the "Plastics and Other" category.
- 3) In Ontario and Manitoba, where municipalities manage the Blue Box recycling program, material recovery rates include non-beverage packaging as well. In addition, the rates presented are from single family and multi-family dwellings only. Recovery of beverage packaging consumed away from home is not currently being monitored in Manitoba or Ontario.
- 4) In Quebec, bi-metal, pure pak /gable top / polycoat / TetraPak, and other plastic bottles are collected through the municipal curbside system. To date, there are no generation or recovery data available for these materials. Recovery rates presented are for soft-drink and beer containers only.

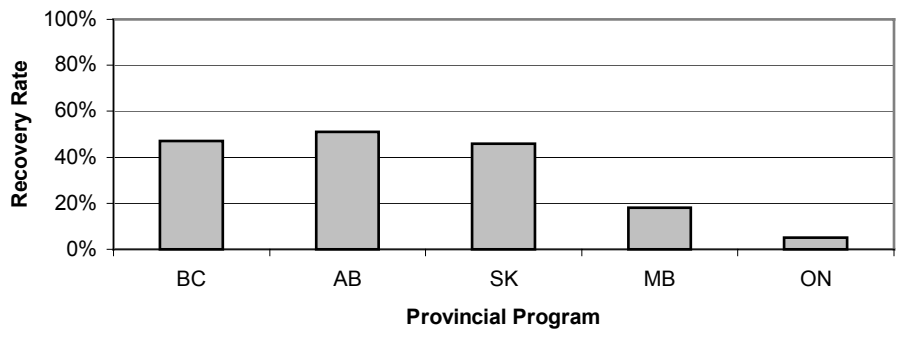




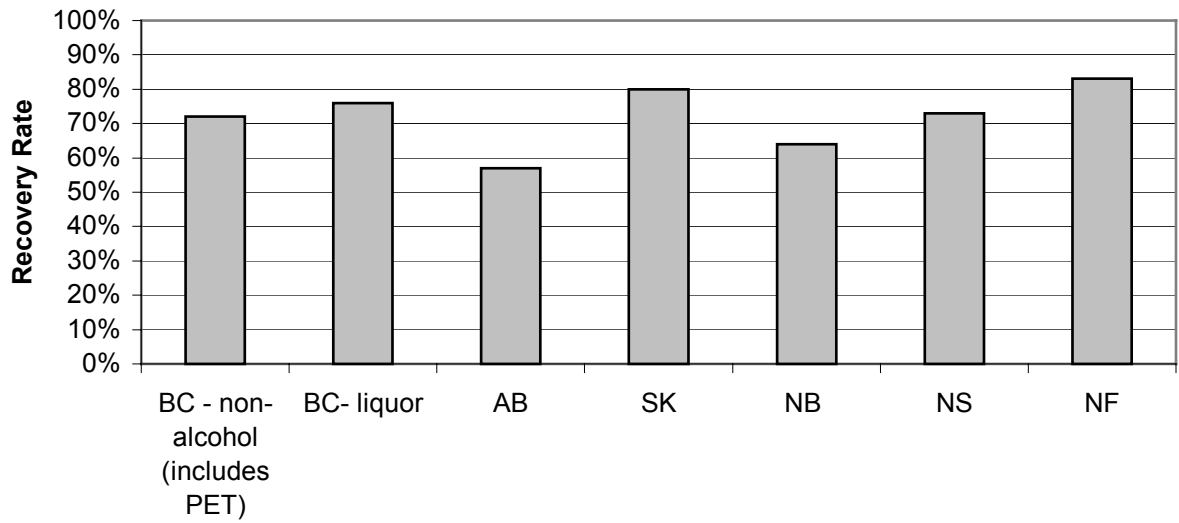
### Aluminum Beverage Can Recovery



### Polycoat / TetraPak / Pure Pak Beverage Container Recovery

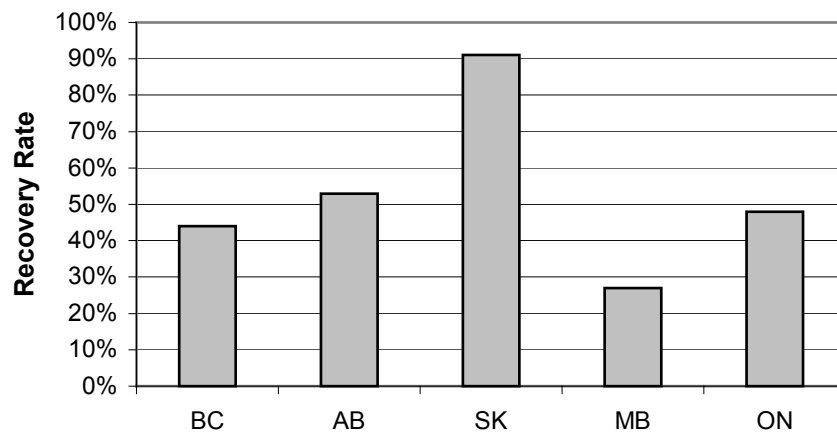


**Plastics / Other Beverage Container Recovery**

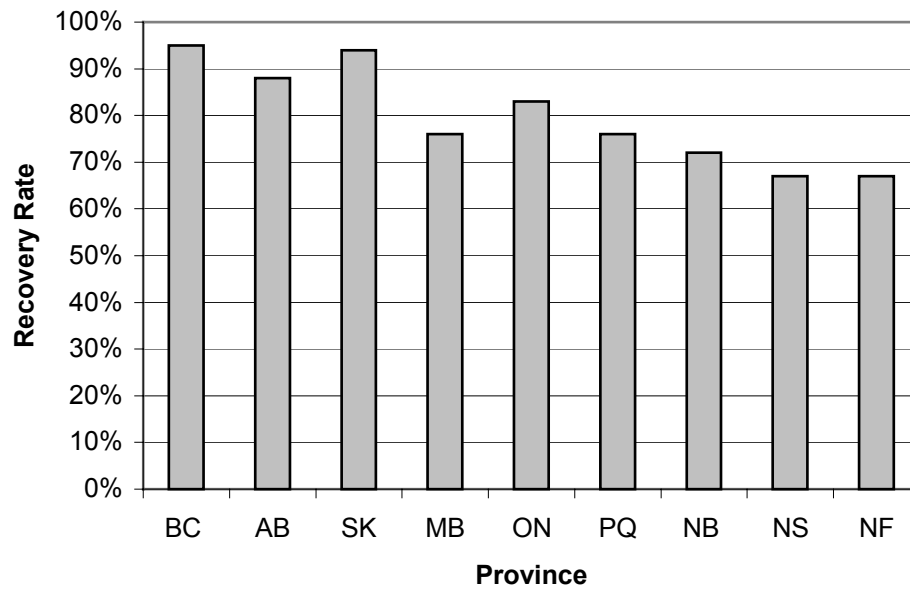
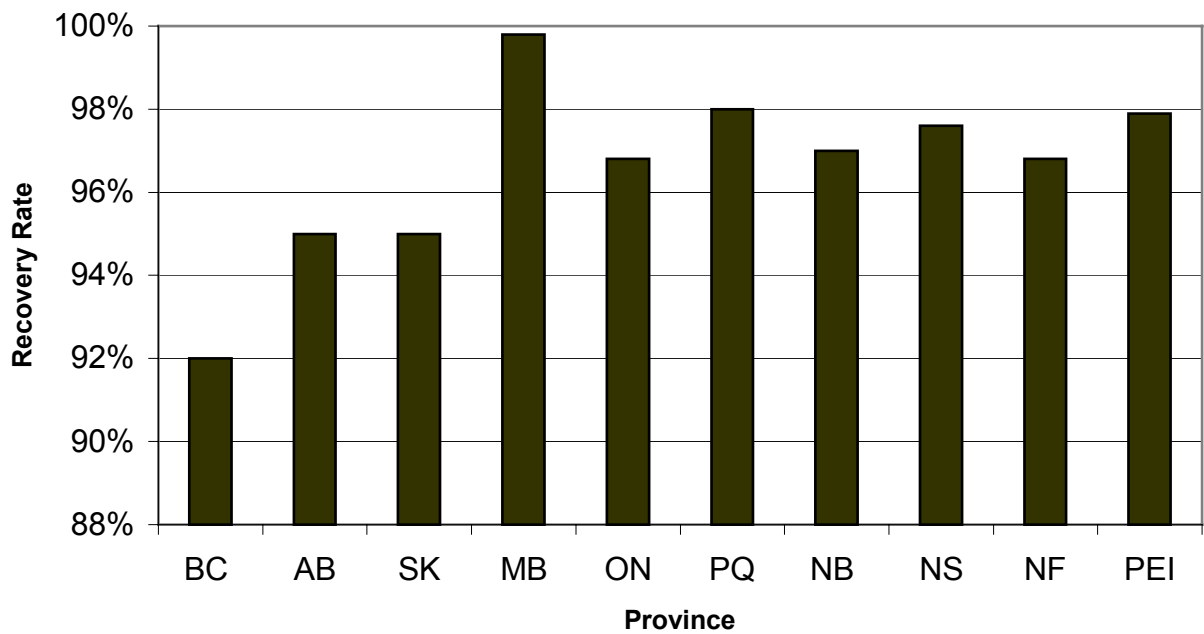


**Provincial Program**

**Bi-Metal Beverage Container Recovery**



**Provincial Program**

**Beer Can Recovery****Refillable Beer Bottle Recovery**

## **Cross-Canada Beverage Container Recovery Agents**

In Canada, while each provincial program is unique, generally there is an agent responsible for the program. These agents facilitate operations, reporting, and financing of the collection service. They are an industry group representing beverage brand owners, a Provincial crown agency, the Provincial government directly, a contracted organization, or municipalities.

For the most part, the Canadian beer industry collectively manages the recovery of all their containers, including refillables bottles and non-refillable cans and glass bottles.

In British Columbia, New Brunswick, and Prince Edward Island, provincially owned and operated liquor commission/boards are responsible for administering the program for wine, spirit and imported beer containers.

In British Columbia, Alberta, and New Brunswick, private organizations were set-up to act on behalf of brand owners to collectively administer the program for non-alcohol containers.

In Saskatchewan, SARCAN (a not-for-profit organization) is contracted by the provincial government to undertake the responsibility of fulfilling the collection requirements under the program for all containers, except refillable beer.

In Manitoba, a not-for-profit organization was established with industry representation to ensure that municipal authorities receive 80% funding of their curbside-recycling program for "designated materials", which include all beverage containers, except beer.

Currently in Ontario, municipalities operate the Blue Box program as a requirement of provincial regulation. The Provincial government is considering an industry Blue Box program plan, which will result in funds being raised from brand owners on all packaging and printed materials sold into the Ontario marketplace.

In Quebec and Prince Edward Island, the soft drink and beer industries operate their program for carbonated and beer products. Wine, spirits, water, juice and new age containers are collected through a municipally operated curbside recycling system. In Quebec, curbside recycling will also be subsidized up to 50% of the net costs by brand owners of packaging materials, (similar to the Ontario Blue Box program) scheduled for early 2004.

In Nova Scotia and Newfoundland, provincial crown agents manage the program for all non-refillable containers.

### Beverage Container Recovery in Canada Who is Responsible for Operations

PROVINCE	British Columbia			Alberta		Saskatchewan		Manitoba		Ontario	
Collection system	DEPOT & RETAIL	DEPOT & RETAIL	DEPOT & RETAIL	DEPOT	DEPOT	DEPOT & RETAIL	DEPOT	RETAIL & Designated Licencees	CURBSIDE	RETAIL	CURBSIDE
Beverage Container Type	Domestic Beer	Wine & Spirits	Non-Alcohol	Domestic Beer	Non-Alcohol & Wine & Spirits	Domestic Beer	Non-Alcohol & Wine & Spirits	Beer	Non-Alcohol & Wine & Spirits	Beer	Non-Alcohol & Wine & Spirits
RESPONSIBILITY											
Beverage Industry (third party agent)	Brewers Distributors Ltd.		Encorp Pacific (Canada)	Brewers Distributors Ltd.	Alberta Beverage Container Recovery Corporation	Brewers Distributors Ltd.		Brewers Distributors Ltd.		The Beer Store	
Provincial Government (Crown corp)		Liquor Distribution Branch									
Municipal Government									Municipalities		Municipalities
Not-for-Profit NGO							SARCAN		Manitoba Product Stewardship Corp.		Waste Diversion Ontario


Note: Where municipalities are responsible for container collection, only residentially generated material is available to be collected. Away from home consumption and consumption in the commercial sector rely on voluntary recycling efforts by commercial generators and managers of public space waste generation.

Indicates that cost data are not available

### Beverage Container Recovery in Canada Who is Responsible for Operations

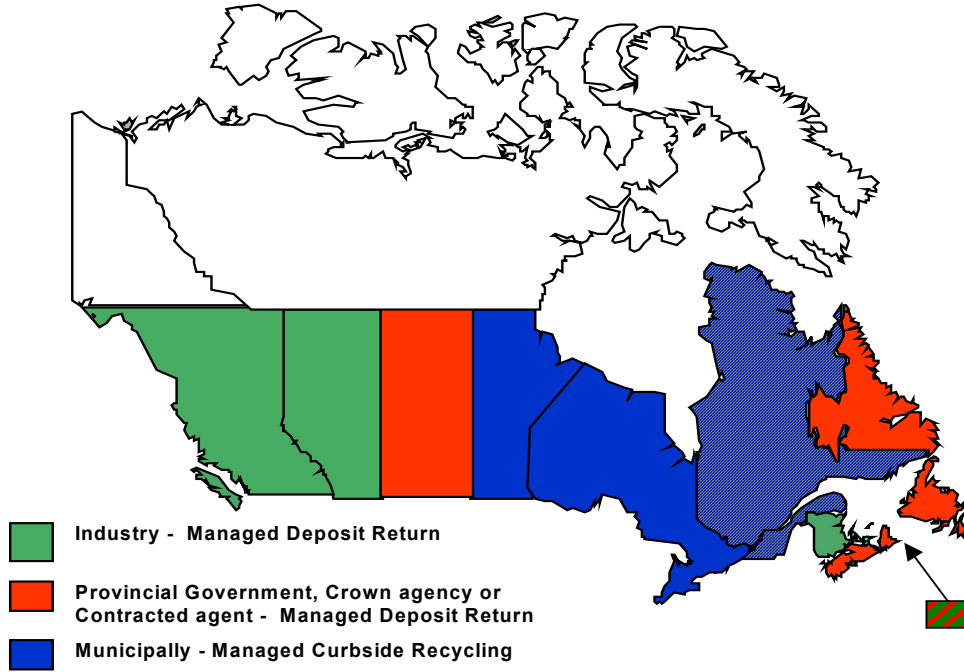
PROVINCE	Quebec			Nova Scotia		New Brunswick			Newfoundland		PEI			
Collection system	RETAIL	RETAIL	CURBSIDE	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	RETAIL & DEPOT	RETAIL & DEPOT	RETAIL & DEPOT	CURBSIDE
Beverage Container Type	Beer	Soft-Drinks	New-Age/Water/Juice & Wine & Spirits	Beer	Non-Alcohol & Wine & Spirits	Beer	Wine & Spirits	Non-Alcohol	Beer	Non-Alcohol & Wine & Spirits	Refillable Beer	Refillable Soft-Drinks	Wine & Spirits	New-Age/Water/Juice
<b>RESPONSIBILITY</b>														
Beverage Industry (third party agent)	Beer Ind.	Soft-Drink Companies		Beer Ind.		Beer Ind.	Rayan Industries	Encorp Atlantic	Beer Ind.		Beer Ind.	Soft-Drink Ind.		
Provincial Government (Crown corp)					Resource Recovery Fund Board		NB Liquor			Multi-Materials Stewardship Board			PEI Liquor Control Commission	Island Waste Management Corp.
Municipal Government			Municipalities											
Not-for-Profit NGO														

Note: Where municipalities are responsible for container collection, only residentially generated material is available to be collected. Away from home consumption and consumption in the commercial sector rely on voluntary recycling efforts by commercial generators and managers of public space waste generation.

 Indicates that cost data are not available

### Beverage Container Recovery Operating Body

#### Non-Alcohol Containers



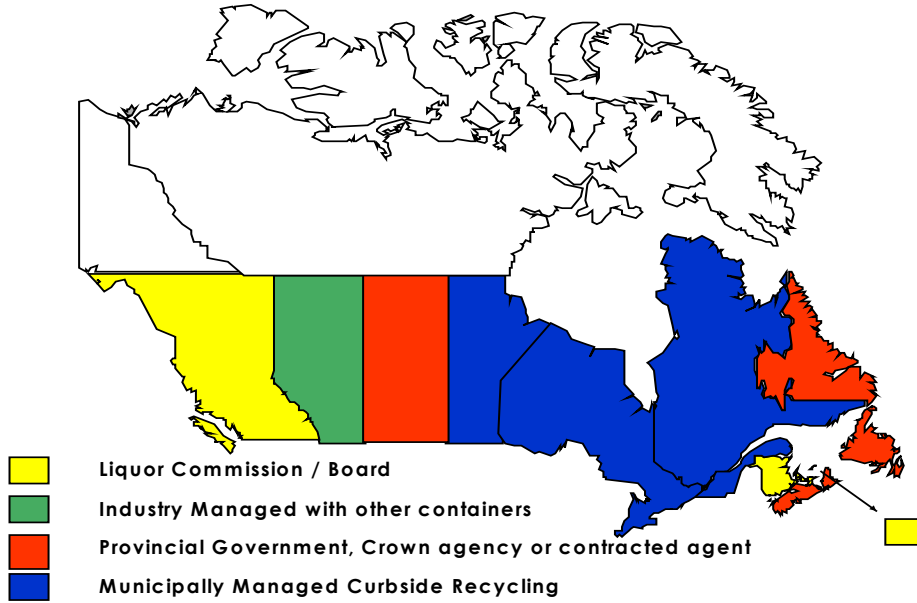
### Beverage Container Recovery Operating Body

#### Refillable Beer Bottles



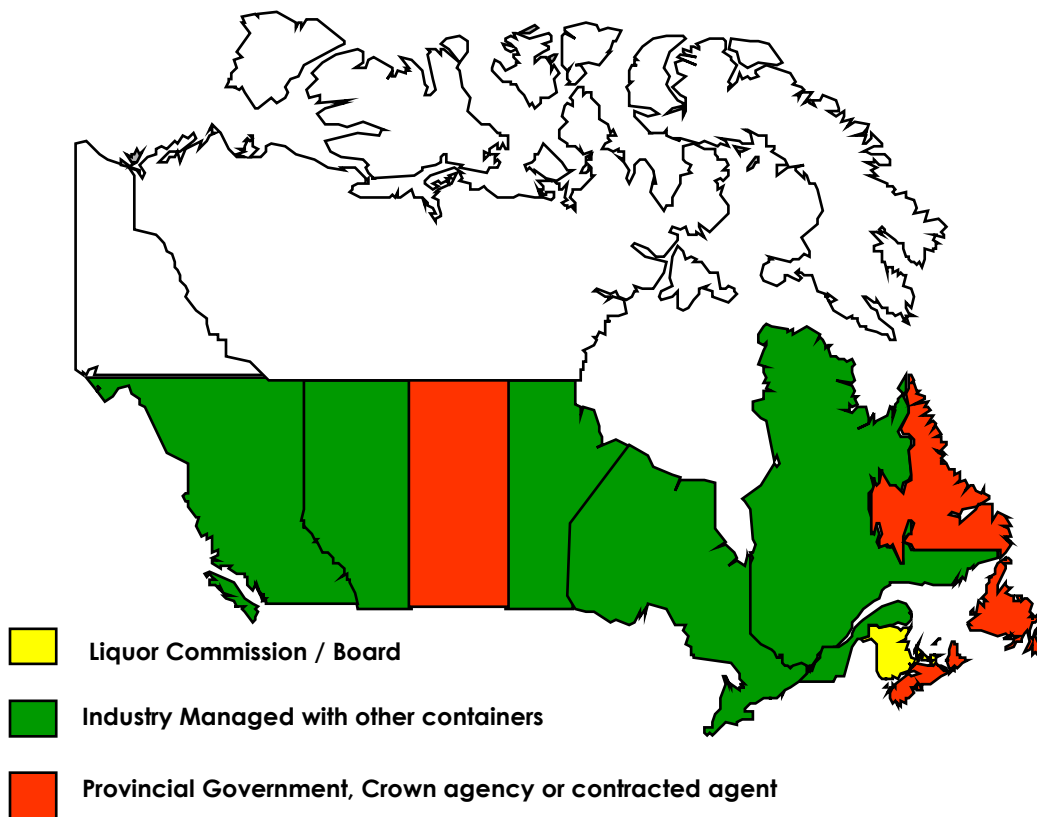
### Beverage Container Recovery Operating Body

#### Wine & Spirits



### Beverage Container Recovery Operating Body

#### Non-Refillable Beer





## **Beverage Recovery Program Elements by Province**

Information in this section was obtained from Environment Canada's Extended Producer Responsibility Inventory: [www.ec.gc.ca/epr/inventory/en](http://www.ec.gc.ca/epr/inventory/en)  
All Research and writing of the inventory was done in 2002 by CM Consulting.

### **Program Scope**

#### **British Columbia**

Beverage Container Stewardship Program

The province-wide program began in 1970 and expanded to include all beverage containers, excluding milk and milk substitute products in 1997.

All beverage containers are included under the regulation. This means any liquid that is a ready-to-serve drink but does not include milk, milk substitutes, rice milk, Soya milk, flavoured milk, infant formulas, meal replacements or dietary supplements.

#### **Alberta**

Alberta Beverage Container Recycling Program

The province-wide program began in 1972 and expanded to include TetraPaks and gabletop containers in 1997.

On May 1, 2001 the exemption for domestic beer containers was lifted from the regulation. Domestic Beer containers were added to the program on Nov 1, 2001.

#### **Saskatchewan**

Beverage Container Collection and Recycling Program

The province-wide program was established in 1973 and expanded to include TetraPaks and gabletop containers in 1999.

All beverage containers are included under the regulation. This means any liquid that is a ready-to-serve drink but does not include milk, milk substitutes, rice milk, Soy milk, flavoured milk, infant formulas, meal replacements or dietary supplements.

#### **Quebec**

Agreement Relating to the Deposits, Recovery and Recycling of Non-Refillable Soft drink Containers and Beer Containers.

The province-wide program has been in place since 1985.

All non-refillable soft drink and beer containers are included in this program.

**Nova Scotia**

## Nova Scotia Deposit Refund System

The province-wide program has been in place since 1996.

All beverage containers are included under the regulation. This means any liquid that is a ready-to-serve drink but does not include milk, milk substitutes, rice milk, Soy milk, flavoured milk, infant formulas, meal replacements or dietary supplements.

**New Brunswick**

## New Brunswick Beverage Container Recovery Program

The province-wide program was established in 1992.

The regulation covers all ready-to-drink beverage containers up to a size of five litres.

Milk and milk products, and un-pasteurized cider are exempted.

**Newfoundland**

## Beverage Recycling Program

The province-wide program has been in place since 1997.

The regulation covers all ready-to-drink beverage containers (excluding milk, infant formulas, refillable bottles and containers more than five litres).

**Prince Edward Island**

## Prince Edward Island Beverage Container Recycling Program

The province-wide program has been in place since 1992.

The regulation covers wine, spirit and cooler containers.

## Targets

### **British Columbia**

The regulation targets a recovery rate by container type of 85% by April 1, 2002 and October 1, 2002.

### **Alberta**

There are no recovery targets set-out in the regulation, however the government has encouraged a target of 85%.

The recovery rate for 2000 was 75%. This represents a decline from 1999, but can be attributed to the expansion of the program to include TetraPaks and polycoat material.

The recovery rate is expected to rise as consumer awareness increases.

### **Saskatchewan**

There are no provincial targets for containers covered under the program.

### **Quebec**

The target is 80% recovery of soft drink and beer containers as set-out in Bill 90 - Plan d'Action Québécois sur la gestion des matières résiduelles 1998-2008.

### **Nova Scotia**

There are no provincial targets for containers covered under the program.

However there is a provincial target of 50% total diversion for the whole province.

### **New Brunswick**

The regulation does not specify any targets.

However, the Department of Environment has an unofficial target of 80% recovery.

### **Newfoundland**

The regulation does not specify targets.

The Department of Environment has however set targets. They are 50% after year one, 60% after year two, 70% after year three 80% after year four.

### **Prince Edward Island**

There are no official targets in the regulation.

## Summary of Initiative

### British Columbia

The Beverage Container Recovery Program was expanded on October 1, 1998 and targets persons or businesses that manufacture non-refillable beverages, which are sold in the province of British Columbia.

A multi-stakeholder management body called the Beverage Container Management Board provides advice to the Minister of Water, Land and Air Protection regarding the design, efficiency and effectiveness of the program.

Affected manufacturers/brand owners or agents representing those manufacturers are referred to as "stewards".

Stewards were required to submit a stewardship plan, which described the development and operation of a beverage container stewardship program, within an acceptable timeframe. The plan also described how the program would provide consumers with an efficient and convenient system for collecting and recycling beverage containers.

All beverage containers carry a deposit based on their size.

Currently there are three "stewards" in British Columbia representing beverage manufacturers.

Encorp Pacific Canada represents brand owners of non-alcohol beverages. Encorp return centres include 159 independent depots and thousands of retail outlets. Encorp manages about 55% of recovered beverage containers province-wide.

The Liquor Distribution Branch is the steward for over 220 wine, spirit and some cider and beer manufacturers. The Liquor Distribution Branch container management system provides for retail returns at all Liquor Distribution Branch outlets and rural agency stores province-wide, as well as unlimited returns at 160 depots. The Liquor Distribution Branch manages about 7% of recovered beverage containers province-wide

Brewers Distributors Ltd. is the third steward representing 15 brand owners of coolers, beer and cider. Brewers Distributors Ltd. provides for retail returns at all Liquor Distribution Branch retail outlets, Cold Beer and Wine stores, and unlimited returns at 20 depots.

Brewers Distributors Ltd. manages about 38% of recovered beverage containers province-wide.

**Alberta**

The province requires beverage producers/brand owners to operate a common collection system to recover containers from the bottle depots.

The Beverage Container Management administers the Beverage Container Recycling Regulation.

The Alberta Beverage Container Recycling Corporation is the agent representing producers/brand owners of beverages sold in Alberta. It is responsible for ensuring that containers are collected, transported, processed and recycled as per the requirements of the regulation.

Alberta Beverage Container Recovery Corporation is also responsible for financing the entire system.

The Brewers Distributors Ltd. is the agent representing beer producers. Brewers Distributed Ltd. is responsible for ensuring that all beer containers are collected, transported, processed and recycled as per the requirements of the regulation.

**Saskatchewan**

The Saskatchewan Association of Rehabilitation Centres' Recycling Division, known as Sarcan, administers the program.

Sarcan operates under contract to the provincial government's environment ministry, Saskatchewan Environment and Resource Management.

This Ministry designates containers that can be collected for recycling and establishes the value of the deposit and Environmental Handling Charge that consumers pay when purchasing a beverage.

The retailer passes the collected revenue through to the distributor and then to the Department of Finance.

When returning the empty container to one of Sarcan's 71 depots, the consumer is refunded the full deposit.

The Environmental Handling Charge is not refunded to the consumer, but used by the provincial government to offset Sarcan's contract cost, and contribute to general revenues.

**Quebec**

The program is overseen by Recyc-Quebec, a crown corporation responsible for monitoring performance, increasing or decreasing the deposit levels and education and promotion.

In 2001, Recyc-Quebec increased the deposit level on non-refillable beer bottles from 5-cents to 10-cents.

Recyc-Quebec also administers the program for non-refillable beer containers.

Boisson Gazeuses Environment administers the program on behalf of the soft drink industry.

Boissons Gazeuses Environment took over this role from Recyc-Quebec on December 1, 1999.

The program is based on a return-to-retail collection system.

### **Nova Scotia**

The Resource Recovery Fund Board administers the program.

The Resource Recovery Fund Board was established in 1996 to administer solid waste management in Nova Scotia.

The program uses the half-back system to help off-set the program costs and to subsidize other waste diversion initiatives in the province.

### **New Brunswick**

The Department of Environment administers the program.

Distributors are required to recover their containers. The Department of Environment registers distributors of containers sold in the province.

Encorp Atlantic is responsible for non-alcoholic container recovery on behalf of non-alcohol brand owners.

New Brunswick Liquor Commission is responsible for the recovery of liquor containers (wine, beer, spirits and coolers).

### **Newfoundland**

The program, which began in 1997, requires that deposits be paid on all regulated beverage containers.

Consumers pay either 8-cents on non-alcohol containers or 20-cents on alcohol containers and receive 5-cents or 10-cents back when they are returned to one of 37 province-wide Green Depots.

The Multi-Materials Stewardship Board is a crown agency appointed by the Minister of the Department of Environment, and has overall responsibility of the program.

**Prince Edward Island**

The Prince Edward Island Liquor Control Commission distributes all alcoholic beverages through its network of 18 stores.

Prince Edward Island Liquor Control Commission accepts empty wine and cooler containers at all retail outlets and depots accept containers as well.

Consumers receive half of the deposit back at retail outlets, or 3-cents and 7-cents when returning to depots.

Deposit levels are 10-cents for bottles equal to or under 500ml and 20-cents for bottles over 500ml.

The Prince Edward Island Liquor Control Commission uses the half-back to pay depot operators a 2-cent handling fee (and a 2.5-cent additional fee for clean containers), and to off-set its own costs.

## Supporting Regulatory Framework

### **British Columbia**

The province-wide program began in 1970 with the Litter Act, which made British Columbia the first jurisdiction in North America to establish a mandatory deposit-refund system for soft drink and beer containers as a litter control initiative.

The program was further expanded to include all beverage containers, excluding milk and milk substitute products with the Beverage Container Stewardship Program Regulation in 1997.

The regulation was enacted under the Waste Management Act of 1996.

### **Alberta**

The program is regulated under the Environmental Protection and Enhancement Act and Alberta Regulation 101/97, known as the Beverage Container Recycling Regulation.

### **Saskatchewan**

The program is legislated under the Litter Control Act.

### **Quebec**

The program is regulated under Bill 87 - Law on Selling and Distribution of Beer and Soft Drinks in Non-Refillable Packaging Act - from 1985. The regulation is called, Beer and Soft Drink Distributors' Permits Regulation.

### **Nova Scotia**

The program is legislated under section 102 of the Environment Act, which sets out regulations for industry stewardship agreements including beverage containers. Specifically, they are the Solid Waste Resource Management Regulations - Nova Scotia Reg. 25/96.

### **New Brunswick**

The program is legislated under the Beverage Container Act from 1992.

The regulation is the Beverage Container Regulation from 1992. Both the Act and regulation were revised in 1999.

### **Newfoundland**

The program is regulated under the Waste Management Control Act.

The program has been in place since 1997 under The Beverage Container Control Regulation - Nfld. Reg. 103.

### **Prince Edward Island**

The program is regulated under the Environmental Protection Act.

The program has been in place since 1992 under Litter Control Regulations - Prince Edward Island Reg. EC697/91.



## Collection Mechanism

### British Columbia

In the case of beverage containers excluding beer and some domestic cider and cooler brands, containers redeemed at depots, retail outlets and Liquor Distribution Branch stores are picked-up by independent transporters and taken to about twelve processing sites across the province.

Processors accept bagged containers and prepare them through crushing and baling for the recycling market.

Each different commodity (glass, aluminum, plastic etc.) is sent to the appropriate recycling company.

In the case of most domestic beer, cider and coolers, the Brewers Distributors Limited collects these containers from the various collection points when they deliver new product. Empty containers are back-hauled to the various distribution centres where recyclables are baled and sent to market. Refillable bottles are sorted and sent back to the brewers for washing and refill.

### Alberta

Consumers return empty containers to privately owned and operated registered bottle depots (214 province-wide) and collect their refund.

Bottle depots collect and sort the bottles for the Alberta Beverage Container Recycling Corporation (representing beverage producers/brand owners) and the Brewers Distributors Limited.

Alberta Beverage Container Recovery Corporation and Brewers Distributed Limited transport and process containers at facilities in the province. Containers are prepared for the recycling end-markets.

### Saskatchewan

Containers are returned to 71 province-wide depots in the 62 communities. Depots sort and bale the containers, which are picked up by Sarcan trucks, taken to processing facilities and sent to recycling facilities.

### Quebec

Containers are returned to over 40,000 grocers, service stations, pharmacies etc.

Upon return, consumers are provided with a full refund.

Distributors are required to collect redeemed containers from the vendors. Usually, trucks that deliver new product also recover empty non-refillable containers. These containers are then consolidated at distribution warehouses for shipment to accredited recyclers.

Distributors keep the revenue associated with the recycling exchange.

### **Nova Scotia**

There are approximately 93 individually owned and operated Enviro Depots in the province.

All Enviro Depots must be registered with the Nova Scotia Department of Environment and Labour.

Consumers bring used beverage containers directly to these Depots, where they sort them by type and colour.

The Resource Recovery Fund Board organizes collection from the Enviro Depots, sends container material for processing, and markets them.

Note: Enviro Depots. Also accept cardboard, newsprint, paint and batteries.

### **New Brunswick**

There are approximately 85 individually owned and operated Depots in the province.

All Depots must be licensed with the New Brunswick Department of Environment.

Consumers bring used beverage containers directly to these Depots, where they are sorted.

Encorp Atlantic organizes the collection of all non-alcohol containers from the Depots, sends materials for processing, and markets them.

Rayan Investments organizes collection of all alcohol containers from the Depots, sends materials for processing, and markets them.

### **Newfoundland**

Consumers bring containers to 37 Green depots within the province.

The Multi-Materials Stewardship Board arranges for collection from the depots to one of four processing plants in Newfoundland and Labrador, where material is processed and shipped to end-markets.

### **Prince Edward Island**

The Prince Edward Island Liquor Control Commission contracts a local firm to collect, sort and ship liquor containers to recycling centres.

Containers collected through depots are managed by depot operators and paid a 2-cent handling fee by the Prince Edward Island Liquor Control Commission.

## Reuse/Recycling

### British Columbia

Stewards report on where containers get recycled and what products they are recycled into. Specifically, aluminum cans are recycled into new aluminum cans and aluminum products. Polyethylene Terephthalate plastic is recycled into new bottles and plastic sheet.

High-density polyethylene plastic is recycled into non-food containers such as oil, detergent and spray bottles and plastic film. Poly Vinyl Chloride plastic is recycled into Poly Vinyl Chloride Piping.

Bag-in-box is recycled into cardboard box - paper products.

Glass is recycled into fiberglass home insulation, new bottles, manufactured glass products, aggregate road base, decorative blocks, landscape material, drainage tile, construction aggregate and sand blasting material.

Bi-metal is recycled into metal products.

Gabletop material is recycled into paper products including filler plys for medium and grey gypsum wallboard cover.

Aseptic drink box material is recycled into paper products including filler plys for medium and grey gypsum wallboard cover.

### Alberta

The Albert Beverage Container Recovery Corporation reports on where containers get recycled and what products they are recycled into. Specifically, aluminum cans are recycled into new aluminum cans.

Polyethylene Terephthalate plastic is recycled into new bottles and plastic sheet.

High-density polyethylene plastic is recycled into non-food containers such as oil, detergent and spray bottles, and plastic sheet.

Glass is recycled into fiberglass, new container glass and beads for highway paint.

Bi-metal is recycled into metal products.

Gabletop containers are recycled into paper products including filler plys for medium and grey gypsum wallboard cover. Aseptic drink boxes are recycled into paper products, including filler plys for medium and grey gypsum wallboard cover.

### **Saskatchewan**

Sarcen reports on where containers get recycled and what products they are recycled into. Specifically, aluminum is recycled into new aluminum products including cans.

Plastic bottles are recycled into non-food containers, polyester clothing and carpeting.

Glass is recycled into new bottles, reflective beads for highway striping and fiberglass insulation.

Bi-metal is recycled into metal products like steel pipe.

Milk jugs are recycled into non-food containers.

Aseptic drink boxes are recycled into paper products.

### **Quebec**

In Quebec, aluminum is recycled into new aluminum cans usually through Alcan in the United States.

Plastic bottles are recycled into non-food containers, polyester clothing and carpeting through various

Polyethylene Terephthalate recyclers in the province, and in the United States.

### **Nova Scotia**

In Nova Scotia, plastics go to Novapet, a plastics recycling company located in the province.

Aluminum is shipped to Alcan in the United States.

Gabletop and TetraPak material is sent to a market in the United States or overseas to Asia.

Steel is sent to a local broker for shipment to a steel smelter (most likely in Ontario)

High-density polyethylene plastic is sent to Ontario for recycling.

Glass is sent to New Brunswick to be made into new glass bottles.

### **New Brunswick**

There is one processing facility in New Brunswick that deals with glass, which is owned by Rayan Investments.

Owens Illinois, located in New Brunswick gets all the glass container material to be made into new containers.

Aluminum cans are baled in province and sent to the aluminum market in New York.

TetraPak material is baled and sent to market in Ontario to be made into paper-based packaging material.

Metals are processed in province by a large number of metal dealers. Metal is sent to Hamilton, Ontario to be made into new metal products.

High density polyethylene is recycled into mid-range end-use applications like plastic crates and plastic pipe for agriculture.

### **Newfoundland**

Approximately 180 million beverage containers are shipped into Newfoundland and Labrador each year.

As of January 31, 2001 approximately 346 million beverage containers have been recycled in the province since the program started in January 1997.

Glass is sent to New Brunswick for recycling into new bottles.

Plastics are sent to Nova Scotia's Novapet, and steel is sold to metal brokers.

Aluminum is sold to Alcan in the United States or metal brokers to be recycled into new cans.

### **Prince Edward Island**

Coloured glass goes to New Brunswick, and is made into new bottles. Clear glass goes to Quebec for manufacturing into new bottles.

Polyethylene Terephthalate plastic goes to Novapet in Nova Scotia.

## Funding Mechanism

### British Columbia

The Beverage Container Recovery Program in British Columbia is funded through revenues generated from the sale of material and revenues from unredeemed deposits.

Generally, any shortfall in revenues is paid for directly by the producers/brand owners through a direct "fee for service" charged to them by their steward.

In the case of non-alcohol containers, in 2000, retailers began charging consumers a "Container Recycling Fee". This fee replaced what was originally a producer/brand owner fee for service.

Today, the Container Recycling Fee makes up about 29.4% of revenues that help fund the program. Container Recycling Fees are charged based on the net cost of recovering specific container types. Fees are re-evaluated every year, and are rounded up to the nearest penny. For example, if the net system cost to recover an aluminum can is \$0.0095, the Container Recycling Fee will be \$0.01 per can.

The Container Recycling Fee varies depending on the value of the material and the recovery rate for a particular container. For example, high recovery rates generate less unredeemed deposit revenue, and therefore a higher Container Recycling Fee, while lower recovery rates generate greater unredeemed deposit revenue and lower Container Recycling Fees. The fees range from \$0.01 to \$0.07 per unit depending on the size and material used for the container. Some containers, like drink pouches do not have a carry fee.

Since the implementation of the Container Recycling Fee, non-alcohol producers/brand owners do not bear any direct costs associated with the operation of the Beverage Container Recycling Program.

In the case of liquor containers, funding is generated through "service fees" charged to producers/manufacturers by the Liquor Distribution Branch. These fees range from \$0.01 to \$0.04 per unit depending on container type.

### Alberta

The Alberta Beverage Container Recycling Program is funded through revenues generated from the sale of material and revenues from unredeemed deposits. Any shortfall in revenues is paid for directly by the producers/brand owners. As of September 2002, Alberta will begin charging consumer a container recycling fee (CRF) as in British Columbia.

### Saskatchewan

The program is funded through revenue generated from the sale of empty beverage containers, and a provincial grant awarded to Sarcan.

According to the Saskatchewan Environment and Resource Management, in 2000-2001 the contract was worth \$8,200,000.

The provincial government raises revenue through the Environmental Handling Charge, which ranges from \$0.03 to \$0.07-cents per unit sold.

The financial responsibility is borne by the consumer through the Environmental Handling Charges. Also, consumers who choose not to return their containers contribute revenue through the unredeemed deposit.

According to Saskatchewan Environment and Resource Management in 2000-2001, the province collected \$3,692,032 in unredeemed deposits and \$12,579,290 in Environmental Handling Charges. Excess funds generated by the provincial government are put into general revenues.

Producers bear no financial responsibility for operating the program.

### **Quebec**

Return Incentives paid to retailers (2-cents per unit) funds the retail collection portion of the program.

Return Incentives, transportation, processing, marketing, administration, education and promotion is funded through the unredeemed deposits and the revenue generated from the sale of material.

The program is self-financing up to a return rate of 74% recovery rate. Beyond this threshold level, the system runs a deficit. Distributors cover the deficit. Currently the cost for soft drink recovery is \$0.005 per unit sold, which is collected by Boissons Gazeuses Environment.

Distributors pay (through contracting) directly for transportation and processing, which are off-set by material revenue (sale of cans, plastic and glass). This information is proprietary; therefore these system costs are unavailable.

### **Nova Scotia**

Nova Scotia operates a half-back system, where half-of the deposit is not refunded.

This half-back revenue, plus the revenue generated from the sale of containers is used to pay for the program, which includes the handling fee per unit to Enviro Depots (3.1-cents per unit).

In addition, excess funds are used to finance curbside collection programs in the province.

Very little or none of the half-back is required to off-set system costs. Generally, because deposit levels are high in the province, the revenue generated from unredeemed deposits more than off-sets the system costs.

### **New Brunswick**

New Brunswick operates a half-back system, where half-of the deposit is not refunded.

50% of this half-back revenue, plus the revenue generated from the unredeemed deposits and the sale of containers is used to pay for the program, which includes the handling fee per unit to redemption centers (3.3-cents per unit).

The remaining 50% of the half-back revenue goes into the province's Environmental Trust Fund and is used for beautification, conservation etc.

The Department of Environment and Local Government manages the fund.

The fund generates about \$4,000,000 per year.

### **Newfoundland**

The program is funded through revenue generated from the sale of empty beverage containers and unredeemed deposits.

The program also uses part of the revenue generated from the non-refunded portion of the deposit to off-set costs. In Newfoundland, the system is similar to a half-back program in principal, but it provides 5-cents for non-alcohol containers returned based on an 8-cent deposit, and 10-cents for alcohol containers returned based on a 20-cent deposit.

Excess revenue is placed in the province's "Waste Management Trust Fund".

Very little or none of the unredeemed portion of the deposit is required to off-set system costs. Generally, because recovery is low in the province, the revenue generated from unredeemed deposits more than off-sets the system costs.

### **Prince Edward Island**

Prince Edward Island operates a half-back system on alcoholic beverages only, where half of the deposit is not refunded. This half-back revenue, plus the revenue generated from the sale of containers is used to pay for the program, which includes the handling fee per unit to depots (2-cents per unit).

Excess funds go into provincial general revenues.



### Deposit Levels

In provinces where deposit return systems exist, deposits are paid on beverage containers at the point of purchase.

Generally they are indicated separately on the sales receipt.

Consumers will receive the full deposit back (a refund) if they return the container to the appropriate collection center (retail store and/or depot)

In the Atlantic Provinces, (New Brunswick, Newfoundland, Nova Scotia and PEI) only half the deposit is returned when a non-refillable container is returned. The remaining half deposit is used to pay for the system and subsidize other provincial environmental initiatives. (Note: In NF, 5-cents is refunded on an 8-cent deposit.)

### DEPOSITS in CENTS per unit sold

Province	BC	AB	SK	MB	ON	PQ	NS	NB	NF	PEI
Container Type										
Containers less than 1 Litre	5	5								
Containers greater than 1 Litre	20	20								
Containers under 450ml						5				
Containers greater than 450ml						20				
Non-alcohol							10	10	8	
Aluminum cans less than 1 Litre			10							
Aluminum cans greater than 1 Litre			20							
PET plastic bottles										
Refillable soft-drink and beer under 500ml										10
Refillable soft-drink and beer greater than 500ml										20
Glass Bottles 1-300ml			10							
Glass Bottles 301ml-999ml			20							
Glass Bottles greater than 1 Litre			40							
Steel/Bi-metal cans less than 1 Litre			10							
Steel/Bi-metal cans greater than 1 Litre			20							
Other plastic bottles less than 1 Litre			10							
Other plastic bottles greater than 1 Litre			20							
Juice box and Gable top			5							
Wine and Spirit Containers up to 500ml	10	10					10	10	20	10
Wine and Spirit Containers 501ml-1 Litre	10	10					20	20	20	20
Wine and Spirit Containers greater than 1 Litre	20	20					20	20	20	20
Beer Bottles less than 1 litre	10	10	10	10	10		10	10	10	10
Beer Bottles greater than 1 Litre	20	20	40	20	20		20	20	20	20

## Consumer Fees

In many deposit return programs, the beverage industry pays for the bulk of the system costs. In Canada however, programs have evolved in a way to minimize or eliminate the industry's financial obligation, and pass it on to their customers in the form of a front-end fee or a back-end fee.

Currently in Canada, there are four different examples of consumer-based fees that are charged to beverage consumers and used to finance the collection systems.

### Container Recycling Fee (CRF)

Currently being charged in British Columbia and Alberta, the CRF represents the net cost per unit. The Container Recycling Fee varies depending on the value of the material and the recovery rate for a particular container. For example, high recovery rates generate less unredeemed deposit revenue, and therefore a higher Container Recycling Fee, while lower recovery rates generate greater unredeemed deposit revenue and lower Container Recycling Fees. The fees range from no fee to \$0.08 per unit depending on the size and material used for the container. Some containers, like drink pouches and aluminum cans do not have a carry fee.

### Environmental Handling Charge (EHC)

Currently being charged in Saskatchewan, the EHC is charged on every non-refillable beverage sold. The funds are collected by the provincial government and used to pay for the operation of the program. The EHCs range from \$.03 - \$.07 per unit sold depending on the size and material used for the container. The EHC usually generates far more revenue needed to fund the system. Excess funds generated by the provincial government are put into general revenues.

### Beverage Container Levy

Currently being charged on all non-refillable beverages sold in Manitoba, the 2-cent levy is used to finance 80% of the provinces' multi-material municipal curbside collection system. Excess revenues are kept in a surplus fund and accessed in years where shortfalls may occur.

### Half-Back

Currently in place in Nova Scotia, New Brunswick, Newfoundland and PEI, a half-back represents half of the deposit paid on a non-refillable beverage container. Funds are used to pay for the operation of the program. Half-Backs always generate far more revenue than needed to fund the system. Excess funds are used to subsidize the municipal curbside recycling program and/or other provincial environmental initiatives.

**Consumer Fees  
in CENTS per unit sold  
As of June 1, 2003**

Province	BC	AB	SK	MB	NS	NB	NF
Type of Fee	CRF	CRF	EHC	Levy	Half-Back	Half-Back	Half-Back
<b>Container Type</b>							
Aluminum Cans	0	0	5	2	5	5	5
Plastic up to 500ml	1	3	6	2	5	5	5
Plastic 501ml-1L	1	3	6	2	5	5	5
Plastic over 1L	4	7	6	2	5	5	5
Plastic HDPE/PVC (Opaque juice and water)		6	6	2	5	5	5
Polystyrene Cups (with sealed foil lid)		5		2			
Glass up to 500ml	3	5	7	2	5	5	5
Glass 501ml-1L	3	7	7	2	5	5	5
Glass over 1L	5	8	7	2	5	5	5
Drink box up to 500ml	0	2	3	2	5	5	5
Drink box 501ml-1L	2	2	3	2	5	5	5
Gable top 501ml-1L	1	2	3	2	5	5	5
Gable top over 1L	0	1	3	2	5	5	5
Bi-metal less than 1L	0	4	5	2	5	5	5
Bi-metal less over 1L	0	0	5	2	5	5	5
Bag-in-the-Box over 1L	0	0	3	2	5	5	5
Wine and Spirits under 500ml				2	5	5	10
Wine and Spirits equal to or greater than 500ml				2	10	10	10
Refillable Beer Bottles			4*				

**Container Recycling Fee (CRF)** - Represents the net system cost of recovering the container.

**Environmental Handling Charge (EHC)** - A fee charged by the Provincial government to cover the deposit return program costs and generate general revenues.

**Levy** - Manitoba charges a 2-cent levy on all non-refillable, non-milk beverages - This revenue is used to subsidize 80% of the curbside program.

**Half-Back** represents half of the deposit on each container. Half-Back revenue covers the deposit return program costs and funds other residential recycling initiatives, or provincial environmental programs.

There are **no consumer fees** charged on beverages sold in Quebec and Prince Edward Island.

\*The 4-cent handling fee charged on refillable beer in Saskatchewan is charged at the back-end, and taken off the refund by depot operators.

## Container Handling Fees and Trends

A handling fee is one of the system costs associated with deposit return programs. Basically, the handling fee is the cost incurred by the retailer or depot for handling (collecting and sorting), plus a profit margin, for each beverage container unit. Handling fees should not be confused with consumer fees. Handling fees are an expense of the system, which is usually covered by the consumer fee.

Handling fees are however the most costly part of any collection system, and therefore warrant close monitoring. Traditionally handling fees were 2-cents per unit. More recently however, depots (those who charge the fee) have been lobbying for greater fees, arguing that fees have not kept up to the cost of living and inflation. As a result, fees have increased in most provinces in the last five years.

Generally, one fee is charged on all units in order to keep things fairly simple. However, with the onset of "activity based costing" more complex fee schedules have been devised to reflect the extra work, time or space required for some containers. For example, a large glass container is more costly to handle than aluminum can.

In the forum of deposit return programs, keeping handling fees at a reasonable level in the future will to be one of the more challenging areas of cost control within deposit return systems.

### HANDLING FEES in CENTS per unit collected As of June 1, 2003

Province	BC	AB	SK	QC	NS	NB	NF	PEI
<b>Container Type</b>								
Aluminum Cans	3	2.8	n/a	2	3.1	3.3	3	
Plastic up to 500ml	4		n/a	2	3.1	3.3	3	
Plastic 501ml-1L	4		n/a	2	3.1	3.3	3	
PET 0-1L		5.54	n/a	2	3.1	3.3	3	
PET over 1 L		7.5	n/a	2	3.1	3.3	3	
HDPE & PVC & PS cups		8	n/a		3.1	3.3	3	
Glass up to 1L	5		n/a	2	3.1	3.3	3	
Glass 0-500ml	5	7.18	n/a	2	3.1	3.3	3	
Glass over 1L	5	8	n/a	2	3.1	3.3	3	
Drink box up to 500ml	3	5.3	n/a		3.1	3.3	3	
Drink box 501ml-1L	5	5.3	n/a		3.1	3.3	3	
Gable top 501ml-1L	5	8	n/a		3.1	3.3	3	
Gable top over 1L	5	8	n/a		3.1	3.3	3	
Bi-metal less than 1L	3	8	n/a		3.1	3.3	3	
Bi-metal less over 1L	5	8	n/a		3.1	3.3	3	
Refillable non-beer								2
Refillable Beer	2.42***	2.83*	4**	2	2.5	2.3	1	2

#### NOTES

Saskatchewan does not charge handling fees. SARCAN depots are paid a contracted rate per year, which is generated through the Environmental Handling Charge (EHC).

\*Interim rate.

\*\*A 4-cent handling fee charged on refillable beer in Saskatchewan is charged at the back-end from the refund.

\*\*\*In BC bottle depots independently negotiate handling fees directly with the beer industry. The average rate is about 29-cents/doz or 2.42-cents/bottle

## **System Costs**

In order to determine the costs of the deposit return programs in Canada, income statements from the various operating agencies must be reviewed. In general, the income includes sales from empty containers sold to the recycler. In some cases, operators use the unredeemed deposit revenue to help off-set their costs. Therefore, in determining the net cost of a provincial program, it is reasonable to identify a net cost without unredeemed deposit revenue and a net cost with unredeemed deposit revenue.

In some cases, where the deposit levels are greater than or equal to 10-cents per unit (Atlantic Provinces), the unredeemed deposit revenue is large enough to incur a net system surplus (Nova Scotia & Newfoundland).

All revenue and expenses are listed in Appendix A of this report. Additional calculations are available in Appendix B, C and D.

**System Costs/Surplus**  
 In CENTS / per unit sold  
 (\$CAN)

	British Columbia		Alberta	Saskatchewan	Quebec	New Brunswick		Nova Scotia	Newfoundland
	wine /spirits	non-alcohol	all (excluding domestic beer and milk)	all (excluding refillable beer and milk)	soft-drinks	wine /spirits	non-alcohol	all (excluding domestic beer and milk)	all (excluding domestic beer and milk)
	<i>per unit sold</i>								
<b>Without Unredeemed Deposits</b>	7.9	2.8	2.5	3.4	n/a	n/a	n/a	2.2	4.4
<b>With Unredeemed Deposits</b>	6.2	0.83	1	1.8	n/a	n/a	n/a	<b>(0.37)</b>	<b>(.004..... 2.1)</b>

See Appendix – A, B, C and D for individual program revenue/expenses and calculation methodologies.

## Who Pays What

In order to provide a clearer picture of the associated program costs, a new approach called "Who Pays What" has been developed by CM Consulting. This new approach provides a transparent picture of the associated program cost/unit as they relate to the various "funders" or stakeholders of the system. The following identifies and defines these costs.

**Beverage Industry Cost:** Direct system related cost/unit sold or surplus/unit sold to the beverage industry – brand owners or distributors.

**Operating Agent Cost:** Direct cost or surplus/unit sold to the operating agent that year. It should be noted that in order to achieve smooth financial operations, agents require a reserve fund. Generally, surplus funds are accrued under the reserve fund. Similarly, if an agent were in a deficit situation for that year, reserve funds can be used to balance the budget.

**Provincial Government Cost:** Direct system related cost incurred by the Provincial government/taxpayers.

**Municipal Government Cost:** Direct system related cost incurred by municipal authorities/taxpayers. Note: container disposal costs are always a cost to municipalities/taxpayers. These costs are not part of the Who Pays What analysis.

**Consumer Recycling Cost:** Direct system cost/unit purchased to the beverage consumer. Revenue generated from these consumers is used directly to offset the system costs. These costs can be part of an up-front non-refundable eco-fee, container recycling fee (CRF) or the half-back portion of the refund.

**Consumer Wasting Cost:** Additional system cost/unit purchased to beverage consumers that choose not to return their container. These costs are generally quite high because they are equal to the value of the deposit. While these costs vary from container to container depending on the level of the deposit, the cost/unit shown is an average.

**Non-System Related Consumer Cost:** Several programs in Canada use Environment Handling Charges (EHCs) or Half-Back schemes to generate additional revenue. While this revenue may be generated from the beverage container consumer, it does not necessarily mean that it is being used to offset the system costs associated with operating the program that year. These non-system related costs subsidize other provincial programs or go to the provincial general revenues. In the case of excess CRFs, any surplus funds are used to offset the following year's costs. CRFs do not subsidize other programs.

## Who Pays What 2001-2002

Stakeholder Cost/Surplus	BC	BC	AB	SK	MB	ON	PQ	NB	NB	NS	NF	PEI	
	wine /spirits	non-alcohol	all (excluding domestic beer and milk)	all (excluding refillable beer and milk)	all (excluding refillable beer and milk)	all (excluding all beer)	soft-drinks	wine /spirits	all (excluding refillable beer and milk)	all (excluding refillable beer and milk)	all (excluding refillable beer and milk)	wine /spirits	
	<i>per unit sold</i>							<i>per unit sold</i>					
Beverage Industry Cost	\$0	\$0	\$0.014	\$0	\$0	Ontario Packaging Fee Schedule	\$0.005	\$0	n/a	\$0	\$0	\$0	
Operating Agent Cost/Surplus	-	(\$0.006)	(\$0.004)	(\$0.0003)	\$0.0014	-	-	n/a	n/a	(\$0.029)	(\$0.005)	-	
Provincial Liquor Commission Cost/Surplus	\$0.04	\$0	\$0	\$0	\$0	\$5,000,000	-	\$0.0096	-	\$0	\$0	n/a	
Municipal Government Cost	\$0	\$0	\$0	\$0	n/a*	n/a**	n/a***	\$0	\$0	\$0	\$0	\$0	
Recycling Consumer Cost	\$0.022	\$0.008	\$0	\$0.018	\$0.02*	\$0	\$0	\$0.067	n/a	\$0	n/a	n/a	
Wasting Consumer Cost	\$0.115	\$0.069	\$0.056	\$0.09	\$0	\$0	\$0.050	\$0.183	n/a	\$0.15	\$0.075 ... \$0.12	n/a	
Consumer Non-System Related Cost for 2001-2002	\$0	\$0.0062****	\$0	\$0.034	n/a*	\$0	\$0	\$0.025	n/a	\$0.046	\$0.025	n/a	

\*In Manitoba, part of the revenue generated from the 2-cent levy on beverage containers subsidizes recovery of other materials in the municipal curbside program. The portion of revenue dedicated to beverage container recovery is unavailable. The beverage industry is charged the levy and passes it on to consumers at the point of purchase.

\*\*In Ontario and Manitoba all residentially generated containers are collected via municipally operated curbside recycling. In Quebec, wine, spirits, water, juice, and new age beverage containers are collected via municipally operated curbside recycling. As such beverage container units are mixed in with non-beverage containers making it difficult to allocate per unit costs. In addition, data on unit sales for Ontario and Quebec is not available.

\*\*\*In Quebec, the .5-cent per unit cost represents the deficit (handling fees minus unredeemed deposits). Material revenues, transportation & processing costs are considered proprietary.

\*\*\*\*In British Columbia surplus CRF revenue not used to off-set the program costs for 2001 was used to fund the system in 2002. CRFs are adjusted annually to account for any deficit or surpluses that may have occurred the previous year.



## **Who Pays What Summary of Analysis**

The Who Pays What analysis confirms that in British Columbia, Saskatchewan, Manitoba, Nova Scotia, Newfoundland and New Brunswick for liquor, the beverage industry bears no costs to run the provincial beverage recovery program.

As of September 2002, Alberta implemented a Container Recycling Fee (CRF) similar to the program in British Columbia, which will reduce the beverage industry's cost to zero for fiscal 2003 and beyond.

Beverage producers (including milk) in Ontario will be required to pay levies on all their packaging sold into the residential stream once the Minister approves the Blue Box Program Plan developed under the Waste Diversion Act.

It is likely that Quebec will implement a similar levy based funding structure for the Blue Box system, which would see all beverage packaging (including milk, but excluding soft drink and beer containers), carry an industry levy. Quebec packaging levies have not been determined yet.

Therefore, in Canada, the beverage industry will only be required to fund beverage container recovery in Ontario and Quebec. In all other Canadian provinces, beverage companies do not bear any program costs for container recovery.

The bulk of system costs are borne by the consumer that chooses not to return their container – the “wasting consumer”.

There may be a small portion of a front-end or back-end consumer fee (EHC and Half-back), which is used directly to offset the system costs. In half-back provinces most, or all of the half-back is used to fund non-related environmental programs.

## Ontario Beverage Container/Packaging Fees

On June 27, 2002 Ontario's Bill 90 or the Waste Diversion Act (WDA) passed royal assent in the Legislative Assembly of Ontario. The WDA is an Act intended to "promote the reduction, reuse and recycling of waste". The Act establishes a non-crown agency called "Waste Diversion Ontario" or WDO made-up of 13 voting members and 2 non-voting members.

Under the Act, the WDO shall develop, implement and operate waste diversion programs for waste that are designated by the Minister of Environment. In addition, the WDO will monitor program effectiveness, conduct public consultation, advise the Minister, establish dispute resolution processes, determine the amount of money required to carry out its responsibilities and seek public awareness of the programs established.

When the Minister has designated a waste, the WDO shall incorporate an "industry funding organization" or IFO. The industry funding organization, which represents obligated sectors/companies, will coordinate the tasks of the Board specific to a program, and collect funds from its members (or obligated companies) to pay for the program.

The Act also mandates that for Blue Box waste diversion programs run by municipalities, industry will pay municipalities 50% of the total net costs.

In September 2002, the Minister designated "Blue Box Waste" and requested the WDO to develop a waste diversion program for Blue Box wastes. The Blue Box Waste regulation (OR 273/02) defines Blue Box materials as a waste that consist of, or a combination of glass, metal, paper, plastic and textiles.

Also in September 2002, in conjunction with the release of the Blue Box regulation, the Minister requested that the WDO develop a program for Blue Box Waste. This is the first "program request" letter received since the passing of the WDA.

Ontario's new Waste Diversion Act will require all companies that introduce packaging and printed-paper into the Ontario consumer marketplace ("Stewards") to share in the funding of 50% of Ontario's municipal Blue Box and Blue Bag waste diversion programs.

Companies can register with the industry funding organization (IFO) to discharge their obligation, or seek approval from Waste Diversion Ontario to implement a program to recover their packaging and printed-paper, known as an Industry Stewardship Plan (ISP). ISPs must meet or exceed the performance of the Blue Box program and require approval by the WDO and the Minister of Environment. (The Minister may also approve a plan without approval by WDO)

In November 2002 an interim Board of the IFO was established. Stewardship Ontario, whose secretariat is Corporations Supporting Recycling (CSR) was named as the IFO. (Note: CSR owns the Canadian rights to the Green Dot)

The Blue Box Program Plan addresses only consumer packaging material and printed papers commonly found in household wastes, and not those materials found in the industrial, commercial and institutional sector.

Stewards are defined as Brand owners or trade-mark owners.

The de minimus level (minimum threshold for participation) is set at \$2 million in wholesale sales, or less than 15 tonnes in material output. This will exempt over 30,000 Ontario companies.

Of fundamental importance is that the fees charged to obligated companies by the IFO must: *“not exceed the sum of the costs of developing, implementing and operating the program”*.

This means, that the IFO can only levy funds from a company that reasonably reflect the true cost related of recovering the material/product of a particular company whose packaging is being managed.

The funding formula used to assess the level of funds each company must pay, must meet the “nexus” test. The “nexus” refers to fees being reflective of the service rendered (i.e. fee-for-service). In keeping with the “nexus test”, Stewardship Ontario has devised the following fee calculation methodology, which is a combination of three factors:

**Recovery Rate (40% of costs)** – takes into consideration differences in the percentage recovery rates for each material.

**Net Cost to Manage (40% of costs)** – takes into consideration the total net cost to manage each material as a percentage of the total net cost of the program.

**Equalization (20% of costs)** – takes into consideration the total net cost to manage each material under a scenario where all materials are recovered at the same rate (75%).

The following is the proposed fee schedule for 2003 (as of February 28, 2003). These fees are in \$CAN and per tonne.

## Proposed Ontario Packaging Levies

Material Category	Material	Levy - Per Tonne
PRINTED PAPER		
	Newspaper	\$ 0.28
	Magazines and Catalogues	\$ 0.82
	Telephone Books	\$ 0.81
	Other Printed Paper	\$ 2.54
PACKAGING		
Paper Packaging	Old Corrugated Containers	\$ 47.28
Laminant Packaging	Gabletop	\$ 47.28
	Paper Laminants	\$ 47.28
	Aseptic Containers	\$ 47.28
	Old Boxboard	\$ 47.28
Plastics	PET bottles	\$ 66.92
	HDPE bottles	\$ 66.92
	Plastic Film	\$ 66.92
	Plastic Laminants	\$ 66.92
	Polystyrene	\$ 66.92
	Other Plastics	\$ 66.92
Steel	Steel Food & Beverage Cans	\$ 36.33
	Aerosols	\$ 36.33
	Paint Cans	\$ 36.33
Aluminum	Aluminum Cans	\$ (54.65)
	Aluminum Foil	\$ (54.65)
Glass	Food and Beverage - Flint	\$ 37.23
	Food and Beverage - Coloured	\$ 40.16

Because levies are based on different material types, per container fees can be calculated when the weight of each unit is measured. The following represents an expression of the 2003 fee schedule by container type for specific volume units.

All containers will carry a levy with exception of aluminum, which will accrue a credit against other levies charged to a brand owner. If the credit exceeds a brand owner's cost, funds will not be paid to that brand owner. In addition, a credit cannot be carried over to the next fiscal year.

<b>Expression of Ontario levies by beverage container type in Canadian CENTS per unit</b>	
2-litre <b>gable-top</b>	0.3
1-litre <b>gable top</b>	0.19
250ml <b>Tetra pak</b>	0.05
1.36 litre <b>steel</b> can	0.56
473ml clear <b>glass</b> bottle	0.85
750ml clear <b>glass</b> bottle	1.25
2-litre <b>PET</b> bottle	0.39
600ml <b>PET</b> bottle	0.2
4-litre <b>HDPE</b> water bottle	0.43
outer milk bag - <b>LDPE film</b>	0.05
355ml <b>aluminum</b> can	-0.08

These levies are based on year one (fiscal 2001) costs. The analysis undertaken by Stewardship Ontario on the program costs associated with meeting the 50% recycling rate for 2006 are listed below.

Brand owner levies will be adjusted accordingly every year. Therefore, according to these future cost projections, it is reasonable to assume a doubling of levies in the next five years. This is based on the fact that the Blue Box net costs are predicted to double.

**Projected future net costs:**

2001 - \$62,500,000  
 2002 - \$77,429,000  
 2003 - \$86,989,000  
 2004 - \$108,807,000  
 2005 - \$116,658,000  
 2006 - \$119,962,000

## Quebec Beverage Container Packaging Fees

The Quebec program will be similar to that of Ontario's Proposed Blue Box Program. The law – Bill 102 was passed in December 2002 and the designating regulation is scheduled to be passed soon.

One principal difference with the law is that it stipulates that industry will pay “up to” 50% of the net Blue Box costs (a maximum of 50%).

Initial program cost estimates (for fiscal 2000) were:

Gross cost:	\$ 70,000,000
Gross Revenue:	<u>\$ 20,000,000</u>
NET COST	\$ 50,000,000

(Note: revenues are significantly less than in Quebec compared to Ontario, because soft drink containers (aluminum and PET) are not part of the Blue Box program. These containers are collected through an industry run deposit return program.

Another principal difference with Quebec's future program is that industry funding by material type has been specified by the government. Specifically, the printed “media” materials industry will pay for 20% of the costs; other printed material industry will pay for 20%; and the packaging industry will pay for the remaining 60%.

In addition, the printed “media” industry has reached an agreement with the government to contribute \$1,300,000 worth of in-kind advertising for five years. This sector will not be responsible for any other financial contributions.

So, based on fiscal 2000 data, industry funding would be:

Printed “media” sector	\$1,300,000 in in-kind
Printed “other” sector (20%)	\$5,000,000
Packaging (60%)	\$15,000,000





The Funding Formula is likely to be based on a similar methodology to the Ontario formula, but will separate-out printed materials from packaging (as noted above). This fee structure approach will provide affected brand owner /first importers with a harmonized system between the two provinces.

## Contacts Page

Province	Recycling Affiliate	Phone /Fax	Web Site
British Columbia	Encorp Pacific (Canada) Neil Hastie, President and CEO 206–2250 Boundry Road. Burnaby, British Columbia V5M 3Z3	Phone: (604) 473-2400 (Greater Vancouver) 1-800-330-9767 (Rest of BC) Fax: (604) 473-2411	 www.encorpinc.com
British Columbia	Liquor Distribution Branch Gord Hall Director, Corporate Policy 2625 Rupert St. Vancouver British Columbia V5M 3T5	Phone: (604) 252-3035 Fax: (604) 252-3044	 www.bcliqorstores.com/en
British Columbia Alberta Saskatchewan Manitoba	Brewers Distributors Limited Garry Clermont, President 11500 – 29 <sup>th</sup> Street East. Calgary, Alberta T2Z 3W9	Phone: (403) 531-1000 Fax: (403) 531-1025	
Alberta	Alberta Beverage Container Recovery Corporation (ABCRC) Guy West, President and General Manager 3617 Ogden Road. S.E. Calgary, Alberta T2G 4N6	Phone: (403) 264-0170 Fax: (403) 264-0179	 www.abcrc.com
Alberta	Beverage Container Management Board Bob Saari, Managing Director Suite 100, 10707-100 Ave. Edmonton, Alberta T5J 3M1	Phone: (780) 424-3193 1-800-424-7671 Fax: (780) 428-4620	 BEVERAGE CONTAINER MANAGEMENT BOARD www.bcmb.ab.ca
Saskatchewan	Sarcán Recycling Ken Homenick 111 Cardinal Crescent Saskatoon, Saskatchewan S7L 6H5	Phone: (306) 933-0616 Fax: (306) 653-3932	 <a href="http://www.sarcán.sk.ca/sarcán.htm">www.sarcán.sk.ca/sarcán.htm</a>
Manitoba	Manitoba Product Stewardship Corporation (MPSC) Jim Fogg, General Manager 280-530 Kenaston Blvd Winnipeg, Manitoba R3N 1Z4	Phone: (204) 989-6222 Fax: (204) 989-6229	 <a href="http://www.mpsc.com">www.mpsc.com</a>

Province	Contact	Phone /Fax	Web Site and Logo
Ontario	Stewardship Ontario Damian Bassett, CEO 26 Wellington Street East, Suite 601 Toronto, Ontario M5E 1S2	Phone: 416 594-3456 1-888-277-2762 Fax: 416 594-3463	 www.stewardshipontario.ca
Ontario	Waste Diversion Ontario Glenda Gies, Executive Director	Phone: (905) 623-6437 Fax: (905) 623-5945	 www.wdo.ca
Quebec	Boissons Gazeuses Environnement Michel Dion 500, Ouest rue Sherbrooke, bureau 900, Montréal, Québec H3A 3C6	Phone: 514-282-3833 Fax: 514-844-7556	 www.affaires.com/bge
Quebec	Association des Brasseurs du Quebec Ivon Millette, President and Director General 1981 McGill College Montréal, Quebec H3A 2Y1	Phone: (514) 284-9199 Fax: (514) 284-0817	
Quebec	Recyc-Quebec Ives Boivierre 7171 Gean-Talon East Room 500 Anjou, Quebec H1M 3N2	Phone: (514) 352-5002 Fax: (514) 873-6542	 www.recyc-quebec.gouv.qc.ca
Quebec	Collect Selective Quebec André Martel, Director General Place du Parc 300, rue Leo-Pariseau Bureau 2516 Montreal, Quebec H2X 4B3	Phone: (514) 978-1491 Fax: (514) 978-1598	 www.coselective.qc.ca
New Brunswick	Encorp Atlantic Inc. Bryan Howell, General Manager Box 65 Moncton, New Brunswick E1C 8R9	Phone: (506) 532-7320 Fax: (506) 533-7006	<b>ENCORP</b>



Province	Contact	Phone /Fax	Web Site and Logo
<b>New Brunswick</b>	NB Liquor Rick Smith, Controller and Director of Information Systems 170 Wilsey Rd. P.O. Box 20787 Fredericton, New Brunswick E3B 5B8	Phone: (506) 452-6826 Fax: (506) 462-2024	 www.alcoolnb.com
<b>New Brunswick</b>	Rayan Investments Murry Cruikshank, President 1635 Berry Mills Road, Moncton, New Brunswick E1E 4R7	Phone: (506) 452-6826 Fax: (506) 852-9102	
<b>Newfoundland</b>	Multi-Material Stewardship Board Kimberly Spencer General Manager P.O. Box 8131 Station A St. John's, Newfoundland A1B 3M9	Phone: (709) 753-0955 Fax: (709) 753-0974	 www.greenroutine.com
<b>Nova Scotia</b>	Resource Recovery Fund Board Derek Firth, COO 14 Court Street Suite 305 Truro, Nova Scotia B2N 3H7	Phone: (902) 895-7732 Fax: (902) 897-3256	 www.rrfb.com
<b>Prince Edward Island</b>	Island Waste Management Corporation 110 Watts Ave. Charlottetown, PEI C1E 2C1	Phone: 902-894-0330 Fax: 902-894-0331	 www.iwmc.pe.ca

## Information and Data Sources

Province	Container type	Data	Source
<b>British Columbia</b>	Non-alcohol	Recovery Data	Beverage Container Stewardship Program Regulation - Annual Report by the Director - 2001 reporting period
	Non-alcohol	Financials	Encorp Pacific Annual Report 2002
	alcohol	Recovery Data	Beverage Container Stewardship Program Regulation - Annual Report by the Director - 2001 reporting period
	alcohol	Financials	KPMG Report - Liquor Distribution Branch - Container Recovery Costs - October 2000
	non-alcohol & alcohol	Container Service and Handling fees	Liquor Distribution Branch and Encorp Pacific
	Domestic Beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)
	Domestic Beer	Financials	Proprietary
	Domestic Beer	Handling fees	Western Brewers Association - Greg D'Avignon
<b>Alberta</b>	non-alcohol & alcohol	Recovery Data	Alberta Beverage Container Recycling Corp
	non-alcohol & alcohol	Financials	Alberta Beverage Container Recycling Corp
	Refillable beer	Recovery Data	BCMB Annual Report - 2001
<b>Saskatchewan</b>	non-alcohol & alcohol	Recovery Data	SARCAN
	non-alcohol & alcohol	Financials	SARCAN
	non-alcohol & alcohol	Other	Kim Yee, Saskatchewan Environment and Resource Management provided the total unredeemed deposit collected and the total Environmental Handling Charge (EHC) revenue collected.
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)
<b>Manitoba</b>	non-alcohol & alcohol	Recovery Data	Manitoba Product Stewardship Corporation - Annual Report 2001-2002 - Table 1-Generation and Recovery - 338,901,178 non-refillable containers were sold in 2001-2002.
	non-alcohol & alcohol	Financials	Manitoba Product Stewardship Corporation - Annual Report 2001-2002 - Table 2-Gross and Net Costs - MPSC generated a net deficit of \$457,902 in fiscal 2001-2002.
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)
	cans - beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)

## Information and Data Sources

Province	Container type	Data	Source
<b>Ontario</b>	non-alcohol & alcohol	Recovery Data	Stewardship Ontario - Blue Box Program Plan - February 2003
	non-alcohol & alcohol	Financials	Stewardship Ontario - Blue Box Program Plan - February 2003
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles) and Brewers of Ontario
	cans - beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles) and Brewers of Ontario
<b>Quebec</b>	Soft-Drink and non-refillable beer	Recovery Data	Recyc-Quebec - Annual Report 2002 & Sales/Recovery data for soft-drinks and beer
	soft-drink	Financials	proprietary - but BGE can provide industry fee. Industry fee is a function of: total collected deposits (5-cents/unit) - redeemed deposits - handling fee (2-cent/unit) - BGE administration (\$875,000) - P&E (\$703,340) which is 1.25% of total collected deposits. Comes to about .5/unit
	non-soft-drink containers	Recovery Data	Report for Recy-Quebec has some tonnage numbers - for 2000 - 320,000 tonnes were collected from the res sector - 87% of pop have service blue box. About 25% recovery (not including SD)
	non-soft-drink containers	Financials	Collect Selective
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles) and Brewers of Ontario
<b>Nova Scotia</b>	non-refillables	Recovery Data	Resource Recovery Fund Board - Liz Canning
	non-refillables	Financials	Resource Recovery Fund Board - Annual Report
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)
<b>New Brunswick</b>	non-alcohol	Recovery Data	Encorp Atlantic
	non-alcohol	Financials	Not available - proprietary
	Liquor	Recovery Data	The Department of Environment and Local Government - Joanne Glynn
	Liquor	Financials	New Brunswick Liquor Corporation Annual Report - 2001-2002
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)
<b>Newfoundland</b>	non-refillables	Recovery Data	Multi-Materials Stewardship Board- Karen O'Neil
	non-refillables	Financials	Multi-Materials Stewardship Board - Annual Report 2002
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)
<b>PEI</b>	non-refillables	Financials	Not available at this time.
	refillable soft-drinks and beer	Financials	Not available - proprietary
	Refillable beer	Recovery Data	Brewers Association of Canada - 2001 Statistical bulletin - (1 HL = 292.8 bottles)