



Brewers Distributor Limited 2011 Stewardship Annual Report

*Covering the Period: January 1, 2011 –
December 31, 2011*



**Submitted to: Director of Waste Management
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Table of Contents

1. Executive Summary	4
2. Program Outline	5
3. Educational Materials and Strategy	7
4. Collection System Information	8
5. Recovery Rates	9
6. Life Cycle Management	13
7. Fee Information	16
8. Performance Targets	18
Appendix A: Brewers Represented by BDL	19

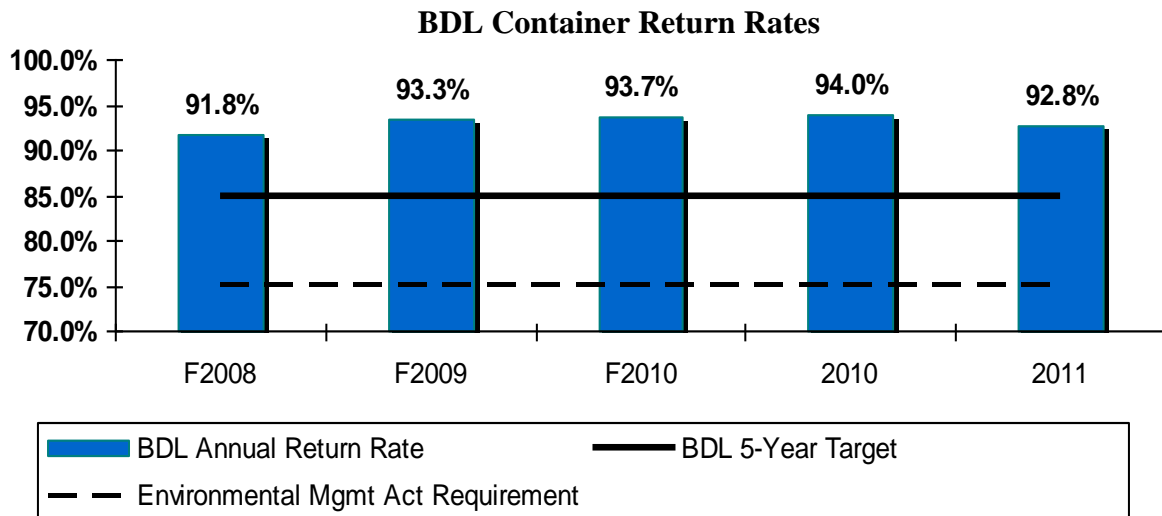
2011 BDL Program Highlights

- **554 million beer containers collected**
 - **Return Rate of 93% for all beer containers**
- **1,277 return locations**
 - **Beer containers can be returned for refund at all BC Liquor stores, all private liquor stores and private bottle depots**
- **Over 50 manufacturers with containers managed under BDL's product stewardship system**
- **24 B.C. breweries using refillable beer bottles**
 - **Includes 13 breweries using the industry standard refillable bottle**
- **120 million refillable beer bottles collected**
 - **Return rate of 94.5%**
 - **Bottles refilled an average of 15 times before being recycled into new glass bottles**
- **433 million beer cans collected**
 - **Return rate of 92.3%**
 - **Aluminum cans recycled into new aluminum cans**
- **Over 44,000 tonnes of packaging diverted from B.C. landfills**
- **Greenhouse gas emission reductions equivalent to taking 13,600 cars off BC roads and highways**

1. Executive Summary

In calendar year 2011, the Brewers Distributor Limited (BDL) product stewardship program continued to generate outstanding results. Its overall container return rate reached 92.8%, a slight decline from calendar year 2010. BDL's principal performance return rate target of 85% was exceeded in all product categories.

For over 80 years, B.C. Brewers have demonstrated leadership in product stewardship by sustaining high container return rates for the province of British Columbia, recovering their containers well before a deposit-return system was mandated by the BC Government. For example, BDL's return rate of 92.3% on beer cans is one of the highest return rates for this type of packaging in North America.¹ BDL's average overall return rate over the last five years is over 93%.



Use of reusable containers and the diversion of recyclable materials from landfill avoids unnecessary consumption of energy and related greenhouse gases and pollution. In 2011, the BDL product stewardship system helped avoid the generation of 69,326 tonnes of CO₂ emissions – equivalent to taking about 13,600 vehicles off of B.C. roads and highways.

Consumer convenience remains a key attribute of the BDL product stewardship system. In total, the BDL container management system offers consumers 1,277 return locations (as of December 31, 2011). These locations include government liquor stores, rural agency stores, private retail liquor stores and private bottle depots.

¹ In Canada, only the province of Saskatchewan reports higher return rates for aluminum cans than BDL's stewardship program has delivered in the last few years. In the United States, while select deposit states generate high return rates, recycling rates for aluminum cans in most states is well below fifty percent. See *Who Pays What 2010: An Analysis of Beverage Container Recovery and Costs in Canada* by CM Consulting for a summary of provincial container return rates.

2. Program Outline

In addition to distributing the majority of beer for sale in British Columbia, BDL collects refillable glass beer and cider bottles and imported & domestic beer cans sold in British Columbia. These containers include the industry standard brown refillable glass beer bottle, non-standard refillable glass beer bottles, refillable cider and cooler glass bottles and aluminum beer cans. BDL does not collect non-refillable glass beer bottles (import beer) – Encorp Pacific acts as the steward for these non-refillable containers. BDL also distributes and collects beer kegs.

Breweries and other beverage manufacturers represented under the product stewardship component of BDL's operations include all breweries operating in the province and imported brewers who designate BDL as their product steward when they obtain Liquor Distribution Branch approval to sell brands in cans. For a list of brewers and other manufacturers covered under the plan, see Appendix A.

BDL is a joint venture company, owned by Molson Coors Canada and Labatt Brewing Company Ltd., which distributes beer and maintains product stewardship responsibilities throughout Western Canada. In British Columbia, BDL's product stewardship functions are funded by fees set by the British Columbia Brewers' Recycled Container Collection Council (the Council), a not-for-profit society comprised of domestic beer industry representatives. These fees are set on a cost-recovery basis and are internalized to brewers – they are not levied on the consumer as a charge in addition to the retail price.

Council member companies collectively represent over 95 percent of beer sold in the province and include a cross section of large and small brewing interests. The Council was established to provide transparent management of BDL's financial, regulatory and logistical product stewardship requirements.

BDL operates warehousing and distribution facilities throughout British Columbia and distributes beer to all types of provincial liquor stores, including government-run Liquor Distribution Branch (LDB) outlets, private licensee retail stores (LRS) and LDB rural agency stores (private businesses authorized by the LDB to sell liquor with other goods in smaller or remote communities) as well as bars, restaurants, cabarets and other licensed establishments.



As the province's primary beer distributor, BDL is ideally placed to operate an efficient closed loop product stewardship system. BDL delivers full goods to over 4,000 retail locations and licensed establishments and picks up empty containers on the same trips. Combining product delivery with container pickup minimizes the number of trucks on the road and reduces BDL's carbon footprint. This convenient and efficient system helps to reduce costs to consumers and improve return rates.²

Consumers can return beer containers to the retail locations where beer is purchased or to private bottle depots. BDL refunds to each of these return locations the full deposit paid by the consumer on the container, with BDL's recovery rate for the calendar year determined on the basis of audited statements for deposits collected and refunded in the calendar year. BDL has contractual arrangements with a number of private liquor retail stores and private bottle depots to collect and sort BDL containers. These contracts commit BDL collection partners to accept unlimited consumer returns when they collect BDL containers ("unlimited return locations").

Refillable bottles collected by BDL are returned to manufacturers for cleaning and reuse. They are reused an average of 15 times. Refillable bottles accounted for approximately 22% of the containers BDL managed in 2011.

Beer sold in aluminum cans accounted for approximately 78% of the containers BDL collected in 2011. Aluminum cans are compressed and sent to ALCOA in the United States to be recycled into new cans and other products.

Aluminum kegs are collected from licensees and returned to brewers for refilling. Draught beer kegs are reusable and can last for up to 50 years. Kegs, at the end of their lifecycle, are crushed and recycled.

BDL's product stewardship system is funded by: fees paid by brewers based on their container volumes; the unclaimed portion of consumer deposits on containers; container recycling fees (charged internally to manufacturers, not as an additional charge to the consumer); and revenues BDL obtains on the sale of collected materials, such as aluminum. In 2011, the BDL container recycling fee applied to cans was \$0.02 per can.³

Brewers' environmental stewardship goes beyond the regulated container collection system as 100% of brewer packaging is reusable or recyclable. Information on BDL's product stewardship system can be found at www.beerbottlerefund.com.

² The reverse logistics of BDL's container management system do not pertain to containers collected from empty bottle depot locations, as BDL does not deliver full goods to these private, independent businesses.

³ This fee was reduced to \$0.00 per can on April 29, 2012. There is no container recycling fee for glass bottles.

3. Educational Materials and Strategies

BDL continues to enjoy strong consumer awareness of, and satisfaction with, its stewardship program. In 2011, BDL undertook significant stakeholder and public promotion and education activities.

Whereas in the past few years, the focus of these initiatives has been on improving consumer information about container return options, starting in 2012, BDL will place greater emphasis on educating stakeholders, including the public, about how BDL's product stewardship system operates and the environmental benefits and performance it delivers for BC residents. BDL believes that once stakeholders have a better understanding of program performance, they will become ambassadors of the program, driving greater awareness and participation, as BDL strives to achieve higher recovery rates.

In late 2011, Canada's National Brewers (CNB) – the trade association representing BDL's shareholders – hired its inaugural Director of Sustainability. The creation of this role is a reflection of the brewers' continued commitment to responsible production, incorporating sustainability into all facets of their operations, including the collection, reuse and recycling of containers.

While this role is national in scope, BC is one of the focus areas for this position. Among other activities, CNB's Director of Sustainability will work with the public and with stakeholders to raise awareness about BDL's product stewardship program. BDL is looking to renew existing relationships and to create a number of new relationships. The Director of Sustainability's outreach activities will continue into 2012.

In line with commitments in its 5-year stewardship plan, BDL conducted a consumer survey in March 2011, which received over 1,250 responses. The poll revealed that 98% of consumers are aware of the deposit on beer container purchases. Over 90% of consumers expressed high satisfaction with the return options available to them. As well, the poll showed that 99% of beer consumers ensure that their containers are reused and recycled, with those not directly returning containers donating them to bottle drives and other collectors.

Brewers continued their sponsorship of, and participation in, various recycling conferences and initiatives. BDL sponsored RCBC's annual conference in Whistler, as well as funding RCBC's recycling hotline (for the 12th consecutive year) and its Recyclepedia app. In addition, BDL sponsored the Coast Waste Management Association's Annual Conference in Victoria. BDL is also engaged with other stewards, sharing information and promoting best practices, through the Stewardship Agencies of BC. BDL also partnered with other stewards in the development and distribution of a brochure detailing the stewardship programs in BC.

BDL continued its communication partnership in support of the deposit-return system with private liquor stores through their industry association, the Alliance of Beverage Licensees of British Columbia (ABLE BC). ABLE BC regularly informs its members of the partnership through newsletters, publications and surveys. BDL continues to provide its collection partners with point-of-sale signage to let consumers know of unlimited return locations and continues to run the website beerbottlerefund.com (url recently changed to www.envirobeerBC.com). A review of the website will take place in 2012.

4. Collection System Information

Consumers can redeem BDL containers at multiple locations, including:

- * BC Liquor Distribution Branch stores;
- * Licensee Retail Stores (163 LRS stores are under contractual agreement with BDL to accept unlimited returns and all LRS are required to provide full refund deposits);
- * Private Bottle Depots (all depots are legally obligated to provide consumers with a full refund of deposits paid; BDL has arrangements with 84 private bottle depots);
- * LDB authorized agency stores (businesses in smaller or remote communities that are authorized by the LDB to sell liquor with other goods);
- * BDL also collects containers from licensed establishments (i.e. bars and restaurants).

BDL continues to enhance its contracted container return network. Seventy-eight percent of BC residents are within 2 km of a contracted return location. With respect to smaller communities and rural areas, BDL could not identify any communities in British Columbia without at least one BDL contracted return location within 15 km. This network of collection partners has doubled over the five-year stewardship plan period.

Table 1: BC Container Redemption Locations for Beer Containers

Return Locations	March 2007	March 2008	March 2009	March 2010	Dec 2010	Dec 2011	Change F07-2011	Percent Change
Private Bottle Depots	170	170	170	177	177	178	+ 8	4.7 %
Licensee Retail Stores	631	654	676	670	655	658	+ 27	4.3 %
Government Liquor Stores	201	199	197	197	197	210	+ 9	4.5 %
Rural Agency Stores	230	228	227	224	229	231	+ 1	0.4 %
Total	1232	1251	1270	1268	1258	1277	+ 45	3.7 %

5. Recovery Rates

Table 2: BDL Container Recovery Rates: 2011⁴

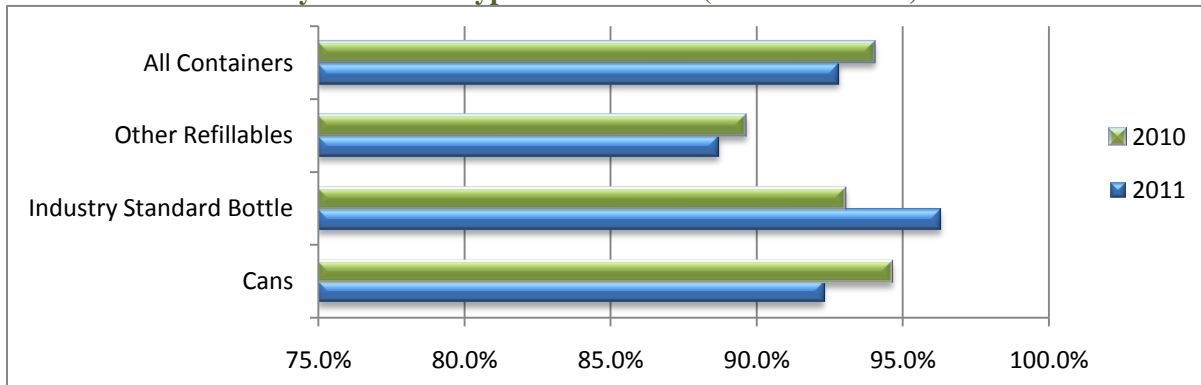
	Cans	Industry Standard Bottle (ISB)	Non-ISB Refillable Bottle	Total
Sales Dozens	39,143,599	8,124,640	2,489,517	49,757,756
Returns Dozens	36,122,573	7,824,478	2,208,548	46,155,599
Return Rates 2010	92.28 %	96.31 %	88.71 %	92.76 %

BDL return rates in all product categories exceeded the 85% performance target established under its 5-year plan and are well in excess of the 75% target mandated under *Environmental Management Act* regulations.

In 2011, BDL collected 554 million containers under its product stewardship program and its overall container return rate was 92.8%.

This is the fourth consecutive year that the overall return rate has exceeded 92%. Return rates for cans and non-ISB refillable bottles decreased slightly in 2011 dropping by 2.3% points and 0.9% points respectively. The return rate for ISB refillable bottles increased by 3.3% points in 2011.

Chart 1: Return Rates by Container Type: 2010 vs 2011 (Calendar Years)



⁴ Container data reviewed and tested by S.J. Yeung Chartered Accountant. Sales for non-industry standard refillable bottles were provided by the BC Liquor Distribution Branch.

Table 3: Estimate of Unit Returns and Tonnes Diverted by Regional District⁵

Regional District		Aluminum	Glass	Total
Alberni-Clayoquot	Units (000)	2,997	832	3,829
	Tonnes	41	221	262
Bulkley-Nechako	Units (000)	3,461	961	4,423
	Tonnes	47	255	302
Capital	Units (000)	36,917	10,254	47,171
	Tonnes	504	2,721	3,225
Cariboo	Units (000)	6,189	1,719	7,908
	Tonnes	84	456	541
Central Coast	Units (000)	280	78	358
	Tonnes	4	21	24
Central Kootenay	Units (000)	5,811	1,614	7,425
	Tonnes	79	428	508
Central Okanagan	Units (000)	17,930	4,980	22,910
	Tonnes	245	1,321	1,566
Columbia-Shuswap	Units (000)	5,203	1,445	6,648
	Tonnes	71	383	454
Comox Valley	Units (000)	6,250	1,736	7,986
	Tonnes	85	461	546
Cowichan Valley	Units (000)	7,897	2,193	10,090
	Tonnes	108	582	690
East Kootenay	Units (000)	5,753	1,598	7,351
	Tonnes	79	424	502
Fraser Valley	Units (000)	26,039	7,232	33,271
	Tonnes	355	1,919	2,274
Fraser-Fort George	Units (000)	8,914	2,476	11,390
	Tonnes	122	657	779
Kitimat-Stikine	Units (000)	3,499	972	4,471
	Tonnes	48	258	306
Kootenay Boundary	Units (000)	3,115	865	3,980
	Tonnes	43	230	272
Metro Vancouver	Units (000)	227,572	63,208	290,780
	Tonnes	3,107	16,771	19,878
Mount Waddington	Units (000)	1,095	304	1,399
	Tonnes	15	81	96

⁵ Unit returns and tonnes diverted have been estimated from provincial totals based on Regional District populations and their proportion to the provincial total (source www.bcstats.gov.bc.ca). BDL does not compile sales or collection information by Regional District.

Table 3: Estimate of Unit Returns and Tonnes Diverted by Regional District

Regional District		Aluminum	Glass	Total
Namaimo	Units (000)	14,835	4,121	18,956
	Tonnes	203	1,093	1,296
North Okanagan	Units (000)	7,946	2,207	10,153
	Tonnes	108	586	694
Northern Rockies	Units (000)	530	147	678
	Tonnes	7	39	46
Okanagan-Similkameen	Units (000)	8,272	2,298	10,570
	Tonnes	113	610	723
Peace River	Units (000)	5,562	1,545	7,107
	Tonnes	76	410	486
Powell River	Units (000)	2,004	557	2,561
	Tonnes	27	148	175
Skeena-Queen Charlotte	Units (000)	1,765	490	2,255
	Tonnes	24	143	168
Squamish-Lillooet	Units (000)	3,750	1,042	4,792
	Tonnes	51	276	328
Stikine Region	Units (000)	102	28	130
	Tonnes	1	7	9
Strathcona	Units (000)	4,216	1,171	5,387
	Tonnes	58	311	368
Sunshine Coast	Units (000)	2,970	825	3,794
	Tonnes	41	219	259
Thompson-Nicola	Units (000)	12,598	3,499	16,097
	Tonnes	172	928	1,100
Total	Units (000)	433,471	120,396	553,867
	Tonnes	5,918	31,944	37,862

Based on a provincial population of 3.61 million people age 19 and over, the per capita return rate for the province was 153.4 BDL containers per person or about 13 cases⁶ of beer.

The number of beer containers sold under the BDL plan declined by 1.3 % in 2011. Can container sales actually increased by 2% and sales in refillable bottles dropped by 12%. Consequently, BDL tonnage diversion totals declined in 2011, with glass diversion tonnage down over 3,000 tonnes or 9.3%.

⁶ A case contains a dozen containers.

Other Packaging Materials:

In addition to managing the containers designated under its product stewardship plan, BDL also sells and collects beer kegs and collects and facilitates recycling with respect to a number of secondary packaging materials, including cardboard cases, can flats and plastic shrink wrap. This means that BDL has been operating consistent with the intent of Schedule 5 (an incoming Schedule under the *Recycling Regulation* covering printed paper and packaging) for decades prior to its enactment.

BDL Keg Sales:

In 2011, BDL sold approximately 360,000 kegs, primarily to licensed establishments. Given the efficiencies of the closed loop system related to keg sales, return rates are extremely high for these containers with a return rate of 99.1% in 2011. The volume of beer represented by these kegs is equivalent to over 5.1 million cases of packaged beer. The volume of beer sold in kegs is equivalent to diversion of approximately 900 tonnes of aluminum or 16,900 tonnes of glass bottles.

Cardboard and other secondary packaging:

Estimates for 2011 indicate that BDL collected and diverted approximately 1,846 tonnes of cardboard. BDL is working on the development of a monitoring and reporting process that will enable the estimation of return rates related to these packaging streams and facilitate compliance with Schedule 5.

Total BDL landfill diversion equates to approximately 44,025 tonnes.

Table 4: BDL BC Landfill Diversion Summary

Material	Tonnes Diverted
Aluminum⁷	5,918
Glass⁸	31,994
Cardboard	1,846
Plastic	na
Keg Packaging Equivalent⁹	4,267
Total	44,025

⁷ Aluminum tonnes diverted represents the weight of BDL shipments to aluminum processors.

⁸ Glass tonnes diverted represents the weight of glass bottles shipped by BDL to brewers for refilling and reuse plus the weight of ISB bottles culled and sent to a glass recycling facility for recycling.

⁹ Keg equivalent packaging diversion based on the current package split for bottles and cans related to BC BDL beer sales.

6. Life Cycle Management

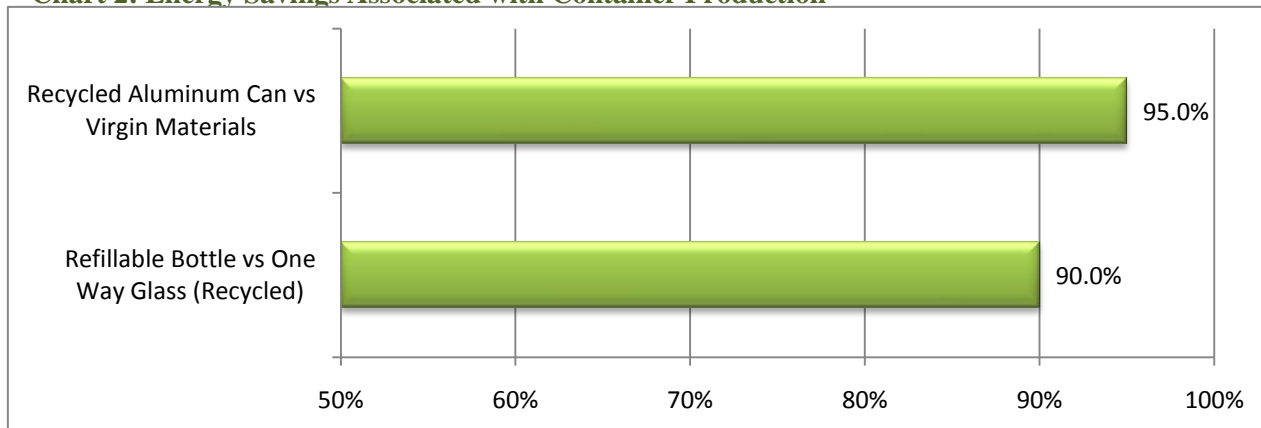
The BDL product stewardship system embodies several key elements of a successful life cycle management process. The system is fully funded by brewers and their consumers, as all costs associated with managing beer containers are incorporated into the price of the product. Extended producer responsibility ensures that brewers have incentives to manage containers and packaging as efficiently as possible.

BDL's closed loop transportation system minimizes transportation costs associated with retrieving empty containers from retailers. Return-to-retail collection, which is convenient for consumers, also encourages high return rates. Finally, brewers design their packaging, particularly for refillable bottles, to serve several functions over its lifecycle, making the overall product stewardship system very efficient.

BDL's distribution practices also support the use of refillable containers, such as kegs and glass bottles. Given that refillable beer bottles can be utilized an average of 15 times, the use of refillable beer bottles in British Columbia avoids the production of approximately 110 million glass bottles annually, diverting approximately 32,000 tonnes of glass containers. Reduced production requirements generate significant energy and pollution savings in comparison to the use of one-way glass containers (see below).

The Canadian brewing industry introduced further improvements in the use of refillable containers by adopting an industry standard bottle (ISB). The ISB is a leading example of design for the environment (DfE). The ISB reduces the cost of sorting empty containers, minimizes inventory storage requirements and improves production efficiencies by eliminating the need for brewers to perform costly packaging line changeovers (associated with different containers for different brands). At present, 13 British Columbia breweries are signatories to the Industry Standard Bottle Agreement and use the ISB bottle as their principal glass container.

Chart 2: Energy Savings Associated with Container Production



Finally, BDL's product stewardship system generates exceptionally high return rates for recyclable containers. BDL's return rate for aluminum cans (which carry a deposit of 10 cents and which accounted for over 78% of beer containers in calendar year 2011) was 92.3% in 2011. This represents one of the highest return rates for aluminum cans in North America and a figure that is over 9 percentage points higher than typical return rates for soft drink cans in British Columbia (which carry a lesser deposit of 5 cents). Given the production of aluminum from recyclable materials uses 95% less energy than the production of aluminum from virgin materials, the BDL product stewardship system generates significant energy and pollution savings related to the collection and recycling of beer cans.

Pollution Prevention Hierarchy

Manufacturing aluminum from recycled materials reduces harmful atmospheric emissions, waterborne contaminants and solid waste in comparison to production from virgin materials. Similarly, the use of refillable glass bottles drastically reduces the amount of glass materials needed to sell a given amount of product. Studies sponsored by the Environmental Protection Agency (EPA) in the United States enable BDL to estimate the reduction of several pollutants associated with container recovery.

Table 5: Reduced Pollutants Associated with BDL Container Recovery 2011¹⁰

	Nitrogen Oxides	Sulfur Oxides	Particulate Matter	Solid Waste
Reduced kg of pollutant per Tonne: Recycled versus Virgin Aluminum	31.4	91.3	31.7	4,297
Recycled BDL Aluminum 2010 Metric Tonnes	5,918	5,918	5,918	5,918
Tonnes Avoided Pollutants Cans	186	540	188	25,430
Pollutants (kg) Glass Production per Tonne	1.73	6.1	3.73	66.65
Diverted Glass Tonnes BDL Refillable Glass Bottles	31,994	31,994	31,994	31,994
Tonnes Avoided Pollutants Refillable Glass Bottles	55	195	119	2,132
Total Tonnes of Avoided Pollutants	241	735	307	27,562

¹⁰ Pollutant reductions associated with recycled versus virgin aluminum production and glass production from Weitz, Keith A. et al. 2003. *Life-Cycle Inventory Data Sets for Materials Production of Aluminum, Glass, Paper, Plastic, and Steel in North America*. Report prepared by RTI International for the U.S. EPA, Office of Research and Development. EPA-600/Q-03-001. Research Triangle Park, NC.

Table 5 provides examples of selected pollutant reductions associated with BDL's product stewardship system. Nitrogen oxide contributes to ground level ozone, acid rain, nutrient overload and global warming and combines with other chemicals to contribute to respiratory problems. Sulfur oxides also contribute to respiratory problems and acid rain. Particulate matter contains microscope solids and liquids that contribute to a variety of health problems such as lung disease and chronic bronchitis.

According to the EPA study, recycling aluminum results in significant reductions in atmospheric emissions. Nitrogen oxides, sulfur oxides and particulate matter emissions are reduced by over 60%, 90% and 95% respectively when aluminum is made from recycled materials. For 2010, total reductions in emissions of nitrogen oxides, sulfur oxides and particulate matter from aluminum recycling and the use of refillable bottles in BC are estimated at 241, 735 and 307 metric tonnes, respectively.

In addition to reductions in atmospheric emissions, BDL container management also generates significant solid waste reductions associated with material production. Aluminum cans are light, but making aluminum from virgin material creates solid waste that is four and half times heavier than the aluminum itself. There were 27,562 less metric tonnes of solid waste generated in 2011 related to aluminum recycling and the use of refillable glass bottles. This reduced tonnage is in addition to the 44,025 tonnes of packaging materials diverted from provincial landfills in 2011 as a result of BDL's product stewardship system.

When these totals are combined, BDL's product stewardship program reduces solid waste production by approximately 71,587 tonnes annually - equivalent to \$7.7 million in Vancouver tipping fees.¹¹

Although not reported in Table 5, recycling aluminum also generates significant reductions in waterborne waste. Production of heavy metals, such as cadmium and mercury, are reduced by more than 99% when aluminum is manufactured from recycled materials.

Green House Gas Reductions and Energy Savings

Every can and refillable glass bottle returned by beer consumers contributes to energy savings and reduced greenhouse gas emissions.

Manufacturing aluminum from recycled materials, such as recovered beer cans, generates enormous energy savings, as processing aluminum from bauxite is an energy-intensive process. Similarly, reusing a glass beer bottle 15 times eliminates the need to produce a new bottle for every beer sold, thereby eliminating the raw material processing and energy requirements associated with making new glass.

¹¹ Based on a Vancouver 2011 tipping fee of \$107 per tonne for waste disposal.

The 69,326 metric tonnes of greenhouse gases avoided annually through the use of can recycling and glass bottle reuse is equivalent to pulling about 13,600 cars off of B.C. roads and highways¹² or equivalent to the energy contained in 161,223 barrels of oil worth approximately \$15 million at 2011 prices for crude oil.¹³

Table 6: Energy and Greenhouse Gas Savings BDL Container Recovery 2010¹⁴

	Glass Reuse	Aluminum Recycling	Total
Tonnes Diverted	31,994	5,918	37,912
Avoided GHG Emissions (MTCO2E)	12,158	57,168	69,326
Avoided Energy (Gigajoules)	217,559	516,996	734,555

7. Fee Information

Costs related to BDL's container collection system are managed by the British Columbia Brewers' Recycled Container Collection Council, which operates the program on a cost recovery basis.

Refillable bottles

In the case of refillable bottles, the Council establishes rates for the collection, sorting and return of containers based on projected and audited costs. Costs associated with cleaning and reusing refillable bottles are borne by the manufacturer. In the case of refillable bottles, manufacturers retain unredeemed deposits and use these funds to offset container costs.

¹² See U.S. EPA Greenhouse Gas Equivalencies Calculator at <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>. Vehicle equivalency calculation based on the assumption that the average car emits approximately 5.1 tonnes of GHG emissions per year.

¹³ Based on a June 2011 crude oil price per barrel of \$93.40.

¹⁴ Source for avoided energy and emission multipliers: Determination of the Impact of Waste Management activities on Greenhouse Gas Emissions: 2005 Update Final Report, ICF Consulting for Environment Canada & Natural Resources Canada, October 2005 and GHG Calculator for Waste Management, Update Oct 2009, ICF Consulting for Environment Canada. Multipliers for avoided GHG Emissions (eCO₂/tonne) used were 0.38 for glass reuse and 9.66 for aluminum recycling. Avoided energy multipliers used (Gigajoules/tonne) were 6.8 for glass reuse and 87.36 for aluminum recycling. Avoided GHGs from glass bottle reuse (0.38) is not presented in the *Determination of the Impact of Waste Management Activities on Greenhouse Gas Emissions: 2005 Update Final Report*. This multiplier was provided in the previous version of the report from 2004.

Recycled Cans

In the case of recycled cans, an internalized container recycling fee is established by the Council and applied to the product's wholesale price set by the Liquor Distribution Branch. In 2010, this fee was set at \$0.02 per can. The Council retains unredeemed deposits with respect to can sales and retains revenues from aluminum material sales to offset, administration, transportation, collection and sorting fees and infrastructure costs.

BDL, as the agent of the Council, pays return location partners for the collection, sorting and return of BDL containers. In the case of the Liquor Distribution Branch, BDL has entered into a 5-year agreement with the agency to pay the LDB fees for each container collected from its stores. Licensee retail stores that sign up as a collection partner that will accept unlimited customer returns are also paid a fee for each container collected. BDL has also entered into service agreements with several private bottle depots for collection and sorting services.

Table 7: BDL Deposit Summary 2011¹⁵

	Cans	Industry Standard Bottle (ISB)	Non-ISB Refillable Bottle¹⁶	Total
Deposits Received	\$46,972,319	\$9,749,568	\$2,987,420	\$59,709,307
Refunds Paid	\$43,347,088	\$9,389,374	\$2,650,258	\$56,863,271
Return Rates 2010	92.3 %	96.3 %	88.7 %	92.8 %

Deposit amounts reported in Table 7 are audited annually by S.J. Yeung Chartered Accountant. The Council contingency fund to ensure stable financing with respect to management of can containers was \$3 million as of March 31, 2011 and is projected to meet its target goal of \$4 million in 2012.

¹⁵ Deposit amounts audited by S.J. Yeung Chartered Accountant, Calgary, Alberta.

¹⁶ Sales for non-industry standard refillable bottles were provided by the BC Liquor Distribution Branch.

8. Performance Targets

Table 6: Performance Target Summary

Stewardship Plan Target 2010	Results
<p>1. Maintain 85 % return rate in each container category.</p>	<p>Target Exceeded:</p> <ul style="list-style-type: none"> • Recovery Rates 2011: <ul style="list-style-type: none"> ○ 92.8% overall ○ 92.3 % Cans ○ 94.5 % Refillable Glass Bottles
<p>2. Increase the number of collection partners BDL has arrangements with. Target 275 by 2011 and 347 by F2014</p>	<p>Target Partially Achieved:</p> <ul style="list-style-type: none"> • 247 collection partners that accept unlimited customer returns as of December 31, 2011
<p>3. Improve Consumer Awareness through various initiatives:</p> <ul style="list-style-type: none"> • Monitoring of consumer feedback re: deposit return locations; <ul style="list-style-type: none"> ○ Maintain 85% consumer awareness levels; • On-going advertising in community/industry recycling publications; • Continuing partnerships with community groups, NGOs on awareness initiatives. 	<p>Target Achieved:</p> <ul style="list-style-type: none"> • Polling indicates 98% of consumers aware of beer container deposits; • All collection partners receive POS materials; • Sponsorship of RCBC Annual Conference, consumer information hotline and Recyclepedia. • Promotion through stakeholder websites
<p>4. Benchmark BDL collection of secondary packaging materials</p>	<p>Target Partially Achieved:</p> <ul style="list-style-type: none"> • Portion of secondary packaging recycled through warehouse operations accounted for, estimate for packaging recycled through other means

Appendix A

Domestic Brewers (Refillable Bottles)

Brewer
Big Rock Brewery Limited
Brick Brewing Company
Chilkoot Brewing Co. Ltd (Yukon)
Dead Frog Brewery
Fireweed Brewing Corporation
Garrison Brewing Company
Granville Island Brewing Co. Limited
Great Western Brewing Company Ltd.
Labatt Brewing Company Ltd.
Mark Anthony Group
McAuslan Brewing
Molson Coors Canada
Moosehead Breweries Ltd
Nelson Brewing Co.
Okanagan Spring Brewery Ltd.
Pacific Western Brewing Co. Ltd.
Phillips Brewing Co.
Plan B Brewing Co.
Russell Brewing Company Ltd.
Sleeman Brewing Co.
The John Allen Brewing Co. Ltd.
Vancouver Island Brewing Co.
Vincor International
Yukon Brewing

Import and Domestic Suppliers (Cans)

Agent/Brewer
Amador Importers
Atlas Wine Merchants
Big Rock Brewery Limited
Bowen Island Brewing
Bruce Ashley Group
Calibrium International Limited
Cannery Brewing
Carlsberg Canada Inc.
Central City Brewing Company Limited
Charton-Hobbs Inc.
Culin Importers Ltd.
Diageo Canada Inc. (Dorval)
Diamond Estates Wines & Spirits B.C.
Fernie Brewing Company Limited
Fireweed Brewing Corporation
Granville Island Brewing Co. Limited
Great Western Brewing Company Ltd
Hell's Gate Brewing
Hi-Bridge Consulting Group
Independent Distillers (Canada) Limited
Innovative Commodity Imports Limited
Labatt Brewing Company Ltd.
Lighthouse Brewing Co. Ltd.
Lmp Wines Inc.
Lothar Heinrich Agencies Ltd.
M.J.S. Beverage Concepts Int'l

Mark Anthony Group Inc.
McClelland Premium Imports Inc.
Meagher's Distillery (B.C.) Ltd.
Molson Coors Canada
Moosehead Breweries Ltd.
Nelson Brewing Co.
Northam Brewery
Okanagan Spring Brewery Ltd.
Pacific Western Brewing Co. Ltd.
Premier Brands Limited
Premium Beer Company Inc.
Russell Brewing Company Ltd.
Sebucom International Corporation
Sleeman Brewing Co.
Sunny Star Import Export Limited
The Barley Mill
The Cannery Brewing Company
The Kirkwood Group
United Distributors Of Canada
Vancouver Island Brewing Co.
Whitehall Agencies Ltd.