



## Glass Recycling Challenges

No dedicated recycler likes to admit some materials are not worth recycling, but if they believe in the adage, “Do no harm,” one must face facts. Here are the many reasons why Nebraskans should not bother to recycle glass:

### **Recycled glass competes with a cheap, plentiful commodity: Sand.**

Glass bottles are made from sand, an extremely plentiful and inexpensive raw material. While it takes less energy to melt old, clean glass and reform it as new bottles, any savings for the manufacturers are offset by these other considerations:

- **The cost to prepare glass to look like sand is very expensive.**

Glass jars and bottles have to first be crushed and ground to a consistent size, called cullet to be able to melt uniformly within the glass furnace (sand, however, starts off at the optimum size). No glass crusher has yet to be developed that itself doesn't quickly wear out due to the highly abrasive nature of glass.

- **Glass comes loaded with “extras,” all of which becomes waste.**

Cullet needs to be clean of the paper and plastic labels and plastic and metal lids and caps. Removing them consumes energy, and if they aren't removed (which isn't entirely possible in any cleaning process) they lower the furnace's effectiveness, cause it to wear out sooner and can ruin an entire batch of molten glass.

- **Not all glass is equal.**

In spite of best efforts to keep glass recycling programs free of ceramic cups and mugs, window pane and fluorescent bulbs and similar contaminants, they do show up because the public doesn't realize they are not the same type of glass. They cause even greater inefficiency and are even more detrimental to glass plants. In addition, the colors – clear, brown and green – must be kept separate, because if mixed they contaminate one another.

## **The glass packaging industry: threatened on both sides.**

All of the above challenges plague glass manufacturers' ability to make glass, but the industry's ability to sell its finished goods faces problems, too, which also mitigate the environmental and economic benefits for recycling glass:

- **An empty bottle or jar – an expensive way to ship air.**

Once made, a glass jar or bottle must be shipped to the customer to be filled, and unless that takes place adjacent to the glass plant, a fully formed bottle or jar has to be packaged and handled so as not to break in transit. Hence, they consume resources and energy before they can even be used. By comparison, plastic and composite packages are shipped from the factory either flattened or not fully formed, thereby greatly reducing their carbon footprints.

- **Breaks in the distribution chain.**

Broken glass is a very real possibility and safety problem from formation to final destination in the customer's cupboard. It's not just a liability issue, although it is a huge reason glass packaging is steadily declining. Breakage is also an energy and environmental issue, since to mitigate breakage requires either making bottles heavier or wrapping them with protective films, which consumes more energy and makes them less attractive to recycle.

## **If glass containers start out in life with such problems, can they expect a better afterlife?**

The unfortunate truth is no, at least not readily. Glass is not a welcomed "bedmate." Everyone can appreciate broken glass is a safety issue, but within the recycling stream it is a growing detriment to the recovery of other materials, threatening other industries' ability to economically recover paper, plastics and metals for the production of newspaper, bath tissue and toweling, carpeting, clothing and steel. Ironically, even as glass has steadily declined as a component of the waste stream while these other materials have been finding their way into new products, the presence of broken glass increases the cost of manufacturing.

## **For more information, please contact Curbside Rewards:**

Call 402-763-CART or e-mail [recycle@curbsiderewards.com](mailto:recycle@curbsiderewards.com).