



STAFF REPORT

Title: Council Query - Glass Recycling

Meeting Date: August 8, 2023

Executive Summary:

Council raised a query during its' July 11, 2023 regular meeting of Council to review City of Cold Lake glass recycling program as the MD of Bonnyville is considering glass as a recyclable material. Collection of glass as recyclable material was removed from the City's recycling program in 2019 and the glass is no longer be collected for recycling at curbside and at the recycling drop off depot.

Considering the volume of the glass generated in the City of Cold Lake as waste, which is very low, and disposal options as recyclable material being limited to almost none, administration is of the opinion to that the glass materials continue to be collected with regular waste stream at this time.

Background:

Back in 2017/18, the global recycling market implemented tougher restrictions on reusable materials, leading to higher processing costs for certain materials, with glass being one of them. The local (Alberta) recycling industry heavily relied on overseas exports of reusable materials, particularly to China. Due to these stricter guidelines, glass recycling is no longer a viable option, resulting in the majority of municipalities in Alberta ceasing to accept glass as a recyclable material. The City of Cold Lake also removed glass from its list of recyclable materials in 2019, and it is now accepted only in the black cart as waste.

<https://edmontonjournal.com/news/local-news/glass-and-plastics-being-removed-from-recycling-pick-up-in-strathcona-county>

Key Challenges in Glass Recycling:

1. **Minimal Contribution:** Over the three years 2017 – 2019 (prior to removing glass from recycling program), the collection of glass in the city accounted for approximately 50 tons per year, making up only 3.2% of the total recycling stream. Similarly, the total glass material received at the Waste Management Facility during the same period was less than 0.5% of the total waste collected annually.



2. High Operating Cost: Downstream recycling processors face significant challenges in processing glass as a recyclable commodity, primarily due to high operating costs. These costs are then transferred to the municipality as the collector and hauler of recyclable materials.
3. Lack of Recycling Technology: Some municipalities, like the City of Edmonton, advertise glass as an acceptable recyclable material. However, they have yet to recycle any collected glass as they await new technology to process glass material.

Based on Council's query, administration reviewed the options for collection of glass as a recyclable commodity. Below are some of the key factors that can enlighten the challenges in recycling of the glass:

- Based on the past year's (2017 – 2019) recyclables generated in the city, the collection of glass constitutes approximately 50 tons per year averaging 3.2% of the total recycle stream.
- Similarly, based on the data for (2017 – 2019), the total glass material received at the Waste Management Facility is less than 0.5% of the total waste collected in a year.
- The downstream recycling processor faces several challenges processing glass as a recyclable commodity with high operating cost which then transfer to the municipality as a collector and hauler.

Current Glass Recycling Practices in Alberta:

1. The following communities accept glass in the black cart as part of the waste stream: Beaumont, Strathcona, Spruce Grove, St. Albert, Leduc, Lloydminster, Okotoks, and Red Deer.
2. The following communities allow glass in the blue cart: Edmonton, Calgary, Airdrie, Cochrane, and Chestermere.
3. A processor operating from Airdrie accepts glass, but they have strict feedstock guidelines and zero tolerance for cross-contamination.

Recommendations for Implementing Glass Recycling in the City of Cold Lake:

1. Glass recycling at the curb is not feasible, as the Material Recovery Facility (MRF) is not equipped to handle glass recycling, and broken glass poses safety risks.
2. Consider adding bins to existing recycling drop-off sites, which would cost approximately \$30,000 in capital and \$5,000 in yearly operating costs.
3. Alternatively, the city can utilize a different type of bin through contracted services, which would cost around \$20,000 per year.



4. Collected glass can be taken either to the landfill or the transfer station, with further hauling to Thorhild landfill. However, it is essential to note that this may not be the most sustainable option in the long run.
5. Another possibility is to provide a self-service volunteer drop-off bin at the landfill/transfer station, similar to the bulb recycling program. The final disposal of collected glass will still be recommended to the landfill, but Council may consider coordinating with the MD of Bonnyville processing site.

During discussions with the MD of Bonnyville, it was revealed that they are presently stockpiling glass at their La Corey site with plans to crush and mix it with concrete recyclable products in the future. However, it is important to note that the administration does not recommend initiating a glass recycling program that relies on a third-party resource, which may or may not exist in the future. If the Council decides to proceed with such a program, additional costs would be incurred, adding to the above-mentioned operating costs. Therefore, the city should carefully assess the feasibility and sustainability of depending on external entities for glass recycling before making any decisions.

Having said that, if Council desire to implement glass recycling program in City of Cold Lake, administration will suggest to review following;

- Glass recycling at curb is not an option as the MRF is not equipped to handle glass recycling. It is also a safety issue to handle broken glass at the MRF floor.
- Bins can be added to existing recycling drop off sites which will cost approx. \$30,000 in capital and \$5000 in yearly operating costs.
- City can utilize a different kind of bin through contracted services which based on current rate will cost approx. \$20,000 per year estimated based on existing contract until rates.
- All the collected glass product will be taken either to the landfill or to the transfer station to be further hauled to Thorhild landfill until a market is able to be ascertained for a revenue stream.

Based on discussions with MD of Bonnyville, they are currently stockpiling glass at their La Corey site for future crushing and mixing with concrete recyclable product. Administration do not recommend to initiate a program dependent on a third-party resource which may or may exist in future, however, it that is the direction Council want to go with this program, then additional costs will be added to above operating costs for shipping/hauling to La Corey.

Alternatively, a bin can be provided at the landfill/transfer station for a self-service volunteer drop off similar to the bulb recycling program. The final disposal for the



collected glass will still be recommended to the landfill but Council may wish to direct administration to dispose it off at the MD of Bonnyville processing site. It should be noted that in future, the M.D. may request fees for costs to process and crush the glass.

Alternatives:

The Council may consider the following alternatives:

1. Direct administration to continue to collect glass with the regular waste stream as per the current service levels and to monitor and watch for any new changes in technology/market to help with future implementation of glass recycling.
2. Refer the issue to the future meeting of Corporate Priorities Committee of Council
3. Direct administration to amend the recycling program to allow for glass recycling with disposal to landfill OR MD of Bonnyville site (administration will prepare the necessary budget amendments for Council approval).
4. Refer the program to the 2024 Budget Deliberations.
5. Accepts the report as information only.

Recommended Action:

Administration recommends to continue to collect glass with the regular waste stream and to monitor and watch for any new changes in technology/market to help with implementation of glass recycling.

Budget Implications (Yes or No):

Yes

Submitted by:

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