



# **BC BREWERS RECYCLED CONTAINER COLLECTION COUNCIL**

## **Annual Report to the Director**

### **2020 Calendar Year**



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

Prepared by: **BC Brewers Recycled Container Collection Council**  
**5900 Explorer Drive**  
**Mississauga, ON L4W 5L2**

## BRCCC 2020 Product Stewardship Report to the Executive Director, Environmental Standards Branch

### Introduction

BRCCC’s mission is clear - to continue to lead the way in environmental stewardship to achieve the highest return rate for alcoholic beverage containers and related packaging. For over 90 years, long before any regulatory requirements, the Beer Industry has managed a deposit return system and remains the only system in the Province that refills glass bottles. The refillable beer bottle, which is reused on average of 15 times before being recycled, continues to be a gold standard of sustainable packaging and an exemplary model of a circular economy during the current single-use plastics crisis. BRCCC’s unique collection system utilizes the brewers’ distribution and retail networks, which maximizes efficiencies through return empty container trips coordinated with full goods deliveries thereby significantly reducing greenhouse gas emissions. BRCCC has also long-practiced crushing cans before shipping to optimize transportation routes and reduce the need for trucks on the road.

BRCCC faced a number of challenges as a result of the COVID-19 pandemic in 2020 that had a direct impact on the program's overall performance. However, despite temporary closures and suspension of empty returns, social distancing restrictions, behaviour changes and the misdirection of container returns, British Columbians still returned over 615 million BRCCC containers. Thanks to BC residents and our partners, BRCCC achieved an overall program return rate of 77.11% which continues to be the highest container recovery rate in the Province. As COVID restrictions lift and return network disruptions are mitigated, BRCCC anticipates program performance to rebound toward historical levels of 90%.

BRCCC consistently has one of the highest recovery rates in the province, with an average over 90% for more than a decade, and we remain committed to continue making the system effective, convenient, and sustainable. Achieving high recovery rates and ensuring excellent environmental performance means more materials are diverted from our landfills, oceans, and waterways.

### 1. Executive Summary

|                              |   |
|------------------------------|---|
| <b>Products within plan:</b> | Refillable Glass Beer, Cider & Cooler Containers, Metal Beverage Alcohol Cans and Secondary Packaging |
| <b>Program website:</b>      | <a href="http://www.EnviroBeerBC.com">http://www.EnviroBeerBC.com</a>                                 |

| Recycling Regulation Reference | Topic   | Summary (5 Bullet Maximum)  |
|--------------------------------|---|---|
| Part 2, Section 8(2)(a)        | Public Education Materials & Strategies<br><br>Schedule 1 & 5 | <ul style="list-style-type: none"> <li>• Updated location tool on <a href="http://www.EnviroBeerBC.com">EnviroBeerBC.com</a> website to make it easier to find return locations</li> <li>• Issued posters to some depot locations to help reduce confusion regarding bringing BRCCC containers to the counter for refund at applicable locations</li> <li>• Consumer awareness survey conducted in 2019 indicated 93% awareness in Schedule 1 program and 61% awareness in Schedule 5 program</li> <li>• Released can and bottle recycling videos providing tips on returning empty containers and associated packaging and showed what happens to those containers after they have been returned</li> <li>• Updated posters displayed at return locations to include messaging around returning secondary packaging</li> </ul> |

|                           |   |   |
|---------------------------|---|---|
| Part 2, Section 8(2)(b)   | Collection Systems & Facilities<br>Schedule 1 & 5                                     | <ul style="list-style-type: none"> <li>BRCCC delivers beer to retail locations and licensed establishments and collects containers at retail locations, licensed establishments, and container depots</li> <li>BDL operates a warehouse facility and delivery vehicles in BC</li> <li>There are 1,141 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</li> </ul>  |
| Part 2, Section 8(2)(c)   | Product Environmental Impact Reduction, Reusability & Recyclability<br>Schedule 1 & 5 | <ul style="list-style-type: none"> <li>All primary containers are either reused or recycled</li> <li>All associated secondary packaging is returnable and recyclable</li> <li>Estimated waste diversion rate of 15,704 TN, avoided 80,060 TN of CO<sub>2</sub>E associated with containers</li> </ul>   |
| Part 2, Section 8(2)(d)   | Pollution Prevention Hierarchy & Product Component Management<br>Schedule 1 & 5       | <ul style="list-style-type: none"> <li>Reduction of new materials used continues to be recognised through the reuse of refillable bottles</li> <li>Brewers receiving bottles for refilling have expressed intent to continue to refill those containers</li> <li>100% of aluminum containers collected were recycled in 2020</li> <li>100% of refillable glass collected is either sent for intended re-use by brewers or recycling (98.4% sent to brewers for re-use, 1.6% sent directly to a glass recycler for recycling)</li> <li>100% of material reported as collected packaging, sent to a recycler for recycling</li> </ul> |
| Part 2, Section 8(2)(e)   | Product Sold and Collected & Recovery Rate  | <ol style="list-style-type: none"> <li>798.1 million containers sold and 615.4 million containers recovered</li> <li>77.11% recovery rate</li> <li>69.79% Secondary Packaging recovery rate</li> </ol>  |
| Part 2, Section 8(2)(e.1) | Schedule 1 & 5  | See Section 7 for estimated breakdown per regional district.  |
| Part 2, Section 8(2)(f)   | Summary of Deposits & Refunds<br>Schedule 1   | <p>Deposits Received: \$78,379,591<br/>Deposits Refunded: \$61,526,943</p> <p>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 conducted by KPMG LLP.</p>  |

| <b>Comparison of Key Performance Targets</b>  |   |   |
|---|---|---|
| Part 2 – Section 8(2)(g); See full list of targets in Plan Performance                            |   |   |
| <b>Priority Stewardship Target</b><br>(as agreed with Ministry File Lead)                         | <b>Performance</b>  | <b>Strategies for Improvement</b>   |
| 1. <u>Container Return Rates</u><br><br>87.5% recovery/collection rate in each container category | <u>Targets Partially Achieved:</u> <ul style="list-style-type: none"> <li>92.54% return rate for refillable industry standard bottles (ISB)</li> <li>74.89% return rate for refillable proprietary glass bottles</li> <li>76.79% return rate for aluminum cans</li> <li>77.11% return rate overall</li> </ul> | <ul style="list-style-type: none"> <li>Improve strategy for collection of refillable proprietary glass bottles</li> <li>Continue to communicate with brewers and collection network regarding categorization of containers</li> </ul> |

|  |   |   |
|--|---|---|
| <p>2. <u>Secondary Packaging Return Rates</u></p> <p>75% Recovery/Collection rate of secondary packaging material</p>  | <p><u>Target Partially Achieved:</u></p> <ul style="list-style-type: none"> <li>69.79% recovery/collection rate attained for secondary packaging</li> </ul>   | <ul style="list-style-type: none"> <li>Work with existing partners to secure additional material for recovery</li> </ul>  |
| <p>3. <u>Consumer Accessibility for Containers</u></p> <p>Improve consumer access to BRCCC return locations to 385 (305 LRS, 80 depots) with at least 1 contracted return location in each regional district</p>   | <p><u>Targets Partially Achieved:</u></p> <ul style="list-style-type: none"> <li>172 return locations (100 LRS, 72 depots)</li> <li>26 of 28 regional districts with at least 1 contracted return location</li> </ul>   | <ul style="list-style-type: none"> <li>Reviewing current coverage levels to identify key areas for depot and contracted LRS expansion</li> <li>Perform additional drive time studies to identify potential areas that require increased coverage</li> </ul> |
| <p>4. <u>Consumer Accessibility for Secondary Packaging</u></p> <p>1,156 total return locations</p>  | <p><u>Target Partially Achieved:</u></p> <ul style="list-style-type: none"> <li>1,141 total return locations in the BRCCC network</li> <li>Materials received from Recycle BC are collected through the Recycle BC network which includes additional collection locations not included in the 1,141 reported in the BRCCC network</li> </ul>  | <ul style="list-style-type: none"> <li>Add incremental collection sites to the BRCCC collection network in potential areas that require increased coverage.</li> </ul>  |
| <p>5. <u>Consumer Accessibility for Drive Time</u></p> <p>80% of population within 10 minute drive of BRCCC authorized return location</p>   | <p><u>Target Achieved:</u></p> <ul style="list-style-type: none"> <li>80% of population within a 10 minute drive of a BRCCC authorized return location</li> </ul>   | <p>N/A</p>  |
| <p>6. <u>Consumer Awareness: Promotion/Education Initiatives</u></p> <p>3 net new consumer promotion/education initiatives throughout the Schedule 1 &amp; 5 plans</p>   | <p><u>Target Achieved:</u></p> <ul style="list-style-type: none"> <li>At least one net new consumer promotion/education initiative rolled out in each program year</li> </ul>   | <ul style="list-style-type: none"> <li>Continue to promote the collection system and educate the public to increase awareness</li> </ul>  |
| <p>7. <u>Consumer Awareness: Level of Consumer Awareness</u></p> <p>60% level of consumer awareness on consumer awareness survey</p>   | <p><u>Target Achieved:</u></p> <ul style="list-style-type: none"> <li>61% consumer awareness survey result</li> </ul>   | <p>N/A</p>  |
| <p>8. <u>Pollution Prevention</u></p> <p>100% of collected materials for re-use or to recycling commodity markets</p> <p>Secondary Packaging:</p> <ul style="list-style-type: none"> <li>Report in accordance with PHP</li> <li>Track end fate of materials in annual stewardship audit</li> </ul> | <p><u>Targets Achieved:</u></p> <ul style="list-style-type: none"> <li>Aluminum: 100% processed for metal recovery</li> <li>Refillable Glass Bottles: <ul style="list-style-type: none"> <li>98.4% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled)</li> <li>1.6% of material shipped, sent directly to a glass recycler for recycling by BDL</li> </ul> </li> <li>100% of material reported as collected, sent to a recycler for recycling</li> </ul> | <ul style="list-style-type: none"> <li>Continue to ensure service providers meet processing standards</li> <li>Work with brewers and other collection locations to strengthen reporting and tracking systems</li> </ul>                                     |

## 2. Program Outline

The BC Brewers Recycled Container Collection Council (BRCCC) is a not-for-profit BC society, whose members represent over 95% of overall beer production in BC and the majority of import production. Those producers appointing BRCCC as their stewardship agency under Schedule 1 and Schedule 5 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 BC.

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 and domestic metal beverage alcohol cans sold in British Columbia and the secondary packaging that accompanies those items (paperboard cartons, trays, etc.). This 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. As such, reverse logistics creates efficiency in the system in the upstream reduction of energy, materials, and water inputs. BRCCC has also long-practiced crushing cans before shipping to optimize transportation routes and reduce the need for trucks on the road, valuing efficiency and operational effectiveness that contributes to the circular economy.

BRCCC is the only container stewardship program that supports reuse through refill. BDL's return collection includes the beer industry standard refillable glass bottle (ISB), non-standard proprietary refillable beer, cider, and cooler bottles and metal beverage alcohol cans as well as the packaging that accompanies these containers, and the packaging associated with non-refillable beer containers as applicable. 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 and secondary packaging, 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 no consumer fees are added to the product price at the point of purchase and identified on the consumer receipt of sale.



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 and packaging 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 on average of 15 times, while damaged or broken bottles are sent to be recycled into new, high-end products including new bottles and fibreglass insulation. Aluminum cans are compacted and were sent to be recycled into new cans and other aluminum based products. Paper packaging is sent to a number of recyclers to be turned into liner board used to make drywall, boxboard rolls to create packaging such as cereal boxes and tissue rolls.

Information on BRCCC's product stewardship systems can be found at [www.EnviroBeerBC.com](http://www.EnviroBeerBC.com).

### 3. Public Education Materials & Strategies

In 2020, BRCCC updated the location tool on the [www.EnviroBeerBC.com](http://www.EnviroBeerBC.com) website to make it easier to find return locations around the province. New posters were issued to some depot locations to help reduce confusion regarding bringing BRCCC containers to the counter for refund at applicable locations.

BRCCC enjoys strong consumer awareness levels in BC for its recovery program, with very high levels of consumer satisfaction with regards to service at return locations. In 2019, the BRCCC undertook a consumer awareness survey with respect to its container (Schedule 1) and secondary packaging (Schedule 5) stewardship programs in BC. Based on these results, BRCCC's program for beer containers was very well-known with 93% of respondents being aware of the deposit program for beverage alcohol containers. BRCCC also hit the consumer awareness target in the Schedule 5 plan with 61% of respondents knowing that the original packaging of these containers can also be returned. BRCCC will continue to create awareness about packaging recovery in BC.

The secondary packaging program was launched in 2017 and saw a number of announcements and updates made to help educate stakeholders about the program to reinforce the effectiveness of the container recovery program while at the same time introducing the complimentary secondary packaging program. To aid in the education of consumers, new posters (shown below) were developed in 2019 to display at return locations to include messaging around returning secondary packaging. BRCCC also released can and bottle recycling videos on its website [www.EnviroBeerBC.com](http://www.EnviroBeerBC.com) providing tips on returning empty containers and associated packaging and showed what happens to those containers after they have been returned. BRCCC continued supply program "swag" such as coasters, beer cozies, and frisbees to several events and conferences to drive awareness of the programs.

Overall, BRCCC continued efforts to a) educate 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.

BRCCC continued 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. Additionally, BRCCC actively participates and sponsors stewardship and recycling related events, such as the annual conferences of RCBC and Coast Waste Management Association (CWMA).

#### 4. Collection System and Facilities

Consumers can return all program containers and related secondary packaging to BRCCC Authorized Depots, Licensee Retail Stores (LRS), Government Liquor Stores (GLS) and Rural Agency Locations (RAL) for their deposit redemption. BRCCC, through BDL, 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 2020, BDL performed the collection, sorting, and storage of containers from one warehouse location. Transport and distribution of product and collection of containers is supported by a fleet of BDL vehicles as well as 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 & Secondary Packaging*

| <b>Return Location Type</b> | <b>2020</b> | <b>2019</b> |
|-----------------------------|-------------|-------------|
| BDL Authorized Depots       | 72          | 71          |
| Licensee Retail Stores      | 652         | 651         |
| Government Liquor Stores    | 199         | 198         |
| Rural Agency Locations      | 218         | 220         |
| <b>Grand Total</b>          | <b>1141</b> | <b>1140</b> |

Currently, there are 1,141 retail and authorized depot redemption centres available for container collections across British Columbia. This is an increase of 1 location from 2019. 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. 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     | 2020 (All Locations) | 2019 (All Locations) | 2020 (Contracted Locations) | 2019 (Contracted Locations) |
|------------------------|----------------------|----------------------|-----------------------------|-----------------------------|
| Alberni - Clayoquot    | 16                   | 17                   | 7                           | 7                           |
| Bulkley - Nechako      | 20                   | 20                   | 5                           | 6                           |
| Capital                | 85                   | 83                   | 17                          | 16                          |
| Cariboo                | 40                   | 41                   | 7                           | 6                           |
| Central Coast          | 4                    | 4                    | 0                           | 0                           |
| Central Kootenay       | 41                   | 42                   | 4                           | 5                           |
| Central Okanagan       | 49                   | 50                   | 5                           | 7                           |
| Columbia - Shuswap     | 36                   | 36                   | 2                           | 2                           |
| Comox Valley           | 24                   | 24                   | 4                           | 5                           |
| Cowichan Valley        | 29                   | 29                   | 8                           | 8                           |
| East Kootenay          | 33                   | 33                   | 2                           | 2                           |
| Fraser - Fort George   | 38                   | 38                   | 12                          | 14                          |
| Fraser Valley          | 77                   | 77                   | 8                           | 9                           |
| Kitimat - Stikine      | 17                   | 17                   | 7                           | 8                           |
| Kootenay Boundary      | 16                   | 17                   | 0                           | 0                           |
| Metro Vancouver        | 301                  | 295                  | 41                          | 45                          |
| Mount Waddington       | 17                   | 17                   | 1                           | 1                           |
| Nanaimo                | 49                   | 48                   | 6                           | 6                           |
| North Coast            | 11                   | 11                   | 3                           | 3                           |
| North Okanagan         | 32                   | 32                   | 2                           | 2                           |
| Northern Rockies       | 4                    | 4                    | 2                           | 2                           |
| Okanagan - Similkameen | 37                   | 38                   | 5                           | 5                           |
| Peace River            | 29                   | 31                   | 4                           | 4                           |
| qathet                 | 14                   | 12                   | 2                           | 1                           |
| Squamish - Lillooet    | 19                   | 19                   | 4                           | 4                           |
| Strathcona             | 28                   | 28                   | 6                           | 6                           |
| Sunshine Coast         | 15                   | 15                   | 4                           | 4                           |
| Thompson - Nicola      | 60                   | 62                   | 4                           | 5                           |
| <b>Grand Total</b>     | <b>1141</b>          | <b>1140</b>          | <b>172</b>                  | <b>183</b>                  |

In 2018, the BRCCC conducted a drive time study and concluded that 80% of British Columbia residents are within a 10 minute drive of a BRCCC authorized return location. Consumers can visit [www.EnviroBeerBC.com/Locations/](http://www.EnviroBeerBC.com/Locations/) to search for the closest authorized BRCCC Depot or retail location by postal code.

With the introduction of Schedule 5, secondary packaging, some material is also sourced in accordance with contractual arrangements between BRCCC and other recyclers. In 2020, a large portion, 1,190 tonnes of material was acquired from Recycle BC in the calendar year. This helps to capture the secondary packaging associated with one-way glass containers and other beer and cider packaging that may not have otherwise come back with the containers. This material was collected via the Recycle BC network and therefore collected at even more collection locations than outlined in the tables above.

## **5. Product Environmental Impact Reduction, Reusability and Recyclability**

BRCCC's mission is to continue to lead the way in environmental stewardship to achieve the highest return rate for alcoholic beverage containers and related packaging. The beer industry has taken back containers and packaging in the province since the end of Prohibition over 90 years ago and this practice continues today. The foundation of BDL's business strategy remains the efficient collection and recycling of containers and packaging 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 and by extension the related secondary packaging as the majority of the bottles returned to a collection location are done so in their original packaging. All secondary packaging produced by brewers in BC is 100% recyclable and by returning it to a collection location along with the containers, it ensures that cardboard and plastic are being kept out of landfills. Through the network of return locations, these resources are able to be optimized for high-end recycling and sold back to industry to be used again.

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 numerous western Canadian 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 closed-loop cycle and economic efficiency of the British Columbia brewers' reuse and recycling system extends its benefits as savings to the consumers and to the environment, making it an exemplary model of a circular economy.

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.

The secondary packaging (the outer box) is more than just packaging in this circular economy. As long as the case is intact, these cases also act as the transportation vessel that the refillable containers travel back to brewers in.

## 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)<sup>1</sup>. 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 CO<sub>2</sub> 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 tonne of aluminum recycled, over 200 GJ of energy are saved in avoided production processes including: bauxite mining, alumina refining, and electrolysis<sup>2</sup>.



Figure 1 - Pollution Prevention Hierarchy



Cans are crushed before shipping to optimize transportation routes and to reduce need for trucks on the road

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 2020, 100% of the aluminum and glass containers sent from BDL to recyclers was recycled. By reusing and recycling containers and packaging, then 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 materials recovered in 2020.

Table 3: Results of Recovered Containers & Packaging 2020<sup>3</sup>

| Type of Container        | Results of Recovered Material  |  |
|--------------------------|--|--|
| Aluminum Cans            | 100% Processed for metal recovery  |  |
| Refillable Glass Bottles | 100% of the material sent to brewers were intended to be refilled        |  |
|                          | 98.4% of material shipped, sent to brewers for reuse                     | 1.6% of material shipped, sent directly to a glass recycler for recycling by BDL |
| Secondary Packaging      | 100% of material reported as collected, sent to a recycler for recycling |  |

BRCCC's product stewardship system for containers 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 2020 are equivalent to pulling over 17,411<sup>4</sup> cars off provincial roads.

<sup>1</sup> See Zero Waste SA: South Australia's Waste Strategy 2011-2015. 2011 Report

<sup>2</sup> PE Americas. Life Cycle Impact Assessment of Aluminum Beverage Cans. 2010 Report.

<sup>3</sup> Results of Recovered Containers reviewed by KPMG LLP

<sup>4</sup><https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Table 4 - Energy, Greenhouse Gas, and Avoided Pollutants Associated with BRCCC Container Recovery 2020

| Pollution Prevention Metric                     | Glass Reuse & Recycling | Aluminum Recycling | Total Diversion |
|---|-------------------------|--------------------|-----------------|
| Weight of Materials Diverted (tonnes)           | 7,720                   | 7,984              | 15,704          |
| Avoided GHG Emissions (MT-CO2-eq)               | 2,933                   | 77,126             | 80,060          |
| Avoided Energy Consumption (GJ)                 | 52,494                  | 697,491            | 749,985         |
| Avoided Pollution - Nitrogen Oxides (tonnes)    | 13                      | 251                | 264             |
| Avoided Pollution - Sulphur Oxides (tonnes)     | 47                      | 729                | 776             |
| Avoided Pollution - Particulate Matter (tonnes) | 29                      | 253                | 282             |
| Avoided Pollution - Solid Waste (tonnes)        | 515                     | 34,308             | 34,822          |

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 2020, the estimated total emission reductions of nitrogen oxides, sulphur oxides and particulate matter from recycling aluminum and reusing glass bottles in BC are 264, 776, and 282 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 34,822 metric tonnes of solid waste were prevented in 2020 as a result of BRCCC's container management. This prevented waste figure excludes approximately 15,704 tonnes of reused or recycled materials already diverted from provincial landfills in 2020 due to BRCCC's efforts. Combined, these totals represent BRCCC's accumulative impact of roughly 50,526 tonnes of reduced solid waste production annually – equivalent to approximately \$5.9 million in Vancouver tipping fees<sup>5</sup>. In summary, BRCCC continues to deliver outstanding results for British Columbia's environment through its product stewardship program.

Since BRCCC began to run its schedule 5 program to recover secondary packaging associated with beer and cider, the vast majority of this packaging is boxboard/cardboard, such as can cases and beer boxes. These materials are then sent to a recycler and eventually make their way into a variety of products including cereal boxes and drywall components.

## 7. Product Sold and Collected and Recovery Rate

Return, reuse, and recycling rates for all BRCCC container categories met the 75% mandated target (with refillable non-standard bottles rounding up to 75%) set under the Environmental Management Act. In 2020, BRCCC's product stewardship plan collected over 615 million containers with an overall program return rate of 77.11% which means that BRCCC has consistently achieved an overall return rate above the mandated target for well over a decade.

The return rates in 2020 were lower than in previous years due to a number of factors as a result of the COVID-19 pandemic. First, more than half of BRCCC contracted depots temporarily closed during the onset of the crisis and/or operated at reduced hours until the

<sup>5</sup> Based on Vancouver tipping fee of \$117 per tonne for waste disposal.

[http://www.metrovancouver.org/boards/Bylaws1/GVSDD\\_Bylaw\\_306\\_Amendment\\_341.pdf](http://www.metrovancouver.org/boards/Bylaws1/GVSDD_Bylaw_306_Amendment_341.pdf)

end of June. BC Liquor Stores and many private liquor stores had temporarily suspended accepting empty alcohol containers into late summer. BRCCC's return network relies more heavily on return-to-retail than other stewardship programs. Restrictions at bars and restaurants also reduced collection from licensees. Finally, there have been general consumer behavior changes during COVID-19, especially during Encorp's six-month Aluminum Can Pilot where aluminum alcohol can returns were misdirected from BRCCC's normal collection network which began on July 6, 2020. Note that a full deposit refund is required at container redemption facilities for all beverage containers, including alcohol cans and refillable bottles, since the June 29, 2020 amendment of the *Recycling Regulation*.

Table 5 outlines a summary of the recovery rate by container type for 2020.

*Table 5a – BRCCC Container Recovery Rates 2020<sup>6</sup>*

| Container Type              | Sales Dozens | Returns Dozens | Recovery Rate (%) |
|-----------------------------|--------------|----------------|-------------------|
| Cans                        | 63,633,169   | 48,862,472     | 76.79%            |
| Refillable Glass Containers |              |                |                   |
| Industry Standard Bottles   | 1,506,815    | 1,394,474      | 92.54%            |
| Non-Standard Bottles        | 1,368,193    | 1,024,617      | 74.89%            |
| Total Refillables           | 2,875,008    | 2,419,091      | 84.14%            |
| Total All Containers        | 66,508,177   | 51,281,563     | 77.11%            |

Note: Figures in Table 5 have been rounded

*Table 5b – BRCCC Secondary Packaging Recovery Rates 2020<sup>6</sup>*

| Packaging Type      | Tonnes Generated | Tonnes Recovered | Recovery Rate (%) |
|---------------------|------------------|------------------|-------------------|
| Secondary Packaging | 4,242            | 2,961            | 69.79%            |

### Secondary Packaging and Other Containers

BRCCC is proud to have been collecting and recycling secondary packaging now included in Schedule 5 (Packaging and Printed Paper) of the BC Recycling Regulation for decades prior to its enactment. Since 2017, in addition to refillable beer containers and alcohol containers, the BRCCC has been running a program that formally includes the collection of all secondary packaging associated with those containers as well as imported beer and ciders. BRCCC provides a return and recycle option for all associated packaging related to every product sold to customers.

BDL also sells and facilitates the collection and reuse of beer kegs. Steel beer kegs have an expected service life of over 30 years and require no additional packaging. In 2020, BDL sold approximately 120,366 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 2020, the return rates for these container types were in excess of 105%. This volume is equivalent to over 1.7 million cases of packaged beer<sup>7</sup>, which translates to approximately 273 tonnes of aluminum or 5,480 tonnes of glass bottles<sup>8</sup>.

<sup>6</sup> Data reviewed by KPMG LLP. Sales were provided by the BC Liquor Distribution Branch (LDB)

<sup>7</sup> Assumed 58.67L Kegs and 12 x341 glass bottles as a package

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

Table 6 provides estimated values of program diversion by regional district. As BRCCC does not compile sales or 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 2020 were obtained from the BC Stats website<sup>9</sup>.

*Table 6 - 2020 Program Diversion Estimates by Regional District (Based on Collected Materials)*

| Regional District    | Aluminum Units (000) | Aluminum Weight (Tonnes) | Glass Units (000) | Glass Weight (Tonnes) | Total Units (000) | Total Schedule 1 Weight (Tonnes) | Secondary Packaging Weight (Tonnes) | Total Weight (Tonnes) |
|----------------------|----------------------|--------------------------|-------------------|-----------------------|-------------------|----------------------------------|-------------------------------------|-----------------------|
| Alberni-Clayoquot    | 3,860                | 53                       | 191               | 51                    | 4,051             | 104                              | 20                                  | 123                   |
| Bulkley-Nechako      | 4,524                | 62                       | 224               | 59                    | 4,747             | 121                              | 23                                  | 144                   |
| Capital              | 48,467               | 666                      | 2,400             | 635                   | 50,866            | 1,301                            | 246                                 | 1,547                 |
| Cariboo              | 7,469                | 103                      | 370               | 98                    | 7,839             | 201                              | 38                                  | 238                   |
| Central Coast        | 406                  | 6                        | 20                | 5                     | 426               | 11                               | 2                                   | 13                    |
| Central Kootenay     | 7,280                | 100                      | 360               | 95                    | 7,640             | 195                              | 37                                  | 232                   |
| Central Okanagan     | 25,372               | 349                      | 1,256             | 332                   | 26,628            | 681                              | 129                                 | 810                   |
| Columbia-Shuswap     | 6,481                | 89                       | 321               | 85                    | 6,802             | 174                              | 33                                  | 207                   |
| Comox                | 8,391                | 115                      | 415               | 110                   | 8,806             | 225                              | 43                                  | 268                   |
| Cowichan Valley      | 10,340               | 142                      | 512               | 135                   | 10,852            | 278                              | 52                                  | 330                   |
| East Kootenay        | 7,493                | 103                      | 371               | 98                    | 7,864             | 201                              | 38                                  | 239                   |
| Fraser Valley        | 38,184               | 525                      | 1,890             | 500                   | 40,075            | 1,025                            | 194                                 | 1,219                 |
| Fraser-Fort George   | 11,843               | 163                      | 586               | 155                   | 12,430            | 318                              | 60                                  | 378                   |
| Metro Vancouver      | 311,835              | 4,286                    | 15,438            | 4,085                 | 327,274           | 8,371                            | 1,581                               | 9,952                 |
| Kitimat-Stikine      | 4,628                | 64                       | 229               | 61                    | 4,857             | 124                              | 23                                  | 148                   |
| Kootenay-Boundary    | 3,808                | 52                       | 189               | 50                    | 3,996             | 102                              | 19                                  | 122                   |
| Mount Waddington     | 1,341                | 18                       | 66                | 18                    | 1,407             | 36                               | 7                                   | 43                    |
| Nanaimo              | 19,591               | 269                      | 970               | 257                   | 20,560            | 526                              | 99                                  | 625                   |
| North Okanagan       | 10,500               | 144                      | 520               | 138                   | 11,020            | 282                              | 53                                  | 335                   |
| Northern Rockies     | 569                  | 8                        | 28                | 7                     | 597               | 15                               | 3                                   | 18                    |
| Okanagan-Similkameen | 10,258               | 141                      | 508               | 134                   | 10,766            | 275                              | 52                                  | 327                   |
| Peace River          | 7,664                | 105                      | 379               | 100                   | 8,043             | 206                              | 39                                  | 245                   |
| qathet               | 2,418                | 33                       | 120               | 32                    | 2,537             | 65                               | 12                                  | 77                    |
| North Coast          | 2,211                | 30                       | 109               | 29                    | 2,321             | 59                               | 11                                  | 71                    |
| Squamish-Lillooet    | 5,395                | 74                       | 267               | 71                    | 5,662             | 145                              | 27                                  | 172                   |
| Strathcona           | 5,616                | 77                       | 278               | 74                    | 5,894             | 151                              | 28                                  | 179                   |
| Sunshine Coast       | 3,613                | 50                       | 179               | 47                    | 3,792             | 97                               | 18                                  | 115                   |
| Thompson-Nicola      | 16,793               | 231                      | 831               | 220                   | 17,625            | 451                              | 85                                  | 536                   |
| British Columbia     | 586,350              | 8,060                    | 29,029            | 7,681                 | 615,379           | 15,741                           | 2,972                               | 18,713                |

<sup>9</sup> Source: <https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates>  
June 28, 2021

## Summary of Deposits, Refunds, Revenues and Expenditures

Costs associated with the collection systems 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.

### b. Recycled Cans

BRCCC retains unredeemed deposits with respect to can sales and BRCCC retains revenues from aluminum material sales to offset costs related to administration, transportation, collection, sorting fees, and infrastructure. BDL, on behalf of BRCCC, 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 contracted collection partners are also paid a handling fee for each container collected.

In accordance with the *Recycling Regulation*, Table 7 outlines the deposits received and paid for each container type.

*Table 7 2020 Deposit Summary*

|                        | Cans         | Industry Standard Bottles (ISB) | Non-ISB Refillable Bottles | Total        |
|------------------------|--------------|---------------------------------|----------------------------|--------------|
| Deposits Received (\$) | \$74,864,895 | \$1,906,796                     | \$1,607,901                | \$78,379,591 |
| Refunds Paid (\$)      | \$58,625,704 | \$1,671,698                     | \$1,229,540                | \$61,526,943 |

*Note: The 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 conducted by KPMG LLP.*

## Secondary Packaging

Costs related to the recovery of secondary packaging are assessed to program brewers based on a per tonne rate set annually which is intended to cover any costs related to the collection of secondary packaging. The efficient collection method in place for decades assists in keeping the program costs relatively low.

## 8. Plan Performance

| Target  | 2020 Performance  | Strategies for Improvement  |
|---|---|---|
| 87.5% recovery/collection rate in each container category   | <ul style="list-style-type: none"> <li>92.54% return rate for refillable industry standard bottles (ISB)</li> <li>74.89% return rate for refillable proprietary glass bottles</li> <li>76.79% return rate for aluminum cans</li> <li>77.11% return rate overall</li> </ul>  | <ul style="list-style-type: none"> <li>Improve strategy for collection of refillable proprietary glass bottles</li> <li>Continue to communicate with brewers and collection network regarding categorization of containers</li> </ul>                       |
| 75% Recovery/Collection Rate of secondary packaging material  | <ul style="list-style-type: none"> <li>69.79% recovery/collection rate attained for secondary packaging</li> </ul>  | <ul style="list-style-type: none"> <li>Work with existing partners to secure additional material for recovery</li> </ul>  |
| <p>Accessibility Targets: Containers</p> <ul style="list-style-type: none"> <li>Improve consumer access to BRCCC return locations to 385 (305 LRS, 80 depots) with at least 1 contracted return location in each regional district</li> </ul>   | <ul style="list-style-type: none"> <li>172 return locations (100 LRS, 72 depots)</li> <li>26 of 28 regional districts with at least 1 contracted return location</li> </ul>   | <ul style="list-style-type: none"> <li>Reviewing current coverage levels to identify key areas for depot and contracted LRS expansion</li> <li>Perform additional drive time studies to identify potential areas that require increased coverage</li> </ul> |
| <p>Accessibility Targets: Secondary Packaging</p> <ul style="list-style-type: none"> <li>1,156 total return locations</li> </ul>  | <ul style="list-style-type: none"> <li>1,141 total return locations in the BRCCC network</li> <li>Materials received from Recycle BC are collected through the Recycle BC network which includes additional collection locations not included in the 1,141 reported in the BRCCC network</li> </ul>   | <ul style="list-style-type: none"> <li>Add incremental collection sites to the BRCCC collection network in potential areas that require increased coverage</li> </ul>   |
| <p>Accessibility Targets: Drive Time</p> <ul style="list-style-type: none"> <li>80% of population within 10 minute drive of BRCCC authorized return location</li> </ul>   | <ul style="list-style-type: none"> <li>80% of population is within a 10 minute drive of a BRCCC authorized return location</li> </ul>   | N/A   |
| <p>Consumer Awareness: Promotion/Education Initiatives</p> <ul style="list-style-type: none"> <li>3 net new consumer promotion/education initiatives throughout the Schedule 1 &amp; 5 plans</li> </ul>   | <ul style="list-style-type: none"> <li>At least one net new consumer promotion/education initiative rolled out in each program year</li> </ul>  | <ul style="list-style-type: none"> <li>Continue to promote the collection system and educate the public to increase awareness</li> </ul>  |
| <p>Consumer Awareness: Level of Consumer Awareness</p> <ul style="list-style-type: none"> <li>60% level of consumer awareness on consumer awareness survey</li> </ul>   | <ul style="list-style-type: none"> <li>61% consumer awareness survey result</li> </ul>  | N/A   |
| <p>Pollution Prevention Hierarchy/ Product Life Cycle Targets:</p> <p>100% of collected materials for re-use or to recycling commodity markets</p> <p>Secondary Packaging:</p> <ul style="list-style-type: none"> <li>Report in accordance with PHP</li> <li>Track end fate of materials in annual stewardship audit</li> </ul> | <ul style="list-style-type: none"> <li>Aluminum: 100% Processed for metal recovery</li> <li>Refillable Glass Bottles: <ul style="list-style-type: none"> <li>98.4% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled)</li> <li>1.6% of material shipped, sent directly to a glass recycler for recycling by BDL</li> </ul> </li> <li>100% of material reported as collected, sent to a recycler for recycling</li> </ul> | <ul style="list-style-type: none"> <li>Continue to ensure service providers meet processing standards</li> <li>Work with brewers and other collection locations to strengthen reporting and tracking systems</li> </ul>                                     |

In closing, BRCCC thanks all British Columbians for their ongoing participation in our program as we remain committed to continue making the system effective, convenient, and sustainable. Achieving high recovery rates and ensuring that container reuse remains viable in the province would not be possible without the generous efforts by our partners and BC residents, even during the COVID-19 pandemic which has made the circumstances of returning empties very different. BRCCC looks forward to continuously monitoring and improving the program in 2021 to strengthen awareness of our packaging recovery system and to continue to lead in environmental stewardship.

