

BC Brewers Recycled Container Collection Council

Annual Report to the Director

2016 Calendar Year

Submitted to:

**Executive Director
Environmental Standards Branch
Ministry of Environment
PO Box 9341, STN PROV GOVT
Victoria, BC V8W 9M1**

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BRCCC 2016 Product Stewardship Report to the Executive Director, Environmental Standards Branch

1. Executive Summary

Products within plan:	Refillable Glass Beer, Cider & Cooler Containers, and Metal Beverage Alcohol Cans
Program website:	http://www.EnviroBeerBC.com

Recycling Regulation Reference	Topic	Summary (5 Bullet Maximum)
Part 2, Section 8(2)(a)	Public Education Materials & Strategies	<ul style="list-style-type: none"> • Participating stewardship agency in 2016 BC Recycles Ambassador Tour • Continued roll-out of new branding and posters distributed for display – including electronic signage – at all authorized return locations • Continued promotion of the BC Recycles portal as a 'one-stop' location for information on recycling in BC
Part 2, Section 8(2)(b)	Collection Systems & Facilities	<ul style="list-style-type: none"> • BRCCC delivers beer to retail locations and licensed establishments and collects containers at retail locations, licensed establishments and container depots • BDL operates 2 warehouse facilities and 44 delivery vehicles in BC • There are 1,140 container redemption facilities for BRCCC program containers in the province; see tables 1 and 2 for breakdown by return location type and by regional district, respectively
Part 2, Section 8(2)(c)	Product Environmental Impact Reduction, Reusability & Recyclability	<ul style="list-style-type: none"> • All primary containers are either reused or recycled • All associated secondary packaging is returnable and recyclable • Estimated waste diversion rate of 25,653TN • Avoided 88,112TN of CO₂E
Part 2, Section 8(2)(d)	Pollution Prevention Hierarchy & Product Component Management	<ul style="list-style-type: none"> • Reduction of new materials used continues to be recognised through the reuse of refillable bottles • Brewers receiving bottles for refilling have expressed intent to continue to refill those containers • 100% of aluminum containers collected were recycled in 2016 • 100% of refillable glass collected are either sent for intended re-use by brewers or recycling (99% sent to brewers for re-use, 1% sent directly to a glass recycler for recycling)
Part 2, Section 8(2)(e)	Product Sold and Collected & Recovery Rate	<ol style="list-style-type: none"> 1. 659 million containers sold and 597 million containers recovered 2. 90.59% recovery rate 3. 9th consecutive year program has achieved a recovery rate over 90%
Part 2, Section 8(2)(e.1)		See Section 7 for estimated breakdown per regional district.

Part 2, Section 8(2)(f)	Summary of Deposits, Refunds, Revenues & Expenses	Deposits Received: \$66,693,087 Deposits Refunded: \$59,712,594 Audit of B.C. Brewers' Recycled Container Collection Council Financial Statements and audit procedures in connection with Sections 8(2)(b), (d), and (e) of the Recycling Regulation and deposits received and refunds paid on cans conducted by KPMG LLP.
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Comparison of Key Performance Targets Part 2 – Section 8(2)(g); See full list of targets in Plan Performance		
Priority Stewardship Target (as agreed with Ministry File Lead)	Performance	Strategies for Improvement
1. <u>Container Return Rates</u> 87.5% Recovery/Collection Rate in each container category	<u>Targets Partially Achieved:</u> <ul style="list-style-type: none"> • 94.34% return rate for refillable industry standard bottles (ISB) • 81.74% return rate for refillable proprietary glass bottles • 90.52% return rate for aluminum cans • 90.59% return rate overall 	<ul style="list-style-type: none"> • Improvement strategies specific to refillable proprietary bottle category only • Strategy: Improve communications and monitoring to ensure BRCCC collection network correctly categorizes container types
2. <u>Consumer Accessibility:</u> — Improve consumer access to BRCCC return locations to 252 (180 LRS, 72 depots) with at least 1 contracted return location in each regional district	<u>Targets Partially Achieved:</u> <ul style="list-style-type: none"> • 175 return locations (103 LRS, 72 depots) • 27 of 28 regional districts with at least 1 contracted return location 	<ul style="list-style-type: none"> • Reviewing current coverage levels to identify key areas for LRS contracted expansion
3. <u>Pollution Prevention</u> 100% of collected materials for re-use or to recycling commodity markets	<u>Targets Achieved:</u> <ul style="list-style-type: none"> • Aluminum: 100% Processed for metal recovery • Refillable Glass Bottles: <ul style="list-style-type: none"> - 99% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled) - 1% of material shipped, sent directly to a glass recycler for recycling by BDL 	<ul style="list-style-type: none"> • Continue to ensure service providers meet processing standards

2. Program Outline

The BC Brewers Recycled Container Collection Council (BRCCC) is a not-for-profit BC society, whose members represent over 95% of BC production and the majority of import production. Those producers appointing BRCCC as their stewardship agency under Schedule 1 of the *Recycling Regulation* are comprised of breweries and other beverage alcohol manufacturers, including those operating in the province in addition to import brewers who designate BRCCC as their product steward when they obtain LDB approval to sell their products in B.C

Brewers Distributor Limited (BDL) is a joint venture company owned by Labatt Breweries of Canada and Molson Coors Canada that provides distribution services throughout Western Canada for the majority of brewers that sell into British Columbia. BDL operates warehouses and distribution facilities throughout British Columbia and distributes beer to provincially licenced 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 small or remote communities) as well as bars, restaurants, and other licensed establishments.

BDL acts as the service provider to BRCCC, operating the stewardship program. On behalf of the BRCCC, BDL collects refillable glass beer, cider, and cooler bottles as well as imported & domestic metal beverage alcohol cans sold in British Columbia. The container recovery happens predominately in conjunction with the distribution of full goods, with container returns occupying trailers returning from delivering full goods to retail and private sites.

BDL's return collection includes the beer industry standard refillable glass bottle (ISB), as well as non-standard proprietary refillable beer, cider, and cooler bottles and metal beverage alcohol cans. BDL's distribution and collection also extends to beer kegs. Beverage alcohol sold in these containers includes a deposit which is paid by the consumer at the point of purchase and returned at the point of return. BRCCC has also established a cost recovery mechanism for cans, which funds BRCCC's product stewardship functions through its subscribers. All costs associated with BRCCC and its container recovery system are internalized in brewers' operating costs, and are not passed on to the consumer in addition to retail prices.

Consumers are able to return all program containers and associated packaging to any retail location where beer is sold or to a BRCCC authorized container return depot. BDL collects containers from these retail locations and authorized depots, as well as from licensees like bars and restaurants. Intact refillable containers are returned to the brewers to be reused in the brewing process, while damaged or broken bottles are sent to Pacific Metals Recycling International in Vancouver for recycling. Aluminum cans are compacted and sent to ALCOA in the United States to be recycled into new cans and other aluminum based products.

Information on BRCCC product stewardship system can be found at www.EnviroBeerBC.com.

3. Public Education Materials & Strategies

BRCCC continues to enjoy amongst the highest consumer awareness levels in BC for its recovery program for containers, with very high levels of consumer satisfaction with their access to return locations. In late 2013, the Stewardship Agencies of BC undertook a consumer awareness benchmarking survey with respect to the various stewardship programs operating in BC (results were received in Q2 2014). BRCCC's program for beer containers was the most well-known of the stewardship programs. Among all respondents, 96% of BC residents were aware of the program for beer containers, with 99% of those with the relevant product being aware of

BRCCC's program. The Stewardship Agencies of BC undertook a similar consumer awareness survey in 2015, with BRCCC's program receiving similar levels of consumer awareness.

A similarly high level of consumers, 96% of all respondents and 99% of program users, expressed satisfaction with their level of convenience with respect to access to return locations. This result was again amongst the highest achieved for any stewardship program in BC. These consumer awareness and satisfaction results are very similar to results obtained by BRCCC in its consumer surveys undertaken in 2013, 2011, 2006, 2000 and 1997.

In 2016, BRCCC's consumer awareness strategy has focused on a) educating stakeholders – principally the consumer – about BRCCC and how its stewardship system operates and the environmental benefits it delivers; and b) promoting the authorized return locations within its stewardship network. Furthering both of these objectives, BRCCC has revamped its program website, www.EnviroBeerBC.com, with video content, a postal code search function for nearby return locations and linking to social media content. All of these functionalities increase the website's search engine optimization to ensure it is among the top results when BC consumers search for information on beer container returns.

BRCCC's Schedule 1 stewardship plan renewal received its approval from the B.C. Ministry of Environment in late July 2016. Despite the uncertainty around plan approval and its impact on the program's operations, BRCCC pressed ahead with achieving its commitments with respect to public education and awareness. In particular, BRCCC began presenting itself to the public as the relevant BC stewardship agency (previously, the name of the stewardship agency and the program operator had not generally been used). BRCCC partnered with a number of its collection location partners for their Earth Day events and other opportunities to promote the BRCCC program and its environmental benefits to the consumer. In addition, BRCCC began to participate in the BC Recycles 2016 summer Ambassadors tour, along with a number of other stewardship agencies. Through this tour, 2 teams of ambassadors travelled to events throughout BC to staff booths and promote consumer education and awareness about the various BC recycling programs, including answering any questions consumers may have. The ambassadors also featured in a number of media stories and interviews, as well as active social media content, reaching hundreds of thousands of BC residents in the summer of 2016. These activities achieved BRCCC's public education and awareness commitments for 2016 (despite plan approval not being achieved until late July 2016), with more activities planned for 2017.

BRCCC continues to work with ABLE BC to secure additional private retail liquor locations to support collections. ABLE BC regularly informs their members of this benefit through newsletters, publications and surveys.

Finally, BRCCC continues to maintain its membership in the Stewardship Agencies of BC (SABC). As a member of SABC, BRCCC funds the Recycling Council of BC's (RCBC) various consumer information vehicles, such as the Recycling Hotline, the RCBC website and the Recyclepedia. BRCCC also directs consumers to the 'BC Recycles' portal as a one-stop location for information on recycling in BC.

4. Collection System and Facilities

Consumers can return all program containers to BRCCC Authorized Depots, Licensee Retail Stores (LRS), Government Liquor Stores (GLS) and Rural Agency Locations (RAL) for their deposit redemption. BRCCC also provides on-site collection services through thousands of licensed establishments (i.e. restaurants and bars). Table 1 provides the number and type of operating collection facilities within the province. In 2016, BDL performed the collection, sorting, and storage of containers from 2 warehouse locations.

Transport and distribution of product and collection of containers is supported by a fleet of 44 BDL vehicles as well use of third party carriers, where required. BRCCC also accepts all secondary packaging associated with containers for return and recycling.

Table 1 – BC Container Redemption Locations for Beer Containers

Return Location Type	2016	2015
BRCCC Authorized Depots	72	72
Licensee Retail Stores	649	656
Government Liquor Stores	200	196
Rural Agency Locations	219	220
Total Locations	1,140	1,144

Currently, there are 1,140 retail and authorized depot redemption centres available for container collections across British Columbia. This is a reduction of 4 locations from 2015, largely due to a reduction in the number of private retail liquor stores in BC. BRCCC facilitates a high rate of return of containers through its convenient and numerous collection facilities within all regional districts of British Columbia, as outlined in Table 2.

Table 2 – Number of Collection Locations by Regional District

Regional Districts	2016 (All Locations)	2015 (All Locations)	2016 (Contracted Locations)
Alberni - Clayoquot	18	19	8
Bulkley - Nechako	20	27	5
Capital	85	83	15
Cariboo	39	43	6
Central Coast	3	3	0
Central Kootenay	43	44	3
Central Okanagan	47	45	8
Columbia - Shuswap	39	39	2
Comox Valley	25	25	5
Cowichan Valley	29	28	8
East Kootenay	35	37	2
Fraser - Fort George	35	39	13
Fraser Valley	73	67	9
Greater Vancouver	285	280	45
Kitimat - Stikine	17	17	7
Kootenay Boundary	18	19	1
Mount Waddington	19	20	1
Nanaimo	48	51	6
North Okanagan	33	33	2
Northern Rockies	5	4	2
Okanagan - Similkameen	38	38	4
Peace River	32	26	3
Powell River	12	13	1
Skeena - Queen Charlotte	12	14	4
Squamish - Lillooet	21	20	3
Strathcona	31	31	6
Sunshine Coast	15	15	2
Thompson - Nicola	63	64	4
Grand Total	1140	1144	175

BRCCC, through BDL, continues to monitor coverage levels to identify key areas for LRS contracted expansion that would improve the consumer experience as well as overall productivity of the program. As such, BRCCC is planning to increase the number of contracted container return locations in the province over the next few years. The current number of operating BRCCC Authorized Depots in the province is 72. Consumers can visit www.EnviroBeerBC.com/Locations/ to search for the closest Authorized BRCCC Depot or retail location by postal code.

5. Product Environmental Impact Reduction, Reusability and Recyclability

The brewers of British Columbia hold environmental awareness and preservation in high regard. The industry has taken back containers and packaging since brewers started brewing in the province over 130 years ago; the practice continues today. The foundation of BDL's business strategy remains the efficient collection and recycling of containers and maximizing return rates, which helps achieve environmental goals, and ensures fewer raw materials are in use in the brewing process. Providing consumers with the ability to take-back returns at retail establishments generates high returns on containers and packaging and does so in a cost effective manner. Coordinating the redistribution of trailer space between full goods and returned containers reduces fuel consumption, which minimizes environmental impact and operating costs. The cost-effectiveness of the system enables the brewing sector to maintain production in refillable containers and encourages new brewers in BC to use refillable over non-refillable containers. Each new entrant who chooses to use refillable containers continues to shrink the environmental impact of the industry and contributes to its exceptional return rates.

The pillar of BDL's business model is the recovery rates of the containers. As the threshold of container recovery rates drops below 75%, each bottle is only reused roughly 4 times, effectively eliminating the cost savings of using refillable bottles. By using refillable containers and achieving high return rates, BC brewers avoid the production of over 90 million one-use bottles and other containers, which dramatically reduces the overall amount of waste produced per product. When compared to using 15 one-time use glass bottles that are then recycled, using a refillable bottle an average of 15 times reduces energy and pollution associated with manufacturing by approximately 90%.

In order to maximize the efficiency of the production cycle, the Canadian beer industry has developed an industry standard bottle (ISB), which is available to every brewer in the country. The use of a standard bottle limits the need, and cost, for specialized handling and storage of bottles returning to different brewers, and significantly improves the production efficiencies by eliminating the need for brewers to perform costly packaging line changeovers. Presently there are 12 British Columbia breweries that are signatories to the Standard Mould Bottle Agreement (sometimes referred to as the Industry Standard Bottle Agreement) and sell their products in the ISB. The economic efficiency of the British Columbia brewers' reuse and recycling system extends its benefits as savings to the consumers and to the environment.

BRCCC's container redemption system generates one of the highest return rates for aluminum cans in North America. Producing cans from recycled aluminum instead of virgin aluminum reduces the energy resources used and pollution produced. Approximately 95% less energy is used in the production of aluminum products from recycled aluminum compared to production from virgin aluminum.

6. Pollution Prevention Hierarchy and Product / Component Management

The Schedule 1 product stewardship plan outlines two types of containers to be used by the BRCCC brand owners: refillable glass bottles and recyclable metal (principally aluminum) cans. According to the expanded hierarchy of material management, reuse and recycle are among the most favourable forms of prevention (see Figure 1)¹. BRCCC remains committed to ensuring the use of 100% recyclable and non-toxic containers, each with their own well established secondary markets. The long standing history of the refillable glass bottle along with its substantial environmental benefits sets its precedent as the preferred container type among brewers, especially when compared to one-way glass containers. Each time a glass bottle is reused the total amount of raw materials needed is reduced, as well as the energy resources needed to produce new glass stock. This helps the beer industry significantly reduce its CO2 emissions and save significant amount of energy. Operationally, the washing and cleaning of refillable bottles requires much less energy and water than that of producing new glass. For each ton of aluminum recycled, over 200 GJ of energy are saved in avoided production processes including: bauxite mining, alumina refining, and electrolysis².

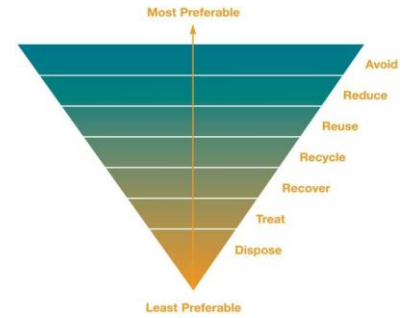


Figure 1 Pollution Prevention Hierarchy

The number of refillable glass bottles shipped to brewers for re-use is tracked and recorded by BDL, as well as the weight of broken or culled glass shipped directly to glass recyclers. BDL’s records also include the weights of aluminum cans that are crushed into “biscuits” and shipped to aluminum recyclers. In 2016, 100% of the aluminum and glass containers sent from BDL to recyclers was recycled. By reusing and recycling containers and releasing the containers back into the market, brewers maintain their commitment to the environment and ensure that the recycling operations done by BDL are utilized to the fullest. Table 3 shows the results for the containers recovered in 2016.

Table 3: Results of Recovered Containers 2016³

Type of Container	Results of Recovered Containers	
Aluminum Cans	100% Processed for metal recovery	
Refillable Glass Bottles	100% of the material sent to Brewers were intended to be refilled	
	99% of material shipped, sent to brewers for reuse	1% of material shipped, sent directly to a glass recycler for recycling by BDL

BRCCC’s product stewardship system also results in energy savings and reduced greenhouse gas (GHG) emissions, which are significant and are outlined in Table 4. The estimated GHG reductions associated with the program’s recycling and reuse in 2016 are equivalent to pulling over 18,612⁴ cars off of provincial roads.

¹ See Zero Waste SA: South Australia’s Waste Strategy 2011-2015. 2011 Report

² PE Americas. Life Cycle Impact Assessment of Aluminum Beverage Cans. 2010 Report.

³ Results of Recovered Containers reviewed by KPMG LLP

⁴<http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>

Table 4 - Energy, Greenhouse Gas, and Avoided Pollutants Associated with BRCCC Container Recovery 2016

Pollution Prevention Metric	Glass Reuse & Recycling	Aluminum Recycling	Total Diversion
Weight of Materials Diverted (tonnes)	17,209	8,444	25,653
Avoided GHG Emissions (MT-CO2-eq)	6,539	81,572	88,112
Avoided Energy Consumption (GJ)	117,018	737,698	854,716
Avoided Pollution - Nitrogen Oxides (tonnes)	30	265	295
Avoided Pollution - Sulphur Oxides (tonnes)	105	771	876
Avoided Pollution - Particulate Matter (tonnes)	64	268	332
Avoided Pollution - Solid Waste (tonnes)	1,147	36,285	37,432

Note: Figures in table have been rounded

The significant environmental savings associated with recycling aluminum extend from energy reduction to direct atmospheric emissions. Nitrogen oxides, sulphur dioxides, and particulate matter emissions are reduced by over 60%, 90% and 95% respectively when aluminum products are made from recycled materials. In 2016, the estimated total emission reductions of nitrogen oxides, sulphur oxides and particulate matter from recycling aluminum and reusing glass bottles in BC are 295, 876, and 332 metric tonnes respectively.

Additionally, the production of aluminum generates solid waste that is four and a half times heavier than the resulting aluminum. The BRCCC container recovery system ensures the reduction of significant quantities of virgin aluminum or glass production through reuse and recycling. An estimated 37,432 metric tonnes of solid waste was prevented in 2016 as a result of BRCCC's container management. The prevented waste is also in addition to the approximately 25,653 tonnes of reused or recycled materials already diverted from provincial landfills in 2016 as a result of BRCCC's efforts. Combined, these totals represent BRCCC's accumulative impact of roughly 63,085 tonnes of reduced solid waste production annually – equivalent to approximately \$6.9 million in Vancouver tipping fees⁵. In summary, BRCCC continues to deliver outstanding results for British Columbia's environment through its product stewardship program.

7. Product Sold and Collected and Recovery Rate

Return rates for most BRCCC container categories exceed the 87.5% performance target established under the 2015-2019 stewardship plan and also greatly exceed the 75% target mandated under the Environmental Management Act regulations. Non-Standard, proprietary bottles was the only category that fell slightly short of the target for the year with a return rate of 81.74%. This can be attributed to an increase use of refillable over non-refillable bottles. This shift to refillables was not noted until the later part of 2016 despite coming onto the marketplace much earlier in the reporting year. This is an indicator that many consumers and service depots may not have been managing them as refillables, managing them as non-refillable outside of BRCCC's system. It is expected that the return rate for non-standard bottles will increase in 2017 as all parties will now be familiar with the newly categorized refillable bottles. However, the overall return rate was not significantly affected for 2016 as BRCCC's product stewardship plan collected over 597 million containers with a program return rate of 90.59%. For nine consecutive years the overall return rate has surpassed 90%. Table 5 outlines a summary of the recovery rate by container type for 2016.

⁵ Based on Vancouver 2015 tipping fee of \$109 per tonne for waste disposal.

http://www.bctrucking.com/sites/default/files/gvsdd_2015_tipping_fee_bylaw_no._287.pdf

Table 5 – BRCCC Container Recovery Rates 2016⁶

Container Type	Sales Dozens	Returns Dozens	Recovery Rate (%)
Cans	49,042,122	44,393,063	90.52%
Refillable Glass Containers			
Industry Standard Bottles	4,386,824	4,138,520	94.34%
Non-Standard Bottles	1,493,055	1,220,438	81.74%
Total Refillables	5,879,879	5,358,958	91.14%
Total All Containers	54,922,001	49,752,021	90.59%

Note: Figures in Table 5 have been rounded

Secondary Packaging and Other Containers

BRCCC is proud to have been implementing the obligations outlined by Schedule 5 (Packaging and Printed Paper) of the Regulation for decades prior to its enactment. In addition to containers, the program includes the collection of all secondary packaging including cardboard cases, can flats, plastic rings, and plastic shrink wrap. BRCCC provides a return and recycle option for all associated packaging related to every product sold to its customers.

BDL also sells and facilitates the collection and recycling of beer kegs. In 2016, BDL sold approximately 282,600 kegs primarily to licensed establishments. The efficiency of the closed loop collection system offered by BDL ensures similar results for kegs as other stewardship program containers. In 2016, the return rates for these container types were in excess of 98%. This volume is equivalent to over 4.05 million cases of packaged beer⁷, which translates to approximately 642 tonnes of aluminum or 12,865 tonnes of glass bottles⁸.

Table 6 provides estimated values of program diversion by regional district. As BRCCC does not compile sales of collection data by Regional District, the values for diversion estimates were assumed to follow the per capita distribution for each district. Population distribution estimates for 2016 were obtained from the BC Stats website⁹.

⁶ Container data reviewed by KPMG LLP. Sales for non-industry standard refillable bottles were provided by the BC Liquor Distribution Branch (LDB)

⁷ Assumed 58.67L Kegs and 12 x341 glass bottles as a package

⁸ Assumed 7lbs/case of glass bottles and 1lbs per 33 355ml cans

⁹ Source: <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx>

Table 6 - 2016 Program Diversion Estimates by Regional District (Based on Collected Containers)

Regional District	Aluminum Units (000)	Aluminum Weight (Tonnes)	Glass Units (000)	Glass Weight (Tonnes)	Total Units (000)	Total Weight (Tonnes)
Alberni-Clayoquot	3,444	47	416	110	3,860	157
Bulkley-Nechako	4,528	62	547	145	5,074	207
Capital	42,900	590	5,179	1,370	48,078	1,960
Cariboo	7,073	97	854	226	7,927	323
Central Coast	367	5	44	12	411	17
Central Kootenay	6,814	94	823	218	7,636	311
Central Okanagan	22,088	304	2,666	706	24,755	1,009
Columbia-Shuswap	5,838	80	705	186	6,543	267
Comox Valley	7,270	100	878	232	8,148	332
Cowichan Valley	9,419	129	1,137	301	10,556	430
East Kootenay	6,610	91	798	211	7,408	302
Fraser Valley	33,775	464	4,077	1,079	37,852	1,543
Fraser-Fort George	10,196	140	1,231	326	11,426	466
Greater Vancouver	286,786	3,942	34,620	9,160	321,405	13,102
Kitimat-Stikine	4,144	57	500	132	4,644	189
Kootenay-Boundary	3,355	46	405	107	3,760	153
Mount Waddington	1,247	17	151	40	1,398	57
Nanaimo	17,666	243	2,133	564	19,799	807
North Okanagan	9,548	131	1,153	305	10,701	436
Northern Rockies	673	9	81	21	754	31
Okanagan-Similkameen	9,045	124	1,092	289	10,137	413
Peace River	7,453	102	900	238	8,353	340
Powell River	2,282	31	275	73	2,557	104
Skeena-Queen Charlotte	1,945	27	235	62	2,180	89
Squamish-Lillooet	4,656	64	562	149	5,218	213
Strathcona	5,178	71	625	165	5,803	237
Sunshine Coast	3,279	45	396	105	3,674	150
Thompson-Nicola	15,137	208	1,827	483	16,964	692
British Columbia	532,717	7,322	64,307	17,016	597,024	24,338

Summary of Deposits, Refunds, Revenues and Expenditures

All costs associated with BDL's container can collection system are managed by BRCCC, which operates on a non-profit basis.

a. Refillable Bottles

In the case of refillable bottles, manufacturers are assessed a per-dozen fee 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. BRCCC retains unredeemed deposits and uses these funds to offset container management costs.

b. Recycled Cans

BRCCC retains unredeemed deposits with respect to can sales and retains revenues from aluminum material sales to offset costs related to: administration, transportation, collection and sorting fees and infrastructure. In 2016, there was no additional container cost recovery charged to brewers for cans under the program. BDL has also entered into service agreements with several container return depots for collection and sorting services. BRCCC revenues collected from both cans and bottles pay return location partners for the collection, sorting and return of BRCCC containers.

In the case of the Liquor Distribution Branch, BRCCC continues to operate under an agreement with the agency to pay it handling fees for each container collected from its stores. Licensee retail stores that sign up as collection partners are also paid a handling fee for each container collected. Table 7 outlines the deposits received and paid for each container type.

Table 7 - 2016 Deposit Summary

	Cans	Industry Standard Bottles (ISB)	Non-ISB Refillable Bottles	Total
Deposits Received (\$)	\$59,637,233	\$5,264,188	\$1,791,666	\$66,693,087
Refunds Paid (\$)	\$53,281,844	\$4,966,224	\$1,464,526	\$59,712,594

Note: As deposits are received and paid based on the quantity of bottles sold and collected, the dollar amount provided is based on \$1.20 per dozen sold/collected. The can figures are in accordance with an audit of B.C. Brewers' Recycled Container Collection Council Financial Statements and audit procedures in connection with Sections 8(2)(b), (d), and (e) of the Recycling Regulation and deposits received and refunds paid on cans conducted by KPMG LLP.

8. Plan Performance

Target	2016 Performance	Strategies for Improvement
87.5% Recovery/Collection Rate in each container category	<ul style="list-style-type: none"> • 94.34% return rate for refillable industry standard bottles (ISB) • 81.74% return rate for refillable proprietary glass bottles • 90.52% return rate for aluminum cans • 90.59% return rate overall 	<ul style="list-style-type: none"> • Improvement strategies specific to refillable proprietary bottle category only <p>Strategy: Improve communications and monitoring to ensure BDL collection network correctly categorizes container types</p>
<p>Accessibility Targets</p> <ul style="list-style-type: none"> — 252 return locations (180 LRS, 72 depots) — At least 1 contracted return location in each regional district 	<ul style="list-style-type: none"> • 175 return locations (103 LRS, 72 depots) • 27 of 28 regional districts with at least 1 contracted return location 	<ul style="list-style-type: none"> • Reviewing current coverage levels to identify key areas for LRS contracted expansion
<p>Pollution Prevention Hierarchy/Product Life Cycle Targets:</p> <ul style="list-style-type: none"> — Target to 100% of collected materials for re-use or to recycling commodity markets 	<ul style="list-style-type: none"> • Aluminum: 100% Processed for metal recovery • Refillable Glass Bottles: <ul style="list-style-type: none"> - 99% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled) - 1% of material shipped, sent directly to a glass recycler for recycling by BDL 	<ul style="list-style-type: none"> • Continue to ensure service providers meet processing standards



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INDEPENDENT ASSURANCE REPORT TO BREWERS RECYCLED CONTAINER COLLECTION COUNCIL

To the Directors of Brewers Recycled Container Collection Council:

ASSURANCE LEVEL AND SUBJECT MATTER

We have been engaged by Brewers Recycled Container Collection Council (“BRCCC”) and the management of Brewers Distributor Limited (“BDL”) (collectively “Management”) to undertake a reasonable assurance engagement in respect of the following disclosures in BRCCC’s Annual Report to the Director for the 2016 calendar year (together the “Subject Matter”):

- Section 4 (Table 1 and Table 2) *Collection System and Facilities* – the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of BC Regulation 449/2004 (the Recycling Regulation);
- Section 6 (Table 3) *Pollution Prevention Hierarchy and Product/Component Management* – the Company’s description of how the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation
- Section 7 (Table 5) *Product Sold and Collected and Recovery Rate*– the total amounts of product sold and collected and recovery rate in accordance with Section 8(2)(e) of the Recycling Regulation;



- Section 8 (2016 Performance) *Plan Performance*– the Company’s description of performance for the year in relation to targets under Section 8(2)(g) of the Recycling Regulation that are associated with Section 8(2)(b), (d) and (e); and,
- Selected information in Section 7 (Table 7) *BRCCC Deposit Summary* – Deposit Received and Refunds Paid of Cans.

BRCCC contracted certain responsibilities to the management of the Brewers Distributor Limited (BDL). The objective of this Report is to express an opinion on how Management has discharged its responsibility to report on the Subject Matter in accordance with Sections 8(2)(b), (d),(e) and (g) and selected deposit received and refunds paid of cans.

RESPONSIBILITIES

Management are responsible for the preparation and presentation of the Subject Matter in accordance with the evaluation criteria which are integral to the Subject Matter presented in Appendix 1, current as at the date of our report. Management of BDL and BRCCC are also responsible for establishing and maintaining appropriate performance management and internal control systems from which the reported Subject Matter is derived.

Our responsibility in relation to the Subject Matter is to perform a reasonable assurance engagement and to express a conclusion based on the work performed. Our opinion does not constitute a legal determination of BRCCC’s compliance with the Recycling Regulation.

ASSURANCE STANDARD AND PROFESSIONAL REQUIREMENTS

We conducted our engagement in accordance with International Standard on Assurance Engagements 3000 Revised (ISAE 3000) Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. ISAE 3000 requires that we comply with applicable professional standards, including International Standard on Quality Control 1.

APPLICABLE CRITERIA

The suitability of the evaluation criteria is the responsibility of Management. The evaluation criteria presented in Appendix 1 are an integral part of the Subject Matter and



address the relevance, completeness, reliability, neutrality and understandability of the Subject Matter.

SUMMARY OF WORK PERFORMED

We planned and performed our work to obtain all of the evidence, information and explanations we considered necessary in order to form our conclusion as set out below. A reasonable assurance engagement includes examining, on a test basis, evidence supporting the amounts and disclosures within the Subject Matter. A reasonable assurance engagement also includes assessing the evaluation criteria used and significant estimates made by management, as well as evaluating the overall presentation of the Subject Matter.

The main elements of our work were:

- Inquiries of relevant management, including walkthroughs, to gain an understanding of the Company's data collection and reporting processes in relation to the Subject Matter included in the Annual Report;
- Comparison of collection facility data included in the Annual Report to internal records and reconciliation with external records.
- Comparison of sales and collection data included in the Annual Report to internal records and recalculation of data, where appropriate;
- Comparison of product recycling data against internal records of transfers to recycling facilities;
- Comparison of data on product reused data against internal records of delivery to brewers; and,
- Comparison of deposit received and refunds paid on cans against internal records of BRCCC and BDL of refunds and payments associated with can sales and can recovery.

OPINION

In our opinion, the Subject Matter within the Brewers Distributor Limited Annual Report for the year ended December 31, 2016 presents fairly in accordance with the evaluation criteria, in all material respects:



- the number and the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation;
- the description of how the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation;
- the total amounts of the producer's product sold and collected and, if applicable, the producer's recovery rate in accordance with Section 8(2)(e) of the Recycling Regulation; and,
- the performance for the year in relation to targets under Section 8(2)(g) of the Recycling Regulation that are related to Section 8(2)(b), (d) and (e); and,
- the total amount of deposit received and refunds paid on cans.

EMPHASIS OF MATTER

Without qualifying our opinion we draw attention to the following sections in the Annual Report which are critical to an understanding of the disclosures related to treatment of recovered containers in 2016:

- As disclosed in Section 6 (Table 3) in the Annual Report, 99% of refillable bottles were sent to brewers for reuse. We note that the actual rate of reuse by brewers is not reported to Brewers Distributor Limited and was not within the scope of our audit.
- As disclosed in Section 7 (Table 7) in the Annual Report, Deposits Received and Refunds Paid on Industry Standard Bottles (ISB) and Non-ISB Refillable Bottles are calculated based on quantity sold and collected. The monetary amounts disclosed for deposits and refunds on Industry Standard Bottles (ISB) and Non-ISB Refillable bottles were not within the scope of our audit..



Our report has been prepared solely for the purposes of Management's stewardship under the Recycling Regulation and is not intended to be and should not be used for any other purpose. Our duties in relation to this report are owed solely to BRCCC, and accordingly, we do not accept any responsibility for loss occasioned to any other party acting or refraining from acting based on this report.

KPMG LLP

Toronto, Canada

June 29, 2017



APPENDIX 1 TO THE AUDITOR’S REPORT
EVALUATION CRITERIA

COLLECTION FACILITIES

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Reference
Total Contracted Collection Facilities – 175 locations	<i>4. Collection System and Facilities</i> table 1 on Page 6
Location of contracted collection facilities -- by region	<i>4. Collection System and Facilities</i> table 2 on Page 6
Change in the number and locations of contracted collection facilities in 2016 -- Comparison between 2016 and 2015	<i>4. Collection System and Facilities</i> table 2 on Page 6

The following evaluation criteria were applied to the assessment of the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation:

1. Total number of contracted collection facilities includes Licensee Retail Stores, Government Liquor Stores and BDL authorized depots and their satellites that BDL has a contractual relationship with.
2. Collection facilities are divided into 28 regional districts in BC based on the address in BDL’s J.D. Edwards system. Addresses of the facilities per BDL are reconciled with those provided by LDB where applicable at a regional district level.
3. Changes in the number and location of collection facilities are calculated based on comparison to the previous year’s list by regional district.



PRODUCT SOLD AND COLLECTED

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Reference
BRCCC Container Sales 2016 (dozens): Industrial Standard Bottles – 4,386,824 Non-Standard Bottles – 1,493,055 Total Refillables – 5,879,879 Cans – 49,042,122 BRCCC Container Recovery 2016 (dozens): Industrial Standard Bottles – 4,138,520 Non-Standard Bottles – 1,220,438 Total Refillables – 5,358,958 Cans – 44,393,063 BRCCC Container Recovery Rates 2016: Industrial Standard Bottles – 94.34% Non-Standard Bottles – 81.74% Total Refillables – 91.14% Cans – 90.52%	<i>7. Product Sold and Collected and Recovery Rate</i> Table 5 on Page 10

The following evaluation criteria were applied to the assessment of the description of how total amounts of the producer’s product sold and collected and, if applicable, the producer’s recovery rate has been calculated in accordance with Section 8(2)(e):



1. Product sold: The total number of bottles or cans sold is based on the sales figures received from the Liquor Distribution Branch (LDB)
2. Product collected--bottles:
 - a) The total number of bottle returns (product collected) is calculated as follows:
Closing inventory balance - Opening inventory balance + Returns to brewers during the calendar year.
 - b) The quantity of bottles returned to brewers from BDL warehouses is based on records in the J.D.Edwards system.
 - c) Opening and closing inventory balances at BDL warehouses are based on year-end physical counts as recorded in the J.D. Edwards system.
3. Product collected--cans: Total number of can returns is based on the total recorded in the J.D. Edwards system during the calendar year.



MANAGEMENT OF RECOVERED PRODUCT

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Reference
Aluminum cans: <ul style="list-style-type: none"> • 100% processed for material recovery Refillable glass bottles: <ul style="list-style-type: none"> • 1% of material shipped, sent directly to a glass recycler for recycling by BDL • 99% of material sent to brewers for reuse 	<i>6. Pollution Prevention Hierarchy and Product/Component Management</i> Table 3 on Page 8

The following evaluation criteria were applied to the assessment of the description of the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation:

1. Aluminum cans

The total weight of cans received by Alcoa is based on Alcoa’s confirmation of each shipment by BDL during calendar year 2016. Total weight confirmed by Alcoa is reconciled with total weight shipped by BDL. End fate of aluminum cans is based on qualitative end fate data reported by Alcoa Inc. to BDL.

2. Refillable bottles sent directly from BDL for recycling

The quantity of bottles/glass sent by BDL to Pacific Metals for recycling is determined based on J.D. Edwards system data on empty shipments to Pacific Metal with the description “ditched bottles”.

The % sent directly from BDL for recycling is calculated as: the quantity of bottles/glass sent to Pacific Metals during the reporting year (equivalent of dozens) divided by the total quantity of bottles/glass sent to Pacific Metals and bottles sent to brewers during the reporting year (equivalent of dozens)



3. Refillable bottles sent to brewers:

The quantity of bottles sent to brewers for reuse is determined based on J.D.Edwards system data on empty shipments to brewers.

The % sent to brewers is calculated as: the quantity of bottles sent to Brewers during the reporting year (equivalent of dozens) divided by the total quantity of ditched bottles/glass sent to Pacific Metals and bottles sent to brewers during the reporting year (equivalent of dozens)

Following the instruction in Waste Prevention Branch's email to Stewards on February 18, 2016: *"Reuse" of a product as it was originally intended (e.g. bottles) does not need to be assured beyond when the product is shipped from the program if evidence is provided that demonstrates the intent is reuse (e.g. the auditor will not need to confirm the actual reuse of the individual product).*



TARGETS

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Reference
<p>Recovery Targets:</p> <p>2016 Assertion – Targets partially achieved:</p> <ul style="list-style-type: none"> • 94.34% return rate for refillable industry standard bottles (ISB) • 81.74% return rate for refillable proprietary glass bottles • 90.52% return rate for aluminum cans • 90.59% return rate overall 	<p>8. Plan Performance on Page 13</p>
<p>Accessibility Targets:</p> <p>2016 Assertion – Targets partially achieved:</p> <ul style="list-style-type: none"> • 72 bottle depots • 103 collection retail sites • 27 of 28 regional districts with at least 1 contracted return location 	<p>8. Plan Performance on Page 13</p>



<p>Pollution Prevention Hierarchy/Product Life Cycle Targets:</p> <p>2016 Assertion --Targets achieved:</p> <ul style="list-style-type: none"> • 100% sent for reuse or recycle 	<p>8. Plan Performance on Page 13</p>
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The following evaluation criteria were applied to the assessment of the description of performance for the year in relation to targets in the approved stewardship plan under Section 8(2)(b), (d) and (e) of the Recycling Regulation.

1. Recovery Targets: Recovery rate of 87.5% in each container category
 Recovery rate is calculated as follows: container returned during the period ÷ container sold during the period. The description of progress against targets to date is supported by records of progress maintained by the Company.
2. Accessibility Targets: 252 unlimited return locations (180 LRS, 72 depots) and at least 1 unlimited return location in each regional district
 Unlimited Collection Partners are those locations active as of Dec 31 that have a contractual relationship with BDL to collect unlimited containers from customers, and refund customers the full amount of the deposit per bottle or can. The description of progress against targets to date is supported by records of progress maintained by the Company.
 Regional district is allocated based on address of the collection facility.
3. Pollution Prevention Hierarchy/Product Life Cycle Targets: 100% of collected materials for re-use or to recycling commodity markets
 Calculation of % is based on methodology defined in Management of Recovered Products section



DEPOSIT RECEIVED AND REFUNDS PAID OF CANS

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Reference
Deposit Received – Cans: \$59,637,233 Refunds Paid – Cans: \$53,281,844	<i>7. Product Sold and Collected and Recovery Rate</i> Table 7 on Page 12

The following evaluation criteria were applied to the assessment of the description of total amount of deposit received and refunds paid of cans as required under Section 8(2)(f)(i):

1. The deposits received are based on funds received from LDB by BRCCC during the period from January 1, 2016 to December 31, 2016 recorded in the general ledger of BRCCC.
2. The refunds paid are based on payments to collection facilities during the period from January 1, 2016 to December 31, 2016 recorded in the general ledger of BDL.