Container Glass Recycling in Virginia

The Issue

While container glass is infinitely recyclable, only about 10% of glass food and beverage containers actually get recycled in Virginia. This means Virginia is wasting an estimated 315,000 tons of container glass each year—with much of it going to Virginia landfills for use as alternative daily cover or road construction. The reasons are somewhat complicated, but most recycling facilities are not equipped with the type of sorting and cleaning equipment necessary to prepare the glass material in a manner that is beneficial to the container glass industry. Glass bottles recycled in a typical “single-stream recycling” program are either broken during transport or during the recycling process. As a result, the glass winds up as a part of the “heavy” portion of the recycling residue that also includes other non-glass materials such as paper, metal and other organic material. The problem, according to one industry source, is that this so-called “glass” can be as much as 70% non-glass. Container glass manufacturers have very strict quality requirements and it is very difficult for them to make new containers using that type of feedstock. In addition, tiny shards from the glass containers contaminate other recyclable materials, such as paper and plastic. This lowers the scrap value of the paper and plastics thus making it more difficult to sell these materials in the marketplace. The issue with glass recycling in the Commonwealth has gone on for far too long and many local governments are considering removing container glass from their recycling programs altogether. At the Virginia Recycling Association Conference, in 2017, a spokesperson for the Glass Packaging Institute (GPI) indicated that GPI’s strategy is to “engage directly with target state and local governments where glass recycling is challenging.” To date, there has been no engagement with state and local governments in Virginia and the Commonwealth needs a better plan for collecting and recovering container glass.

How is Glass Being Recycled Elsewhere?

Glass is being recycled in other parts of the Country. Ten states have container deposit laws or so-called “bottle bills”, including California, Connecticut, Hawaii, Iowa, Maine, Massachusetts, Michigan, New York, Oregon, and Vermont. Under a bottle bill system, when you purchase a beverage container you pay an additional deposit amount (usually 5 or 10 cents per container) which is added to the cost of the product. Once the product has been consumed, you take the empty container to a redemption center where you receive your deposit back. The intent of bottle bill systems is to address concerns regarding litter and/or the recovery and recycling of the plastic, glass, and aluminum materials used to make the packaging. Glass recycling rates in bottle bill states averages over 63% compared with just 24% for non-deposit states. Though effective at increasing glass recycling rates—bottle bills are not the only option for recycling glass.
How is Glass Being Recycled Elsewhere?

In Kansas City, Missouri, for example, Boulevard Brewery Company helped found Ripple Glass in 2009. Ripple Glass set out over 60 glass-only recycling collection bins across the Kansas City region and today recycles glass in nine states. In addition to Ripple Glass, glass-only recycling program have been established in Phoenix, Nashville, and other parts of the country. The glass cullet generated by bottle bill state and programs like Ripple Glass is sold to companies that make fiberglass insulation, beverage containers and other products.

Markets for Glass in Virginia?

Glass bottles sorted at local recycling plants requires further processing in order to be useful to glass bottling industry. These facilities, called glass beneficiation plants, remove the trash and other contaminants and sort the glass according to color. Virginia currently does not have a glass beneficiation facility and the nearest such facilities are located in North Carolina and Pennsylvania. Glass is very heavy and costly to transport and so it makes sense for glass recycling beneficiation facilities to be located close to recycling facilities and/or bottle manufacturing plants. Virginia is fortunate to have two glass bottle manufacturing plants, which are located in Toano (near Williamsburg) and Danville. These plants, which are owned by Owens-Illinois (O-I), can recycled up to 200,000 tons of glass cullet per year. In addition to the two O-I plants, Fairfax County has also invested in glass processing equipment and there is a company manufacturing countertops using glass cullet in the Charlottesville area.

Options for Improving Glass Recycling in Virginia?

There are several options for improving container glass recycling in the Commonwealth including enacting Extended Producer Responsibility (EPR) laws, which would require manufacturers, distributors, and retailers to develop a plan to take back the glass (“bottle bill”). Typically bottle bills would also address other containers such as plastic bottles and aluminum cans. Adopting a bottle bill could improve the quality and quantity of source-separated glass collected for recycling, increase the percentage of glass going back into container use and could help address roadside and marine litter along the way. Any bottle bill should also include wine and liquor bottles, which are often excluded. To help improve the glass infrastructure in the Commonwealth, Virginia could establish a recycling business development grant program to encourage the glass industry to make the necessary investments in glass infrastructure in the Commonwealth including glass drop-off depots for large collectors, glass beneficiation facilities and other glass recycling facilities. Lastly, private waste collectors and local government could encourage removal of glass containers from curbside and drop-off recycling programs and work to establish glass-only drop-off and/or collection programs.

Virginia SB 218

During the 2018 Virginia General Assembly Session, Virginia approved new legislation aimed that improving recycling markets (SB 218, Lewis). The bill provides that a beneficiation facility or recycling center may be considered a manufacturer for the purpose of any state or local economic development incentive grant. Furthermore, it directed the Virginia Department of Environmental Quality (DEQ) to encourage and support beneficial use of materials. The current law only requires DEQ to encourage and support litter control and recycling. SB 218 also directs the DEQ to provide to the General Assembly by November 1, 2019, an evaluation of Virginia’s solid waste recycling rates and a set of recommendations for improving the reliability of the supply of recycled materials during the next 10 years in order to provide for beneficial use.