



BDL

BREWERS DISTRIBUTOR LTD.

Schedule 1 Product Stewardship Plan 2015-2019 Draft

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October 2014

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Product Stewardship Plan: 2014-2019
– Schedule 1 Containers –

1. EXECUTIVE SUMMARY

- Plan renewal of long-standing environmental program – BC brewers have been practicing extended producer responsibility for over 80 years.
- Plan renewal works in tandem with BDL’s proposed Schedule 5 stewardship plan.
- Average recovery rate of 93% over past 4 years. Nearly 93% recovery rate dating back to FY2003.
- Emphasis on design for the environment and re-use. All 3 Rs are engaged: packaging is reduced, as bottles and packaging are reused; all other materials are recycled.
 - Many BC brewers use refillable glass bottles. These containers accounted for almost 25% of relevant containers during the previous stewardship plan.
 - Other container type used by manufacturers represented by BDL is metal cans, which have well established recycling end markets.
 - Manufacturers represented by BDL strive to continuously improve their environmental performance, using vegetable-based inks and water-based glues in their packaging and undertaking research into potential light-weighting of glass bottles. BDL targets to direct 100% of recovered materials for re-use or recycling commodity markets.
- Plan renewal commits to attain a recovery rate of at least 87.5% overall and for each container type.
- Emphasis on consumer access and convenience as a result of BDL’s extensive collection network.
 - As of August 31, 2014, there were 1,152 locations throughout BC where consumers could return their beer containers under this stewardship plan. Based on GIS data, almost all BC residents are within a 15 minute drive of a return location.
 - Between 2009 and 2014, BDL more than doubled the number of depots in its collection network, exceeding its target number of depots by more than 100%.
 - Commitment to continue expanding BDL’s unlimited return collection network.
 - Target of 385 total locations by 2019 (305 retail stores and 80 depots)
 - BDL to achieve at least 1 unlimited return location in each Regional District by 2016
 - Target of 80% of population within 10 minute drive of an authorized BDL return location by 2018
- Extremely high consumer awareness of the program (96% in December 2013/January 2014). Commitment to continue consumer promotion and education.
 - BDL commits to undertake a net new initiative in 3 of the 5 years covered by this stewardship plan.
 - Combined Schedules 1 and 5 annual report to Ministry on program performance.
- Commitment to annually consult with municipalities to address concerns that arise.
- Commitment to direct 100% of collected materials for re-use or to recycling commodity markets.
- Where possible, BDL will continue to quantify the pollution avoidance associated with its product stewardship plan during its annual reporting process.
- Cost of program fully paid by producers. There is no container recycling fee or other visible fees added to the product price at the time of purchase.

2. INTRODUCTION

The Canadian brewing industry has a long history of environmental stewardship. Since the end of Prohibition, Canadian brewers have been offering their product in refillable bottles. Closely tied to the use of the refillable bottle has been deposit-refund, used as an incentive measure to enable brewers to get their bottles back so they can be re-filled.

These two inter-connected elements – deposit-refunds and refillable bottles – have been the cornerstones of the Canadian brewers’ system for decades. Through these mechanisms, the industry assumes full responsibility for end-of-life management of all of its products, including beverage containers and secondary packaging.

In BC specifically, Canadian brewers have been reusing, recycling and reducing our packaging for over 80 years. The brewers’ bottle recovery program was BC’s original extended producer responsibility (EPR) program, performed on a voluntary basis before

the *Environmental Management Act* and its predecessors were enacted. The brewers' deposit-return system established the framework for BC's collection of EPR programs, judged in recent years to be the best in Canada.¹

Brewers Distributor Limited (BDL) is a privately-owned distribution and logistics company, operating in the western Canadian provinces of British Columbia, Alberta, Saskatchewan and Manitoba. BDL's operations in BC comprise two primary elements: the warehousing and distribution of beer, cider and coolers for a number of breweries and liquor suppliers to retail locations and licensed establishments throughout BC², for sale to the public ("full goods"); and the collection of certain beer and cider containers (i.e. refillable glass bottles and cans) and related secondary packaging as the product steward acting on behalf of the majority of brewers and cider manufacturers ("product stewardship").

Under Schedule 1 of the *Recycling Regulation*, BDL is the steward for all refillable glass beer and cider bottles, as well as all metal beverage alcohol cans (hereinafter collectively referred to as "beer containers"). This product stewardship plan seeks to renew BDL's plan for the collection of these containers.

Under this plan renewal, BDL seeks to continue and build upon its exemplary record of recovery of Schedule 1 containers, through expansion of BDL's network of return locations and increased public promotion and consumer awareness (in conjunction with its product stewardship activities under Schedule 5).

3. CONTAINERS & MATERIALS

Under the BDL plan, there are two types of containers: refillable glass bottles and metal cans. Sales percentage data shown below represent the five year average covering 2008 to 2012; all results have been externally audited and verified.

a. Schedule 1 Containers

Refillable Glass Bottles

- In total, refillable glass bottles accounted for 24.6% of total BDL beer containers sold in BC.
- The majority of refillable glass bottles sold in BC are the brown industry standard bottle (ISB): a 341 ml refillable glass bottle that is refilled on average 15 times per container. The ISB also represents the vast majority of beer sold in refillable glass bottles across Canada. Beer sales in the ISB represented 18.8% of total BDL containers (and approximately 76% of refillable glass bottles) sold in the province.
- In addition to the ISB, some brand owners retail their products using proprietary refillable glass bottles (i.e. – brand specific bottles). These proprietary bottles represented about 5.8% of total BDL containers (and approximately 24% of refillable glass bottles) sold in BC.

Metal Cans:

- Product sold in cans represented about 75.4% of total BDL beer containers sold in BC.
- While the majority of beverage alcohol cans are made of aluminum, a small minority are of the tin-plated steel variety. Domestic and import brand owners sell product in cans of various sizes, the most common of which is the 355 ml variety. BDL has been the designated product steward for all beverage alcohol sold in cans, including import beer, since 2006.

b. Schedule 5 Materials

In addition to refillable bottles and metal cans, BDL also handles a number of other materials, including secondary packaging. In its annual reports, BDL provides information on each of these material types and their re-use/recovery rates.

Cardboard Cases and Can Flats:

- Cardboard cases used for bottle sales are reused a number of times. First, they are used to deliver full goods. Second, the consumer uses them to return the empties to the point-of-sale. Third, they are used to transport the empties from the point-of-sale to sorting facilities. Finally, the cases are used to ship the bottles back to brewers. After unloading containers for filling, the cases are recycled. Can flats have a similar life cycle, except that they are sent for recycling either a) from their collection point or b) from sorting facilities. This secondary packaging makes up the vast majority of tonnage under BDL's Schedule 5 stewardship plan. As noted in Section 4, it is BDL's intention to submit a single annual report covering both its Schedule 1 and 5 performance.

¹ EPR Canada. 2011 and 2012 EPR Canada Report Card. The report cards and information on the project can be found at www.eprcanada.ca.

² BDL's customers include pubs, hotels, restaurants, clubs, cabarets, government liquor stores, agency stores (rural agency stores are small general stores in rural areas authorized by the BC Liquor Distribution Branch to sell beer, cider, coolers, wine and spirits with other goods) and licensee retail stores.

c. Other Materials

In addition to the Schedule 1 and Schedule 5 materials noted above, BDL also uses, collects and recycles a number of other materials. To the extent possible, BDL reports on the recovery and recycling of these materials in its annual reports to the Ministry.

Refillable Kegs:

→ Refillable kegs of various sizes are sold by BDL brand owners, primarily to licensed establishments. They are shipped back to the brewers, where they are inspected, washed and refilled. Steel beer kegs have an expected service life of over 30 years and require no additional packaging. In fiscal 2013, kegs of various sizes ranging from 18 litres to 59 litres had return rates of over 98%. Approximately 2.6 million kegs, with a volume equivalent to approximately 53,375,000 industry standard bottles or 51,270,000 beer cans (355 ml) were sold last year in BC.

Shrink-Wrap:

→ Pallets of beer are often wrapped in plastic shrink-wrap for stability during shipping. Used shrink-wrap is baled and sold to a recycler. Recycled shrink-wrap may be used to manufacture plastic shopping bags.

Pallets:

→ Pallets used to transport beer are made of wood and can be reused, repaired, and ultimately recycled.

Can Bins:

→ Cardboard can bins are sometimes placed into high volume locations. The can bins can hold 180 dozen cans, reducing storage and transportation costs. The bins are reused an average of 20 times. When they reach the end of their useful life, they are recycled.

4. 2009 – 2014 PLAN PERFORMANCE

In its more than 80 years of stewardship, BDL has achieved some of the highest levels of program performance seen in Canada or elsewhere. In the past 5 years, BDL has built on this record of success. In its 2009-2014 stewardship plan, BDL made commitments with respect to the recovery rate it would achieve, the number of authorized unlimited return locations it would offer consumers and the additional activities on which it would report.

While the *Recycling Regulation* establishes a legislative recovery rate of 75%, BDL's 2009-2014 plan committed to achieving an 85% recovery rate. BDL is pleased to report that this commitment has been achieved in each year of the 2009-2014 stewardship plan, as well as having been achieved for each category of containers that BDL collects. BDL has achieved an average recovery rate of 93% over the past 4 years. This recovery rate is amongst the highest achieved for any product stewardship program in North America.

With respect to the number of authorized unlimited return locations within the BDL network, considerable progress was made. BDL committed to have 42 authorized depots within its network by the end of the 2009-2014 Stewardship Plan. BDL is pleased to report that, as of August 31, 2014, there are 71 authorized depots within its collection network. This is more than double the number of authorized depots in BDL's network when the 2009-2014 stewardship plan took effect. On this measure, BDL surpassed its target by over 100%.

With respect to authorized unlimited retail return locations, BDL fell short of its previously stated target. The 2009-2014 stewardship plan set a target of 305 unlimited retail return locations. As of August 31, 2014, BDL has 165 unlimited retail return locations in its collection network. There are a variety of reasons BDL missed this target, including concerns amongst retailers of the requirements on them with respect to non-BDL containers if they contracted with BDL. BDL believes it has found ways to address retailers' concerns and will be able to meet this target by the end of its 2015-2019 stewardship plan.

Finally, with respect to reporting, BDL was successful in providing the Ministry with expanded annual reporting. In addition to reporting on the recovery rate achieved for Schedule 1 containers, BDL has been able to provide certain information with respect to the collection of beer and cider secondary packaging, its recovery of kegs from bars and restaurants, as well as other materials like pallets and plastic wrap.

5. COLLECTION SYSTEM AND CONSUMER ACCESS

a. Background

BDL acts as product steward for 24 brewers, cider manufacturers and brewery agents using refillable glass bottles, most of whom are based in British Columbia (See

Table 8 - *Brand Owners using Refillable Bottles Registered under the BDL Plan*). BDL brand owners continue to account for almost all of the domestic beer sold in British Columbia. Authorization of brand owners to elect BDL as steward for beverage alcohol cans is undertaken by the LDB at the time of listing by nomination of BDL as part of the listing application.

Return-to-retail remains a vital component of BDL's container collection system and one which is highly supported by consumers and stakeholders (see Section 5.b). BDL's collection system includes a variety of options for consumers which include: a) all BC Liquor Stores, b) all private retail liquor stores, c) all rural agency stores and d) selected bottle depots. In total, BDL offers BC consumers 1,152 locations to which they can return their beer containers (and associated secondary packaging) as of August 31, 2014. At 236 of these locations, consumers are able to return an unlimited number of beer containers. All other locations will accept at least 24 containers per day from consumers (with many accepting a larger number than this minimum amount).

Table 1 – Breakdown of BDL Return Locations by Channel (as of August 31, 2014)

Location Description	# of Locations
Licensee Retail Stores (LRS)	666 (Active)
Government Liquor Stores (GLS)	194
Rural Agency Stores	221
BDL Contracted Bottle Depots	71
TOTAL	1,152

a. Location Methodology - Coverage & Scope

In determining the appropriate system coverage, BDL utilizes geographic information systems (GIS) technology to identify potential service gaps as it pertains to container return locations. If a particular area of the province appears to be under-served, BDL will enter into a service arrangement with a licensee retail store or bottle depot in that area to ensure there is appropriate coverage throughout the province. With respect to very small communities, the retailer in such communities is often an LDB agent. These retail locations all accept container returns from consumers.

Based on BDL's most recent GIS survey, 75% of BC consumers (or over 3.3 million BC residents) are within a 10 minute drive of an authorized BDL return location and 92% of BC consumers (or over 4 million BC residents) are within a 15 minute drive of an authorized BDL return location. These GIS results far exceed the accessibility standard established in the recent Stewardship Agencies of BC Action Plan. Further, as outlined below in Section 5.b, BDL commits to expand its collection network, thereby increasing this already very high level of consumer convenience.

b. Current BDL Locations

Between 2009 and 2014, BDL more than doubled the number of depots in its collection network, exceeding its target number of depots by more than 100%.³ While BDL exceeded this target, it fell short on its targeted number of retail locations contracted to be unlimited return locations. In speaking with these locations, BDL understands operational considerations from Licensee Retail Stores and concerns about the collection of non-beer containers limited BDL's ability to expand coverage as desired. BDL remains committed to expanding this return channel. As set out in Section 5.b, BDL believes it has made some changes to its requirements of retail collectors that will make it feasible for a large number of these locations to become part of BDL's unlimited return network.

BDL has a contractual agreement with the Liquor Distribution Branch regarding the collection of empty beer containers. As a matter of general business practice, BC Liquor Stores have a flexible and varied return system and have accommodated more than the regulatory limit of 24 containers per customer per day in some locations. However, due to staffing and space constraints, BC Liquor Stores may enforce the regulatory limit of 24 containers per customer per day at their discretion.

6. PERFORMANCE MEASUREMENTS & TARGETS

Recovery rates for each of the primary containers within BDL's product stewardship categories (industry standard refillable bottles, proprietary refillable bottles and cans) remain the program's core performance indicators. In addition to return rates, BDL will utilize the following performance measures to assess its system:

³ In 2013, BDL provided additional commitments to increase its unlimited return collection network. From the beginning of 2013 through August 31st 2014, BDL added another 26 unlimited return locations to its collection network.

Table 2 – BDL Performance Indicators and Associated Tracking Methodologies

<u>Performance Indicator</u>	<u>Methodology</u>
Recovery Rates for Containers	Net Sales vs. Net Returns by Container Type
Secondary Packaging Recovered	as per BDL Schedule 5 Stewardship Plan: 2014-2018
Consumer Accessibility	See Subsection B Below
Consumer Promotion & Education	See Subsection C Below
Pollution Prevention Benefits	See Subsection D Below

a. Recovery Rates for Containers

Performance Objective 2015-2019:

- Achieve a minimum recovery rate of 87.5% overall and for each container type

BDL will target a minimum 87.5% recovery rate in each year of this stewardship plan renewal (2015-2019). As in the previous stewardship plan, it is BDL's intention that this elevated recovery rate will be achieved for each category of beer containers included in the BDL program. This commitment exceeds the mandated provincial target of 75% and builds upon BDL's prior commitment to attain a recovery rate of 85%.

b. Consumer Accessibility

Performance Objectives 2015-2019:

- Continued expansion of BDL's unlimited return collection network
 - Target of 385 total locations by 2019 (305 retail stores and 80 depots)
 - BDL to achieve at least 1 unlimited return location in each Regional District by 2016
- Continued high levels of consumer accessibility
 - Target of 80% of population within 10 minute drive of an authorized BDL return location by 2018

As noted above, BC consumers continue to express significant support for the convenience of being able to return their empty containers to the retail locations where they bought them. For this reason, BDL continues to place a strong emphasis on contracting with retail locations to be unlimited return locations as it looks to expand its program coverage (reflected in Table 3 below).

According to an Ipsos Reid poll conducted for BDL in December 2013 and early January 2014, a significant minority prefer returning their empty beer containers to a retail location. Approximately 30% of consumers identified a retail location as where they are most likely to return their empty beer containers.⁴ Preference for retail locations was more pronounced among Metro Vancouver residents and those over 34 years old.

At the same time, while many consumers may not use a retail store as their primary return location, they are likely to return their empty beer containers to a retail store if they are also intending to buy more beer. Nearly half of British Columbians who return beer containers say they purchase more beer either 'each time' or 'sometimes.' Once again, this preference was more pronounced among Metro Vancouver residents, as well as those who typically return their empty beer containers to government liquor stores. For these consumers, BDL's return-to-retail model reduces the number of required trips, as well as the overall distance travelled.

Current GIS data, emphasized by BDL's very high return rates, indicate existing consumer accessibility is very strong, particularly compared to other stewardship programs. Even so, expanding the unlimited retail return network will provide additional convenience for BC residents.

When selecting bottle depot locations with which to contract, BDL will place priority on contracting with locations that already serve multiple stewardship programs. While this will be an influential factor, final decisions regarding depot locations with which to contract will be based upon what makes most sense for the program, financially and operationally.

BDL is in the process of developing revised handling standards that take limited retail footprints into consideration. After completing pilots, BDL will review system performance and elicit feedback from private retail store operators. Pending results, full

⁴ Ipsos Reid survey conducted on behalf of Canada's National Brewers between December 23, 2013 and January 2, 2014. 1,251 adult respondents (aged 19+ years) participated – generating an estimated margin of error of ±2.8 percentage points.

implementation will proceed by approaching non-contracted private retail store locations. Progress with respect to performance targets will be included in BDL’s Annual Product Stewardship Report filed under the plan.

Table 3 – Targeted Number of Unlimited Return Locations by Type

Program Year	Target Number of LRS Locations	Target Number of Depot Locations	Total Number of BDL Locations
2015	165	71	236
2016	180	72	252
2017	210	75	285
2018	250	78	328
2019	305	80	385

c. Consumer Promotion & Education

Performance Objectives 2015-2019:

- BDL to produce a combined Schedule 1 and Schedule 5 Annual Report to Ministry
- BDL to undertake increased consumer awareness and promotion activities
 - Target of 1 net new initiative in 3 of the 5 years covered in this plan renewal

Consumer awareness of the BDL program for beer containers is very high. Recent survey results indicate that nearly all (96%) British Columbians say they are aware that consumers pay a refundable deposit for their beer containers.⁴ In addition to high consumer awareness, program participation rates are also very high. Among respondents from households that consumed beer within the past year, 86% indicated that they collected and returned beer containers for the refund.⁵ Importantly, consumer satisfaction with the current range of locations available to return beer containers for deposit is also high. More than nine-in-ten respondents indicated that they were either ‘very satisfied’ (42%) or ‘satisfied’ (49%) with BDL’s current stewardship network. These results remain consistent with those of previous surveys undertaken in 2011, 2006, 2000 and 1997.

BDL is committed to maintaining and improving levels of awareness as it pertains to our deposit-return system. BDL will continue to monitor consumer attitudes and conduct surveys on an as-needed basis.



A number of new initiatives to promote the BDL program and to improve consumer awareness of authorized BDL return locations have been developed in recent months and will continue to be rolled out over the course of the 2015-2019 stewardship plan. New BDL branded posters (an example is found above) have been developed to designate BDL authorized return locations. BDL will use consistent images and colour schemes in its promotional materials to provide a consistent consumer experience and reinforce for consumers which locations are authorized BDL return locations. BDL also recently launched an updated consumer website: www.EnviroBeerBC.com. The website includes digital copies of BDL branded promotional materials (currently posted at authorized return locations), information on the environmental benefits of refillable bottles, and directions to authorized return locations (via a postal code search). The website is mobile-enabled and contains a number of features designed for search-engine optimization.

One such feature is social media integration. The website is linked with the twitter account @EnviroBeerGuy, ensuring the website regularly has updated information, including information about BDL program achievements and/or recycling in BC. Another strategy includes the production of a video outlining BDL’s stewardship activities in the province. The video, posted on the website and on YouTube, is designed to provide consumers with insight into BDL’s reverse logistics and recycling networks.

BDL is also a member of the Stewardship Agencies of British Columbia (SABC). As a member of SABC, BDL funds the Recycling Council of British Columbia’s (RCBC) various consumer information vehicles, such as the Recycling Hotline, the RCBC website and the Recyclepedia. BDL updates the authorized return locations listed on these on a regular basis. In addition to its revamped website, BDL will direct consumers to the “BC Recycles” portal as a one-stop location for information on recycling in BC.

⁵ 15% of respondents indicated that their households don’t buy beer. Results listed above are extrapolated after removing these respondents from the results. 76% of total respondents indicated that they collected and returned beer containers for the refund.

d. Pollution Prevent Benefits

Performance Objective 2015-2019:

- Direct 100% of collected materials for re-use or to recycling commodity markets

All BDL containers are made from non-toxic, inert materials with established secondary markets. Furthermore, all refillable glass containers and cans are sent for processing at designated recycling facilities; significant portions are used to produce new primary beer and cider containers. According to Environment Canada, “minimizing or avoiding the creation of pollutants and wastes can be more effective in protecting the environment than treating them, or cleaning them up after they have been created. This approach is needed to secure a safe and healthy environment and a sound and prosperous economy. It is a key component of environmental protection and sustainable development”.⁶

BDL will continue reporting on its pollution prevention achievements, calculated using a) life-cycle inventory data sets made available by the US Environmental Protection Agency (EPA), and b) reports prepared for or by Environment Canada or Natural Resources Canada. A list of performance indicators and metrics can be found below:

Table 4 – BDL Pollution Prevention Performance Indicators

Performance Indicator	Metric
Weight Materials Diverted	Tonnes
Avoided Greenhouse Gas Emissions	MT-CO ₂ -eq
Avoided Energy Consumption	GJ
Weight of Avoided Pollutants	Tonnes
Avoided Tipping Fees (Estimated)	\$

7. DISPUTE RESOLUTION

a. Complaints from Local Governments

As with its Schedule 5 stewardship plan, BDL intends to conduct an annual consultation with local governments. It is anticipated that, through this annual consultation, the vast majority of issues from local governments will be addressed through continual open communications between BDL and local governments. In the event that an issue remains that cannot be resolved through this annual consultation process, BDL will ensure that local governments (through a variety of channels, including UBCM and contact information at the Ministry of Environment) have access to information to directly contact BDL regarding these issues. BDL will look to meet in person, to the extent possible, with the relevant local government to discuss the issue and try to find an appropriate solution.

b. Complaints from Depots/Return Locations

If the issue involves a return location, BDL will investigate the issue and will make sure the return location is aware of the issue. If a return location is found to be in violation of its contractual commitments or legal obligations, BDL will take appropriate measures to ensure compliance (including potential dispute resolution procedures outlined in written contracts).

c. Complaints from Consumers

Consumer complaints are directed to the appropriate BDL manager for follow-up and resolution. Through BDL’s refreshed website www.EnviroBeerBC.com, consumers have access to information on BDL’s product stewardship plans. The website also provides an e-mail link for consumers who have any questions or complaints regarding either BDL’s bottle return or its beer secondary packaging return programs. The website includes an e-mail address, contact phone number and mailing address for public comments on BDL product stewardship activities. Consumer concerns will generally be addressed in writing (for example, e-mail questions are responded to via e-mail).

d. Disputes between BDL and Brewers/Manufacturers that use BDL system

BDL’s container recovery system is subject to the listing and product approval process related to beer sales in the province under the *Liquor Distribution Act*. As a result of this listing and approval process, most brand owners designate BDL as their product

⁶ Government of Canada. “Pollution Prevention”. <https://www.ec.gc.ca/p2/>. Accessed May 9, 2014

steward for containers prior to selling their products in BC. Ongoing compliance is monitored through tracking within our accounts receivable and our brand registry systems.

In the event that BDL does encounter a problem with producer compliance, for the purposes of initiating an action with the Ministry of the Environment, non-compliance is defined as a lack of responsiveness from a brand owner after more than two notices on producers' responsibilities have been sent from BDL. In the event that BDL does not receive a signed agency appointment agreement from the brand owner within the prescribed timeframe, BDL may utilize the following notifications to underscore the importance of compliance with the *Recycling Regulation*:

Table 5 – Timelines & Communication Methods for Addressing Potential Stewardship Disputes

# of Attempts	Timeline	Details
1 st Contact	60 Days Prior	Letter is sent to brand owner obligated under the Recycling Regulation, informing them of their responsibilities
2 nd Contact	No Response within 30 Days of 1 st Contact	A second letter is sent to the brand owner for lack of reply from the previous correspondence. In this letter, BDL will point out that the brand owner is liable if their company contravenes the Act
3 rd Contact	No Response within 30 Days of 2 nd Contact	A final letter with a deadline for submitting membership documents is sent by BDL. At this stage, BDL will consider each brand owner on a case-by-case basis to decide whether to proceed to the final stage.
4 th Contact	No Response by Stipulated Deadline in 3 rd Contact Letter	A request for non-compliance actions is sent to the Ministry of the Environment, with a copy to the brand owner.

e. Coordination and Cooperation with Other Stewardship Programs

There may be some volumes of beverage containers that are part of the BDL stewardship plan that enter other stewards' collection networks. BDL has an agreement with Encorp Pacific (Canada) to cover such situations. With respect to other stewards' collection networks, BDL will monitor its overall recovery performance and will coordinate with other stewardship programs as necessary to ensure overall recovery performance and efficiency.

8. MANAGEMENT OF ENVIRONMENTAL IMPACTS

a. Background

As mentioned earlier, BDL has a long and established history of environmental leadership in B.C. Consistent with the requirements of the *Recycling Regulation*, all of the containers included in BDL product stewardship plans are re-useable, recyclable or both (see Table 6 – *Breakdown of Recycling Attributes for BDL Containers & Packaging Streams*). BDL recycles all returned packaging associated with containers under its stewardship program.

Table 6 – Breakdown of Recycling Attributes for BDL Containers & Packaging Streams

Container Description	Re-useable (Y/N)	Recyclable (Y/N)
Industry Standard Glass Bottles	Y	Y
Proprietary Glass Bottles	Y	Y
Aluminum Cans		Y
Kegs	Y	Y
Cardboard Cases and Can Flats	Y	Y
Shrink-Wrap		Y
Can Bins	Y	Y

BDL's Schedule 1 Stewardship Plan incorporates many important elements of the Polluter Pays Principle, a concept recognized by the OECD as the academic forerunner of EPR. An application of Pigouvian economics, the Polluter Pays Principle is an attempt to remove negative environmental externalities associated with economic activity. The concept advocates that "manufacturers and importers of products should bear a significant degree of responsibility for the impacts including the production process itself, and downstream impacts from the use and disposal of the products."⁷

Costs associated with managing and collecting BDL containers are paid by brand owners, with allocations determined by container type and sales volume. Efficient system management by BDL has kept these stewardship fees low, thus enabling brand owners to internalize stewardship costs into the shelf-prices of full goods. As a result, customers are not required to pay an additional *Container Recycling Fee (CRF)* or *Environmental Handling Fee (EHF)* at the point of purchase, as is common with other stewardship programs, including those under Schedule 1 of the *Recycling Regulation*. BDL will continue to work with brewers and collection partners to coordinate the distribution, storage and delivery of goods and containers in ways that promote cost efficient, environmentally responsible practices.

b. Emphasis on Refillable Containers

The BDL container collection system places a strong emphasis on refillable containers. Manufacturers have a cost efficient system for getting refillable containers back. BDL remains the only B.C. product steward that maintains a significant percentage of refillable containers. Between 2008 and 2012, refillable bottles represented 24.6% of total BDL containers collected.

Given that refillable bottles can be re-used an average of 15 times over their life-cycle, and the return rate for all refillable bottles averaged 93.2% during the aforementioned period, BDL producers utilized 560 million fewer containers versus an alternative system utilizing one-way containers.⁸

The vast majority of refillable containers utilized in British Columbia are of the industry standard bottle (ISB) variety. The ISB generates further environmental benefits, by reducing sorting costs and minimizing container transportation because empty bottles can be returned to the nearest brewery for re-use, rather than only to the brewery they originated from.

c. Pollution Prevention Hierarchy

BDL brand owners utilize two types of containers under the Schedule 1 product stewardship plan: refillable glass bottles and recyclable aluminum cans. Both methods of waste management are among the "most preferable" in the expanded hierarchy (see Figure 1).⁹ As mentioned previously, BDL containers are 100% recyclable, non-toxic, and have established secondary markets. Similarly, current container designs emphasize both reusability and recyclability. BDL will attempt to work with container manufactures to improve the energy efficiency, recycled content, and renewable energy content of containers while reducing associated emissions.

Reduce:

The refillable glass bottle has a long history of use and its track record as an environmentally preferable container is well established. Refillable glass containers have superior environmental performance compared to the production of one-way glass containers. Ever year, BDL's closed loop system for refillable containers effectively *reduces* the total amount of bottles produced by approximately 112 million.

Reuse:

Reusing glass bottles, in comparison to making new ones, saves considerable energy and reduces CO2 emissions associated with container requirements. Energy requirements associated with washing and cleaning refillable bottles remain lower than those associated with producing new glass stock. Similarly, kegs can be reused hundreds of times before approaching end-of-life. On a single strip, each keg can replace more than 160 bottles or cans. Kegs are repaired on an as-needed basis and can remain in

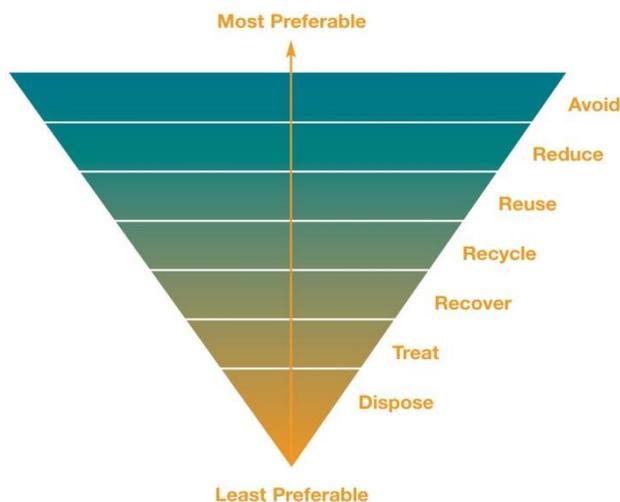


Figure 1 – Expanded Hierarchy of Waste Management Principles for Effective Environmental Protection

⁷ Organisation for Economic Cooperation and Development (OECD). Environment Directorate, Paris, France (2006). "Extended Producer Responsibility." Project Fact Sheet.

⁸ Figures provided for a) return rates and b) container savings are representative of data covering 2009-2013.

⁹ See Zero Waste SA: South Australia's Waste Strategy 2011-2015. 2011 Report.

service for up to 50 years. Finally, the secondary packaging used by brewers is similarly regularly re-used. Beer bottle cases and cartons often serve up to 5 different functions before they are ultimately recycled. Consumer re-use of this packaging is why BDL is able to offer brewers a separate stewardship program for managing their packaging and printed paper.

Recycle:

The collection and recycling of aluminum cans also generates significant environmental benefits versus the production of new, one-way containers. For every ton of aluminum recycled, more than 200 GJ of energy are saved from avoided production processes including: bauxite mining, alumina refining, and electrolysis.¹⁰ The energy required to make aluminum cans from recycled aluminum is 95% less than energy utilized in creating virgin aluminum. A study by the Container Recycling Institute in the U.S., found that while aluminum typically accounted for only 1.4% of landfill materials by weight, it represented 14.2% of the energy required to replace a typical ton of landfill virgin material.¹¹

Despite being reused an average of 15 times over their life-cycle, refillable glass bottles eventually require end-of-life management. When refillable glass bottles are identified as needing treatment, often by high-tech scanners on beer production lines, they are separated from the general stock and sent to the appropriate facility (see below). In 2013, BDL sent more than 756,000 ISB's, weighing approximately 440,000 pounds for destruction. Cullet from these containers was recycled into new, high-end use products including new bottles and fiberglass insulation.

Similar to refillable glass bottles, steel kegs also eventually approach the end of their individual life-cycles. Unlike other metals, metallurgical impurities rise during the steel recycling process; resulting in a product that is practically indistinguishable from virgin sources. Last year, the global end-of-life recycling rate for steel was estimated at 90%.¹² Irreparable kegs are retired and sold to scrap dealers for processing before recycling can occur.

In addition to primary beverage containers, BDL also collects and recycles all packaging associated with products sold by registered brewers. This includes: a) shrink-wrap from goods delivered to licensees, b) cardboard mother cartons, sub-packs & trays, and c) high-cone rings. BDL has been voluntarily collecting these materials since operations first began. Materials are consolidated and bailed before being sold to secondary markets.¹³ Bailed shrink-wrap is often used to manufacture plastic shopping bags. Bailed cardboard is used to make a variety of recycled paper products. BDL can bins are bailed with other cardboard streams after an average of 20 uses.

d. End-of-Life Management Locations

After being consumed and returned, empty glass containers are sent to brewery locations identified in Table 8 (Page 15). BDL Logistics ensures that containers are sent to the closest appropriate brewery in order to minimize the environmental impacts associated with transportation. Compacted aluminum cans are sent via rail to Alcoa, Tennessee for recycling into new cans. Similarly, reject glass from BDL and brand owners is sent to a facility in the Greater Vancouver Area for processing.

Recycled Aluminum is delivered to:

ALCOA Recycling
2300 North Wright Road,
Alcoa, TN 37701-3141

Recycled Glass is delivered to:

Pacific Metals Recycling International
8360 Ontario Street,
Vancouver, BC V5X 3C5

e. Pollution Prevention

Where possible, BDL will continue to quantify the pollution avoidance associated with its product stewardship plan during its annual reporting process. The US Environmental Protection Agency's (EPA) life cycle inventory (LCI) database provides the inputs and outputs for all stages in aluminum can, as well as glass bottle, production. The data enables BDL to determine the avoided nitrogen dioxide, sulphur dioxide, particulate matter and related industrial solid waste from resource extraction and production.

¹⁰ PE Americas. Life Cycle Impact Assessment of Aluminum Beverage Cans. 2010 Report.

¹¹ See Trashed Cans: The Global Environmental Impacts of Aluminum Can Wasting in America, CRI, 2002 Report.

¹² UNEP. Recycling Rates of Metals: A Report of the Working Group on Global Metal Flows. 2011 Report

¹³ See BDL Schedule 5 Stewardship Plan: 2014-2019 for additional details.

Table 7 – Energy, Greenhouse Gas, and Pollutant Reductions from BDL Container Recovery

Pollutant/Symbol	Metric
Landfill Diverted (Glass)	MT
Landfill Diverted (Aluminum)	MT
Avoided Emissions (GHG)	MT CO ₂ -eq
Avoided Energy Use (Gigajoules)	GJ
Avoided Nitrogen Oxide (NO _x) ¹⁴	MT
Avoided Sulphur Oxide (SO ₂) ¹⁵	MT
Avoided Particulate Matter (PM) ¹⁶	MT
Avoided Solid Waste	MT

Landfill Diversion:

The BDL product stewardship plan has generated enormous benefits in terms of landfill diversion. In 2012, more than 6,500 tons of aluminum, 29,000 tons of glass, 28,000 tons of avoided solid waste, and 34,442 tons of secondary packaging were diverted from landfill.

Reduced Energy Consumption:

Annual energy savings associated with the plan have historically been equivalent to the annual heating requirements of 7,800 homes. That's equivalent to approximately 12% of the homes in a community the size of Nanaimo.¹⁷ BDL's closed loop distribution system also reduces energy requirements associated with the distribution of containers. As BDL picks up empties when it delivers full goods to retail locations, container pickup is fully integrated into its existing distribution system reducing the need for one-way distribution trips.

9. STAKEHOLDER CONSULTATIONS

While the BDL program for the recovery of beer containers is well-established, BDL will ensure stakeholders have significant opportunities to shape this plan and to provide their feedback on it. BDL is in regular contact with key program stakeholders, including our network of depot owners, bottle depot associations, private retail liquor store owners and the Liquor Distribution Branch. BDL met with each of these groups in May 2014 to discuss this draft plan and gain their feedback on it. Also in May 2014, BDL held a public consultation on its initial stewardship plan renewal targets at the Recycling Council of British Columbia (RCBC) conference. The feedback provided through these interactions has shaped the plan that BDL has put forward for consideration and approval.

In addition to these individual stakeholder meetings, BDL is posting this stewardship plan on the Recycling Council of British Columbia (RCBC) website and on www.EnviroBeerBC.com for public consultation in the fall. A series of public meetings and/or webinars will also take place in the fall of 2014 to ensure the broadest possible public feedback on this plan renewal. These public meetings and webinars will be advertised to the public through a variety of social, print and other media. In addition to posting the plan on these websites and to the public meetings and webinars, the following additional public consultations will be undertaken:

- Member advisories to RCBC and CWMA members about the posting of the stewardship plan and the public consultations
- Use of social media to promote the stewardship plan and these public meetings to create additional awareness, encourage attendance at the meetings and solicit additional feedback
- Inclusion in a UBCM weekly newsletter to their members
- Inclusion in a CWMA information update

¹⁴ Nitrogen Dioxide (NO_x) is one of the main ingredients involved in the formation of ground-level ozone, which can trigger serious respiratory problems. It reacts to form nitrate particles, acid aerosols, which can cause respiratory problems. NO_x also contributes to formation of acid rain; contributes to nutrient overload that deteriorates water quality, reacts to form toxic chemicals, and contributes to global warming.

¹⁵ Sulphur Dioxide (SO₂) contributes to respiratory illness, particularly in children and the elderly, and aggravates existing heart and lung diseases. SO₂ also contributes to the formation of acid rain, and the formation of atmospheric particles.

¹⁶ Particulate Matter (PM) is microscopic solids or liquid droplets can get deep into the lungs and cause serious health problems including: decreased lung function, aggravated asthma, chronic bronchitis, and premature death.

¹⁷ 92 GJ of energy are used on average to heat households in Canada. Source: Improving Energy Performance in Canada: 2003-2004. Source for number of Nanaimo households, BC Stats, Ministry of Labour and Citizens' Services.

To come: a summary of attendees at the public meetings and feedback received at each

A complete list of stakeholders from whom specific feedback was obtained, as well as a table outlining the main feedback received from stakeholders throughout the consultation process (with the general category of stakeholder providing this feedback identified) and how this feedback has been addressed in this final plan can be found in Appendix A.

10. BEVERAGE CONTAINER AGENCY DETAILS

Name & Address:

Brewers Distributor Ltd
1711 Kingsway Ave
Port Coquitlam, BC V3C 0B6, Canada

Contact Individual:

Dave Kempster
Vice President, Logistics
The Beer Store/Brewers Distributor Ltd

As all beer sold in cans in BC are part of the BDL plan and due to the number of canned brands and the frequency with which canned brands are added and deleted, a full list of brand names has not been included. However, the brand owners using refillable glass bottles registered under the BDL product stewardship plan are listed below.

Table 8 - Brand Owners using Refillable Bottles Registered under the BDL Plan (as of August 31, 2014)

Brewer Name	Brewer Address
Brick Brewing Co.	181 King St. South, Waterloo, ON., N2J 1P7
Chilkoot Brewing/Yukon Brewery	102 Copper Road, Whitehorse, YT Y1A 2A8
Columbia Brewery	1220 Erickson Street, Creston, BC V0B 1G0
Dead Frog	1-27272 Gloucester Way, Aldergrove, BC V4W 4A1
Garrison Brewery	1149 Marginal Road, Halifax, NS B3H 4P7
Granville Island Brewing	1000 1200 73 West, Vancouver, BC V6P 6G5
Great Western Brewing	519 Second Avenue North Saskatoon, SK S7K 2C6
Labatt Breweries Ltd.	Box 580, 210 Brunette Avenue, New Westminster, BC V3L 4Z2
McAuslan Brewing	5080 St. Ambroise, Montreal, PQ H4C 2G1
Molson Coors Canada	#1100-601 West Broadway, Vancouver, BC V5Z 4C2
Moosehead	89 Main St. West, Saint John, NB, E2M 3H2
Nelson Brewing	512 Latimer Street, Nelson, BC V1L 4T9
Okanagan Spring	2808 – 27 Avenue, Vernon, BC V1T 9K4
Oland Specialty Products	#402, 1148 Homer Street, Vancouver, BC V6B 2X6
Phillips Brewing	201 Government Street, Victoria, BC V8T 4P1
Propeller Brewing Company	2015 Gottingen Street, Halifax, NS B3K 3B1
R&B Brewing	54 East 4 Avenue, Unit 100, Vancouver, BC V5T 1E8
Russell Brewing Company/Fort Garry	202 13018 80 Avenue, Surrey, BC V3W 3A8
Sleeman Brewing and Malting Co. Ltd.	551 Clair Road West, Guelph, ON N1L 1E9
Steam Whistle	255 Bremner Blvd., Toronto, ON M5V 3M9
Tree Brewing	1083 Richter Street, Kelowna, BC V1X 2K6
Unibroue Inc.	80 Des Carrieres, Chambly, PQ, J3L 2H6
Vancouver Island Brewing	2330 Government Street, Victoria, BC V8T 5G5
Vincor International	P.O. Box 1650, Oliver, BC V0H 1T0

11. FINANCIAL SUMMARY

BDL will continue to provide audited reports annually on the revenues associated with its deposit return system. The summary audited deposit information for the past 10 reporting periods is outlined below:

Table 9 – Ten Year Summary: Audited Results of BDL’s Deposit Refund Performance 2003-2012

Reporting Period	Deposits Received	Refunds Paid	Return Rate
FY 2003	\$56,289,694	\$53,752,752	95.49%
FY 2004	\$58,223,284	\$54,433,098	93.49%
FY 2005	\$58,955,880	\$53,462,038	90.68%
FY 2006	\$58,479,727	\$54,253,837	92.77%
FY 2007	\$59,649,312	\$54,225,381	90.91%
FY 2008	\$60,101,182	\$55,172,432	91.80%
FY 2009	\$58,678,873	\$54,740,548	93.29%
CY 2010	\$60,475,190	\$56,863,271	94.03%
CY 2011	\$59,709,307	\$55,386,720	92.76%
CY 2012	\$59,229,010	\$54,983,228	92.83%
TOTAL	\$589,791,459	\$547,273,305	92.79%

a. Program Funding

BC brewers pay the full costs of managing their container recovery program. The cost for recovering the container is factored into the price of the product as any other input cost, such as labour, energy or transportation. As all costs of the BDL system are internalized, any inefficiency in the BDL system accrues to brewers as lost margin and deadweight cost. Accordingly, brewers demand that BDL be aggressive in ensuring the system is highly cost-effective, while maintaining best-in-class environmental performance and customer service levels.

A fundamental tenet of EPR is that costs internalized to producers result in producers designing products and systems to reduce environmental and financial cost – an effect often described as “design for the environment” or DfE. The BC brewers’ approach to container management is a practical example of this economic mechanism at work.

On the other hand, other producers have the consumers fund their container recovery program through the levying of ‘container recycling fees’ or visible eco-fees charged at the point of sale in addition to the product price. In such a system, it is exclusively the consumer that pays for the collection and recycling of beverage containers. Producers bear no financial responsibility and face no financial consequences. It is consumers, not producers, who pay for any system inefficiencies. This reduces the impetus to pursue operational policies that would reduce cost.

The lack of incentive to reduce cost can be seen in the actual cost to consumers. In 2012, well over \$50 million (and as much as \$65 million) was charged to BC consumers for the collection of their non-beer beverage containers.¹⁸ On this basis, BDL’s cost internalization saved BC consumers over \$32 million in eco fees.

BDL’s program is run on a cost-recovery basis and is funded by the manufacturers participating in the program.

With respect to refillable glass bottles, BDL’s program will continue to be funded through charging participating brewers an established fee per dozen bottles handled. With respect to cans, the BC Brewers Recycled Container Collection Council (BRCCC) regularly reviews its program finances to determine whether a fee needs to be charged for the collection of beer cans.

The BRCCC is a not-for-profit society established by the brewing sector to transparently administer the financial and logistical requirements of BDL’s stewardship. The BRCCC is comprised of members representing BDL, Labatt Breweries Ltd., Molson Coors Canada, Sleeman Brewing and Malting Co. Ltd., the BC Craft Brewers Guild and Canada’s National Brewers. As a result, the Board is made up of representatives of each of these companies or organizations that together represent over 95 percent of the beer volume sold in the province and is a representative cross section of brand owners that are local, national and international and that own or are the agents for brands in each category of stewardship.

¹⁸ Encorp Pacific (Canada). *2012 Annual Report*, pg. 47.

The skills possessed by Board members range from financial, planning and logistics expertise to customer service, marketing and brand management professionals. The BRCCC meets to review audited and projected material revenues, unredeemed deposits, producer costs, BDL container fees, service levels and environmental standards and measures.

BDL, on behalf of the BRCCC, collects container fees from brand owners, retains unredeemed deposits with respect to can sales (forwarded to BDL from the LDB) and retains material revenues from aluminum material sales. From these revenues, the BRCCC, through BDL, pays container collection partners for collection of beer cans and arranges for the transportation and preparation of cans for recycling.

12. PERFORMANCE MEASUREMENT SUMMARY TABLE

Unless otherwise stated, BDL will report annually on each of the following metrics:

Table 10 – Summary of BDL Plan Performance Measurement Targets 2015-2019

Measure	2015	2016	2017	2018	2019
Recovery/ Collection Targets	87.5%*	87.5%*	87.5%*	87.5%*	87.5%*
Accessibility Targets	236 unlimited return locations (165 LRS, 71 depots)	252 unlimited return locations (180 LRS, 72 depots)	285 unlimited return locations (210 LRS, 75 depots)	328 unlimited return locations (250 LRS, 78 depots)	385 unlimited return locations (305 LRS, 80 depots)
		At least 1 unlimited return location in each Regional District	At least 1 unlimited return location in each Regional District	At least 1 unlimited return location in each Regional District	At least 1 unlimited return location in each Regional District
	75% of population within 10 min. drive of BDL authorized return location**	75% of population within 10 min. drive of BDL authorized return location**	75% of population within 10 min. drive of BDL authorized return location**	80% of population within 10 min. drive of BDL authorized return location**	80% of population within 10 min. drive of BDL authorized return location**
Consumer Awareness Targets	Combined Schedule 1 and 5 Annual Report to Ministry				
	3 net new consumer promotion/ education initiatives				
Pollution Prevention Hierarchy/Product Life Cycle Targets	Direct 100% of collected materials for re-use or to recycling commodity markets				

**Note – Stated target collection/recovery rate applies to both the overall rate and the rate for each container type*

*** Note – Percentage of population within a 10 minute drive of a BDL authorized return location will continue to increase as more unlimited return locations are signed up. However, the stated target is reflective that BDL will undertake a new GIS study in 2018, rather than on an annual basis. As a result, the performance on this measure will only be able to be measured when a new study is undertaken.*