



Reusing and Recycling Glass in Manitoba

<https://simplyrecycle.ca/does-manitoba-recycle-glass/>

Mandatory Materials

- Newsprint and flyers
- ~~Aluminum food & beverage containers~~
- Glass food & beverage containers
- ~~Steel food & beverage containers~~
- Magazines & catalogues
- Gable top containers (eg. milk)
- Boxboard (eg. cereal boxes)
- Telephone directories
- Residential corrugated cardboard
- Aseptic packaging (eg. juice boxes)
- Household plastics #1-5 & #7

Glass packaging is not going extinct

- ✓ Nontoxic and FDA Approved —glass is the only packaging material certified by the U.S. Food & Drug Administration as “generally regarded as safe.”
- ✓ 40% lighter than they were 30 years ago...and becoming lighter
- ✓ can handle vacuum or high-pressure sealing, safeguarding against moisture and oxygen invasions, protecting contents from spoilage and bacteria.
- ✓ Nonporous, impermeable, air-tight, and transparent so there are no interactions between glass packaging and contents
- ✓ can be specified to absorb ultraviolet light, ensuring product purity and taste
- ✓ has an inherently longer shelf life than any packaging material.
- ✓ Does not deteriorate, corrode, stain or fade, so products inside remain fresh

Glass is inert, non-polluting, and endlessly recyclable

- Glass is made from nontoxic raw materials—silica, sand, soda ash, limestone and up to 70% recycled glass
- Glass can also be recycled endlessly back to its original use. It never loses its quality and purity, no matter how many times it's recycled. **However...**
- Making new glass requires sand. Only a specific kind of sand can be used, most of which is harvested from riverbeds and seabeds. Harvesting sand impacts the ecosystem and can exacerbate flooding and erosion.
- Glass is also heavier than plastic, and breaks much easier during transit. This means it produces more emissions in transportation than plastic and costs more to transport.
- And, of course, only a portion of glass packaging is actually recycled.

GLASS BOTTLES



Uncork those refunds by recycling your glass bottles. You'll typically find these containers holding soda and alcoholic beverages like beer, wine, and spirits.

Refund:

10¢ on bottles up to 300ml.

20¢ on bottles 301-999ml.

40¢ on bottles 1L and over.

EHC (Enviro Handling Charge*): 9¢

Prep tips: remove lids, rinse, place in boxes or crates, sorted by colour.

What does SARCAN do with the glass?

The household glass, all beverage containers, electronics and paint that SARCAN receives are processed and recycled into new products. Clear glass can be made into reflective glass beads for road paint to light up the streets of Saskatoon and provincial highways. Coloured glass can be used to manufacture fiberglass insulation for home construction. Recycled glass can also be used as an aggregate material in road construction. All materials received by SARCAN are recycled within North America; nothing is shipped overseas or sent to landfills.

Worldwide, we go through 50 billion tons of sand every year. That is twice the amount produced by every river in the world.

The major player for sand usage is concrete. Concrete is made of 10% cement (lime and Clay) 15% water and 75% sand.

The concrete required to build a house takes on average 200 tons of sand, a hospital uses 3,000 tons, and a mile of a highway requires 15,000 tons.

Company Name	Area	Materials Accepted	Recycled Products	Materials Processed (tons/year)	Capacity (tons/year)
2M Ressources Inc.	Quebec	Glass Bottles, Glass Jars/Containers	Glass Cullets	110,000	
Blue Planet Recycling	British Columbia	Other Glass	Glass Powders		
Enviro-Corp Recycling	British Columbia	Glass Bottles, Glass Jars/Containers	Glass Cullets	60,000	
Tricentris Centre de Tri	Quebec	Glass Bottles, Glass Jars/Containers	Glass Cullets, Glass Powders		60,000
Vitreous Glass Inc.	Alberta	Glass Bottles, Glass Jars/Containers, Other Glass	Glass Cullets		

Overview of Glass Use and Recycling

(Adapted from: *Glass Re-use and Recycling*", Warmer Bulletin, No.49, May 1996, pp.12-13)

The debate regarding the optimum environmental use for recovered glass containers continues. Each of the options listed below has costs and benefits. This table outlines some of the costs and benefits associated with the three most widely use ways of diverting glass from the landfill.

Refilling Glass Bottles

Benefits

- ✓ Conserves energy and resources required to make new glass bottles
- ✓ More times bottles are refilled the more energy and resources are conserved
- ✓ Reduces glass waste entering the landfill

Costs

- ✓ Refillable bottles need to be stronger so they are heavier and made from more resources
- ✓ Large amounts of water, detergents and chemicals are used in cleaning bottles to meet hygiene requirements
- ✓ Heavier glass means more energy used in transport

Remanufacture into new glass containers ("closed-loop" recycling)

Benefits

- ✓ Conserves energy and resources required to make new glass containers
- ✓ Reduces the air and water pollution associated with excavating raw materials required for the production of new glass containers
- ✓ Saves energy because glass cullet melts at a lower temperature than the raw materials
- ✓ Reduces glass waste entering the landfill

Costs

- ✓ High financial costs associated with processing glass to market specifications
- ✓ Energy use in collecting and transporting glass to distant markets

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Challenges & Opportunities

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- ◆ Paving and roadway applications such as use in base course, sub-base, sub-grade and embankments
- ◆ General backfill applications such as use in supporting heavy static loads, certain dynamic loads (ex. compressors)
- ◆ Landscaping and as A-base for sidewalks
- ◆ Drainage applications such as retaining wall backfill, footing drains, drainage blankets and french drains
- ◆ Trench bedding and utility line, wire markers
- ◆ Fill material around underground tanks

Always consult a qualified engineer before using glass in any application

Local Use of Recovered Glass ("open-loop" recycling)	
Benefits	Costs
<ul style="list-style-type: none"> ✓ Replaces resources which require excavation (ex: crushed rock or gravel) ✓ Reduces energy demand from extracting and transporting raw material for construction projects ✓ Reduces air and water pollution associated with excavating raw materials ✓ Conserves energy used in transporting glass to market ✓ Reduces glass waste entering the landfill 	<ul style="list-style-type: none"> ✓ Does not reduce resources and energy used in manufacturing new glass containers ✓ Energy required to crush the glass for local uses ✓ Energy, equipment and labour resources to blend aggregate with other aggregate for some applications

Recovering Glass Packaging for Local Uses – Through a circular economy lens

TAKE

...LESS



MAKE

...SMARTER



WASTE

...LESS

