The consumer throws **glass** into a **recycle** bin. **Glass** is taken from the bin and taken to a **glass** treatment plant. The **glass** is sorted by color and washed to remove any impurities. The **glass** is then crushed and melted, then molded into new products such as bottles and jars.

Glass Facts

- Glass is 100% recyclable and can be recycled endlessly without loss in quality or purity.
- Glass is made from readily-available domestic materials, such as sand, soda ash, limestone and “cullet,” the industry term for furnace-ready recycled glass.
- The only material used in greater volumes than cullet is sand. These materials are mixed, or “batched,” heated to a temperature of 2600 to 2800 degrees Fahrenheit and molded into the desired shape.
- Recycled glass can be substituted for up to 95% of raw materials.
- Manufacturers benefit from recycling in several ways: Recycled glass reduces emissions and consumption of raw materials, extends the life of plant equipment, such as furnaces, and saves energy.
- Recycled glass containers are always needed because glass manufacturers require high-quality recycled container glass to meet market demands for new glass containers.
- Recycled glass is always part of the recipe for glass, and the more that is used, the greater the decrease in energy used in the furnace. This makes using recycled glass profitable in the long run, lowering costs for glass container manufacturers—and benefiting the environment.
- Glass containers for food and beverages are 100% recyclable, but not with other types of glass. Other kinds of glass, like windows, ovenware, Pyrex, crystal, etc. are manufactured through a different process. If these materials are introduced into the glass container manufacturing process, they can cause production problems and defective containers.
- Furnace-ready cullet must also be free of contaminants such as metals, ceramics, gravel, stones, etc.
- Color sorting makes a difference, too. Glass manufacturers are limited in the amount of mixed color-cullet (called "3 mix") they can use to manufacture new containers. Separating recycled container glass by color allows the industry to ensure that new bottles match the color standards required by glass container customers.
- Some recycled glass containers are not able to be used in the manufacture of new glass bottles and jars or to make fiberglass. This may be because there is too much contamination or the recycled glass pieces are too small to meet manufacturing specifications. Or, it may be that there is not a nearby market for bottle-to-bottle recycling. This recovered glass is then used for non-container glass products. These "secondary" uses for recycled container glass can include tile, filtration, sand blasting, concrete pavements and parking lots.
- The recycling approach that the industry favors is any recycling program that results in contaminant-free recycled glass. This helps ensure that these materials are recycled into new glass containers. While curbside collection of glass recyclables can generate high participation and large amounts of recyclables, drop-off and commercial collection programs tend to yield higher quality recovered container glass.

Glass Recycling Statistics

- Glass bottles and jars are 100% recyclable and can be recycled endlessly without any loss in purity or quality.
- The container and fiberglass industries collectively purchase 3.35 million tons of recycled glass annually, which is re-melted and repurposed for use in the production of new containers and fiberglass products. (Sources: Precision Consulting, NAIMA)
- Over a ton of natural resources are saved for every ton of glass recycled.
- Energy costs drop about 2-3% for every 10% cullet used in the manufacturing process.
- One ton of carbon dioxide is reduced for every six tons of recycled container glass used in the manufacturing process.
- There are 44 glass manufacturing plants operating in 21 states. There are 63 glass beneficiating facilities (aka "glass processing" plants) in 30 states. At the glass processing plants, recycled glass is further cleaned and sorted to spec, then resold to the glass container manufacturing companies for re-melting into new food and beverage containers.
- In 2015, 41.9% of beer and soft drink bottles were recovered for recycling, according to the U.S. EPA. Another 27.5% of wine and liquor bottles and 15.1% of food and other glass jars were recycled. In total, 33.2% of all glass containers were recycled.
- States with container deposit legislation have an average glass container recycling rate of just over 63%, while non-deposit states only reach about 24%, according to the Container Recycling Institute.
- Beverage container deposit systems provide 11 to 38 times more direct jobs than curbside recycling systems for beverage containers. (Source: The Container Recycling Institute, "Returning to Work: Understanding the Jobs Impacts from Different Methods of Recycling Beverage Containers").
- About 18% of beverages are consumed on premise, like a bar, restaurant, or hotel. And glass makes up to about 80% of that container mix.
- In 2008, NC passed a law requiring all Alcohol Beverage Permit holders to recycle their beverage containers. Since then, they have boosted the amount of glass bottles recovered for recycling from about 45,000 tons/year before the ABC law to more than 86,000 tons in 2011.
- Glass bottles have been reduced in weight approximately 40% over the past 30 years.
- Recycled glass is substituted for up to 95% of raw materials.
- Manufacturers benefit from recycling in several ways—it reduces emissions and consumption of raw materials, extends the life of plant equipment, such as furnaces, and saves energy.
- An estimated 80% of all glass containers recovered for recycling are re-melted in furnaces, and used in the manufacture of new glass containers. Source, Strategic Materials, Inc.
- Recycling 1,000 tons of glass creates slightly over 8 jobs. (Source: 2011 Container Recycling Institute).

http://www.recycling-guide.org.uk/science-glass.html