Stakeholder Consultation: Problematic Materials

Phase 1: Information

BEVERAGE CONTAINER MANAGEMENT BOARD

Summary

In response to evolving market dynamics and material management trends, BCMB is initiating a consultation process with beverage manufacturers, distributors and retailers who conduct business in Alberta.

This process specifically addresses the *potential* phase-out of two material streams (crystal and ceramic) from Alberta's designated beverage container list.

Background

The exploration of phasing out crystal and ceramic containers is driven by BCMB's optimization of Alberta's beverage container recycling system, ensuring the province remains a global leader in collecting and recycling non-reusable beverage containers, and ensuring Alberta's material streams remain some of the cleanest in the world.

This Phase 1 document provides foundational information regarding these proposed changes. Its purpose is to inform manufacturers, distributors and retailers who conduct business in Alberta about BCMB's initial considerations and the rationale behind exploring these adjustments to Alberta's beverage container recycling system.

Your understanding and subsequent feedback are paramount as we explore these changes.

Regulatory Context

BCMB is Alberta's beverage container recycling system regulator. The organization was established in 1997 as a management board under Alberta's Environmental Protection and Enhancement Act, specifically the Beverage Container Recycling Regulation (BCRR).

This regulation gives BCMB its authority and outlines its duties and powers, which include:

- Registering Beverage Containers
- Approving Recycling Methods
- Overseeing the Common Collection System (Deposit Return System, DRS)
- Permitting Bottle Depots
- Setting Handling Commissions for Bottle Depots

Under the BCRR, the responsibilities of manufacturers and the Collection System Agent (CSA) are also included. When it comes to the re-use and recycling of products, the BCRR outlines the following:

Re-use and recycling

> **Section 16(1)** A manufacturer of a beverage in a refillable container shall
>
> (a) re-use the container as a refillable container if the manufacturer considers the container to be suitable for re-use as a container, or
>
> (b) cause the container to be recycled by a method approved by the Board, if the manufacturer considers the container is not suitable for re-use as a container.
>
> **16(2)** The collection system agent shall cause non-refillable containers to be recycled by a method approved by the Board.

Section 4.8 of the Manufacturer and Retailer By-law states:

> "The BCMB shall not register any Container that cannot be recycled by an Approved Method of Recycling. "
>
> 4.8.1 As of November 20, 2024, ceramic and crystal Containers are deemed to be recyclable by an Approved Method of Recycling.

However, despite crystal and ceramic materials currently being deemed "recyclable" for compliance purposes, it is critical to acknowledge that there are currently *no* widely verified or economically feasible true recycling methods for these materials within Alberta's existing infrastructure.

As of June 2025, BCMB and Alberta's CSA, Alberta Beverage Container Recycling Corporation (ABCRC) began the process of collaborating on a project to establish methodologies for verifying recycling rates.

Problematic Materials

Problematic materials in beverage container recycling are those that hinder efficient collection, sorting, or processing due to factors such as contamination, mixed compositions, or a lack of viable end markets for the recycled material.

These issues often lead to inefficiencies, increased operational costs, or can pose environmental concerns.

The Case of Crystal and Ceramic

As mentioned, currently, crystal and ceramic materials are currently deemed "recyclable" under current by-law. However, the reality is that these materials lack true, widespread recycling methods that are economically feasible and environmentally sound within the existing infrastructure.

Issues

Crystal	Ceramic
Lead Content Traditional crystal often contains lead oxide, which provides its characteristic sparkle. Lead is a toxic heavy metal, rendering crystal unsuitable for standard glass recycling due to contamination risks.	**Varied Composition** Ceramics encompass a wide range of materials (e.g., earthenware, porcelain, stoneware), each possessing different compositions and glazes. This inherent variability makes standardized, efficient recycling processes extremely difficult to implement.
Different Composition Crystal has a distinct chemical composition compared to regular glass. This difference disrupts the melting point and chemical balances required in standard glass recycling processes, leading to material incompatibility.	**High Melting Points** These materials are fired at extremely high temperatures, making them highly heat-resistant. Re-melting ceramics for recycling requires significant energy input, often rendering the process economically unfeasible.
Specialized Handling Recycling lead crystal necessitates specialized facilities and processes to effectively prevent lead contamination in the recycling stream and ensure worker safety.	**Glazes and Contaminants** Ceramic glazes can contain various chemicals, including heavy metals. These contaminants can pollute recycling streams, compromise the quality of recycled materials, and pose environmental risks.
	Fragmentation Ceramics tend to break into sharp, abrasive fragments. These fragments can cause significant damage to recycling equipment and pose considerable safety hazards to personnel throughout the collection and processing chain.

Common Issues

Lack of Infrastructure
Standard recycling facilities are not equipped to handle crystal or ceramic materials, contributing to a lack of viable and scalable recycling options.

Contamination
If ceramic or crystal enters standard recycling streams, it can contaminate other recyclable materials, such as glass. This contamination can reduce the quality of recycled materials and even render them unusable.

Equipment Damage
Hard ceramic and crystal fragments can damage recycling equipment, leading to costly repairs and downtime.

Landfill Burden
When these materials cannot be recycled, they end up in landfills, contributing to waste accumulation.

Environmental Pollution
Lead from crystal and other chemicals from ceramic glazes can leach into the environment from landfills, polluting soil and groundwater.

Current Economic Context/Statistics

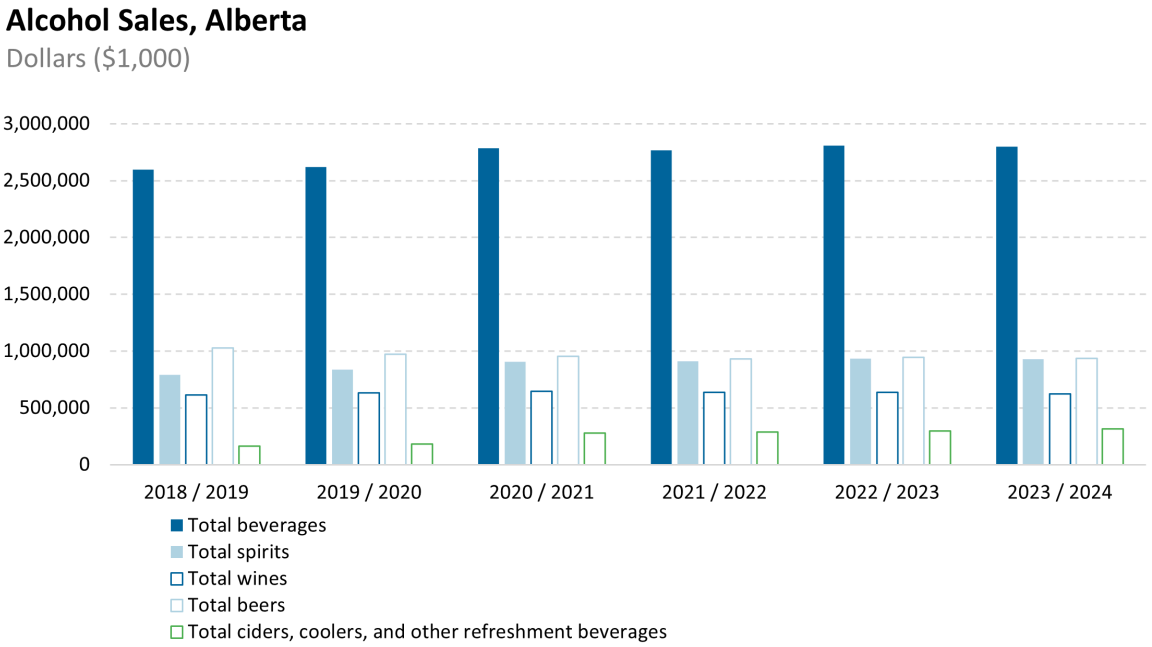
Apart from environmental degradation, understanding the broader economic landscape is crucial when considering changes to container types. Specifically, we can examine alcohol sales data, as these can represent a significant contribution to crystal and ceramic container types within Alberta's Deposit Return System (DRS).

While the specific crystal and ceramic container types under consideration for potential phase-out will be presented in more detail in Phase 2, understanding the broader context of sales volumes helps inform the potential impact of any such changes.

Alcohol Sales, Alberta

Last year, total alcohol sales in Alberta reached $2.8 billion dollars, a drop of 0.3% from a year earlier, according to Statistics Canada. Total volume of alcohol sold in 2024 reached 343 million litres, falling from 347 million litres (-1.7%) from 2023.

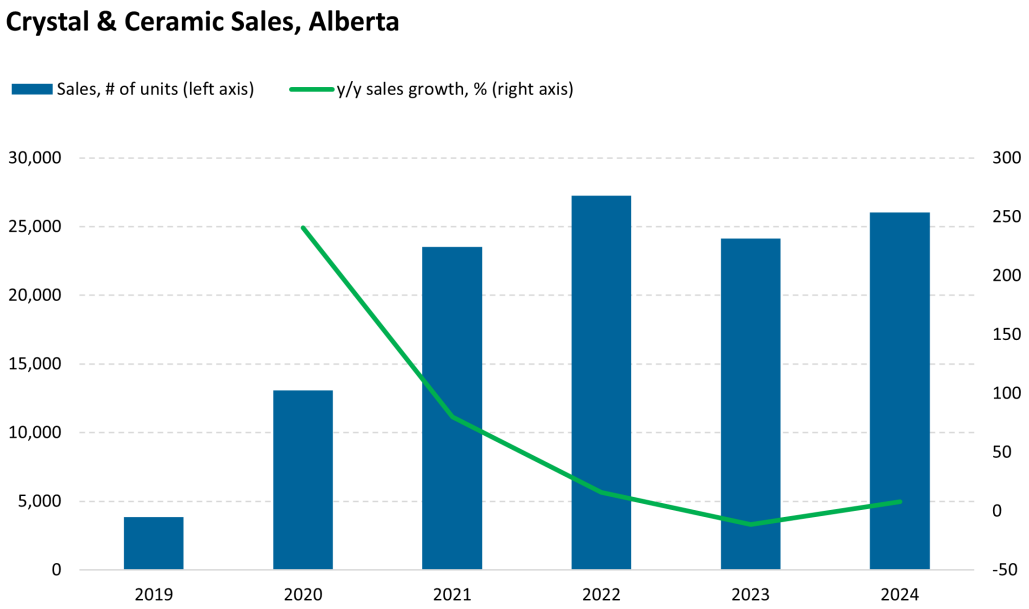
Spirits maintained their 33% share of total alcohol sales year-over-year. While overall sales dipped 0.7% last year, spirits' volume saw a comparable 0.6% increase.



Source: Statistics Canada. Table 10-10-0011-01 Value of sales of alcoholic beverages of liquor authorities and other retail outlets, by beverage type (x 1,000)

According to Alberta Gaming, Liquor and Cannabis (AGLC), crystal and ceramic alcohol container sales in Alberta reached 26,052 units in 2024, a 7.8% increase from 2023. While the five-year average growth rate for these containers is a robust 67.2% (peaking in 2020, the first year of the pandemic), sales dipped -11.0% in 2023.

While crystal and ceramic beverage containers saw relatively strong sales growth over the past five years, they make up a tiny fraction of the market. In 2024, these materials represented just **0.1%** of Alberta's 2.6 billion total beverage container sales.



Source: Alberta Gaming, Liquour and Cannabis (AGLC)

Stakeholder Consultation

BCMB is committed to a transparent and collaborative consultation process for this initiative. Stakeholder engagement will unfold in three distinct phases:

Phase 1 Information	**Phase 2** Stakeholder Feedback	**Phase 3** Findings and Broader Information Sharing
Current Phase - July 2025	August - September 2025	October 2025
This document provides initial information and the comprehensive rationale for exploring the potential elimination of two container types. It serves to establish a foundational understanding for all stakeholders.	Following the informational phase, a dedicated online survey will be launched. This survey will offer all manufacturers, registrants, and other interested stakeholders a formal opportunity to provide specific feedback, data, and sentiment regarding the potential phase-out of crystal and ceramic. This phase is designed for detailed perspectives and input.	Upon the completion and thorough analysis of the Phase 2 survey, BCMB will present the key findings derived from the consultation process, provide a more detailed overview of the proposed changes, and offer an interactive forum for broader discussion and clarification. This stage will inform the direction of this overall initiative.

Next Steps

We strongly encourage you to thoroughly review the information provided within this document. Your understanding of the rationale behind these potential changes is critical for a productive consultation.

Please anticipate the official launch of our Phase 2 survey in August 2025. This survey will be your opportunity to provide specific feedback on the phase-out of crystal and ceramic.

Should you have any immediate questions or require clarification on the information presented in this Phase 1 document, please do not hesitate to contact us at info@bcmb.ab.ca.