



# RAISING THE BAR

**COLLECTING GLASS CONTAINERS CAN BE A CHALLENGE FOR ANY SECTOR, AND THE BAR AND RESTAURANT INDUSTRY IS NO DIFFERENT. THE GLASS PACKAGING INSTITUTE COMPLETED A COMPREHENSIVE STUDY ON BAR AND RESTAURANT CONTAINER GLASS COLLECTION — MANDATORY AND VOLUNTARY ALIKE — TO CREATE A BENCHMARK AND BEST PRACTICES FOR MOVING FORWARD.**

**BY CONNI KUNZLER**

**G**lass bottles generated at high-volume foodservice businesses are ripe for recycling. And understanding how to “get at” this glass packaging, and ensure quality in the process, has led the glass container industry to track and engage programs that have sprung up across the U.S. over the past several years.

To identify what it takes for a recycling initiative targeting glass containers from bars, restaurants and hotels to succeed, the Glass Packaging Institute completed an in-depth survey during July and August, 2011 of 10 programs in eight states (see sidebar 2). Of the programs surveyed, four were initiated by a hauler, recycling collector or glass processor, another four by the local city or county, and two were started by a bar/restaurant or hotel.

## First step, partner up

The survey collected data on containers and processes, economic details and logistics. It also revealed best practices that have come out of these trailblazing programs. While no two programs are exactly the same, there are some common themes.

Top of the list, the hauler/recycling collector is a key player,

and the best programs create partnerships that are committed to glass container quality and to working with nearby recycled glass processors and/or glass container manufacturers. The local hauler or recycling collector is also critical to working through logistics and getting businesses on board, which is why several of the surveyed programs were initiated by a hauler or recycling collector.

“We could not have done this without the partnership with [regional waste management firm] Deffenbaugh,” says Stacia Stelk, executive director of Ripple Glass, a glass recycling processor in Kansas City, Missouri. Deffenbaugh is a regional waste management firm. Ripple went with a Deffenbaugh representative to pretty much every business to sign them up for the program, which Stelk said made a big difference in facilitating program participation. Not all were Deffenbaugh customers, but there was no conflict with the waste or recycling contract because they don’t collect glass bottles.

Cities and counties that initiate programs are especially effective at helping to create these connections and bring all the parties together. According to Angela Carbetta, director of Marion County (Ohio) Recycling and Litter Prevention, “A good relationship with haulers makes a huge difference. It’s all about relationships when you’re setting up and promoting the program.”

## Sidebar 1: Best practices

**Build partnerships that utilize and advance the local economy.** The food service businesses, hauler or recycler, and glass processor working in tandem ensure that the recycled glass is returned to a glass container manufacturer for closed-loop recycling. Cities and counties can be adept at helping to create these connections and bring all the parties together.

**Ensure sufficient participants for economic feasibility.** There need to be sufficient participants to fill a collection vehicle on a daily route to establish economic feasibility. This is a useful guide for determining the number of businesses that would be required to establish a viable program.

**Don't underestimate "set up" time and personnel requirements.** There is an initial requirement of personnel time to work with each business and set up the program, including assistance

with containers, logistics, training, signage, contracts, etc.

**Consider separate glass collection for a closed-loop end market.** Separated glass collection is optimal to ensure recycled glass is used to make new glass container. While some single stream MRFs can produce sufficient quality recycled glass to be taken to a cullet processor and eventually a closed-loop glass market, this results in glass loss. Single stream collection also requires processing both at a MRF and a cullet processor, which adds costs.

**At a minimum ensure cost neutral economics.** Economics must allow for the collection of glass containers to be cost neutral, or lower, to the participating businesses. The hauler also will expect to net some profit or at minimum not incur additional costs.

**Work with a collection team**

**committed to glass quality.** The hauler/recycling collector is a key partner. Work with a hauler or recycler that is committed to glass quality and is working with a closed-loop end market for the recycled glass containers. The hauler or recycler is also critical to working through logistics and economics.

**Match storage containers, collection vehicles, and participants.** Pay attention to outside storage space and collection vehicle accessibility. Inside, it's more musical bins.

**Keep inside collection containers adaptable and clearly marked.** Nearly all bars and restaurants use Slim Jims (no wheels and 23 gallon) or similar, like Brute (wheeled and 50 gallon) for inside/behind bar collection. Consider signage (English and Spanish) and color of containers to help with contamination.

And in Cincinnati, Hamilton County partnered with local waste/recycling companies, allowing businesses to reduce trash collection while adding recycling services.

## Getting started

The majority of programs began within the past six years, and several within the past two years. Of the ten programs surveyed, on average, they have been in operation just over four years. The longest is 19 years old and the shortest has been in operation eight months. Taking out the program in existence for 19 years, the outlier, the average length of time in operation is 2.75 years.

Most programs were initiated to handle the volume of glass generated at bars, restaurants and hotels, as well as the environmental impact of recycling glass versus including it with the trash. According to Holly Christmann, Solid Waste Program Manager, Hamilton, Ohio, "We were getting more calls from bars and restaurants for assistance with glass recycling and realized we hadn't addressed this sector and could get a lot of glass – and cardboard – if we provided assistance."

In some cases it was motivated by generating a higher quality and volume of recycled glass for a targeted end market. "Be creative and customize your own program," says Brad Tomm, sustainability manager for MGM Resorts International. At the 10 MGM hotels in Las Vegas, they have the space and resources to sort recyclables on site, and then they sought out a recycled glass processor with an end market that returns the glass to new bottles.

## Rounding up participants is a hands-on job

Surveyed programs indicated that there was an initial requirement of personnel time to work with each business and set up the program. This primarily involved assistance with recycling containers, logistics, training, signage, contracts, etc. This is another vital element of a successful program.

On average, 100 bars, restaurants and hotels participate in each surveyed programs. The smallest program has 10 participating businesses and the largest

has 330. One program includes 10 large hotels. Of those reporting, on average, each business is generating about one ton per month of mixed glass containers. Of the 10 hotels participating, on average they each generate 40 tons per month (between 20-70 monthly).

The average amount of glass collected through a bar, restaurant and hotel recycling program is about 150 tons per month. The smallest surveyed program collects just over eight tons per month of recyclable mixed glass and the largest two citywide programs generate 400 tons per month and 650 tons per month of mixed glass.

Glass containers are being collected separately from other recyclables in six of the 10 programs, and six also collect glass via a single-stream collection system. Two programs collect glass both separated for larger generators and single-stream for smaller businesses. Single-stream means either all recyclables in one collection bin or commingled containers. Those that are collecting glass separated from other recyclables are generally bypassing the materials recovery facility (MRF) and taking glass directly to a glass recycling or cullet processor.

## Sidebar 2: Surveyed programs

Programs initiated by a hauler/recycling collector or glass processor:

WeCanRecycle  
Houston, Texas  
[www.wecanrecycle.org](http://www.wecanrecycle.org)

Blue Skies Recycling  
St. Louis, Missouri  
[www.blueskiesrecycling.com](http://www.blueskiesrecycling.com)

Dahl Recycling  
Colorado Springs, Colorado

Ripple Glass + Deffenbaugh Industries  
Kansas City, Missouri  
[www.rippleglasskc.com](http://www.rippleglasskc.com)  
[www.deffenbaughindustries.com](http://www.deffenbaughindustries.com)

Local government-initiated program:

Marion County Recycling and Litter Prevention  
Marion, Ohio  
[www.co.marion.oh.us](http://www.co.marion.oh.us)

Hamilton County Solid Waste District  
Cincinnati, Ohio  
[www.hamiltoncountyrecycles.org](http://www.hamiltoncountyrecycles.org)

San Luis Obispo County Integrated Waste Management Authority  
San Luis Obispo, California  
[www.iwma.com](http://www.iwma.com)

Programs initiated by a bar, restaurant, hotel or other private business:

MGM Resorts  
Las Vegas, Nevada  
[www.mgmresorts.com](http://www.mgmresorts.com)

Broad Ripple Village/Union Jack Pub  
Indianapolis, Indiana  
[www.greenbroadripple.org](http://www.greenbroadripple.org)

Orange County Solid Waste Management Department  
Chapel Hill, North Carolina  
[www.co.orange.nc.us](http://www.co.orange.nc.us)

## Aim for cost neutral

Overall, implementing glass recycling resulted in a cost-neutral scenario for businesses or a small reduction or increase in costs. Surveyed programs report that most businesses are unwilling to pay an additional fee for glass recycling collection services. Of those programs initiated by a hauler or recycling firm, all either pick up at no charge, or at a fee that allows for an overall cost neutral position for participating businesses. Some haulers also supply outside collection containers as part of the service.

Of the surveyed programs initiated by a hauler or recycling collector, all report that the program was “economically feasible.” Andy Barton, vice president of sales for Deffenbaugh Industries stated that it was “cost neutral,” but they were getting benefits for participating in a program that is a source of pride for the community as all program partners are part of the local economy – from brewery to recycling firm and back to glass bottles again. Indeed, the Ripple Glass program in Kansas City has the ultimate closed-loop system. It has energized the local economy and is now spreading to collect recyclable glass in a dozen other cities in five nearby states.

In most cases, separate glass collection requires an additional pick-up, and while glass taken out of the trash often eliminates one trash pickup each week for a business, this may not be reflected in overall economics. Terms of the existing hauling contract

may not allow for a change in volume of trash to be reflected in lower costs, although that may occur over time as contracts come up for renewal.

“We’ve done some case studies where we’ve proven that at a minimum with glass and organics out of the mix, you eliminate one pick up of trash per week,” says Harry Cohen, president of Blue Skies Recycling, St. Louis, Missouri. “But, the customer has to make that change with the hauler in terms of contract, so they may be paying more until this benefit is realized.”

This is echoed by Blair Pollock, solid waste planner for Orange County (North Carolina) Solid Waste Management Department, “Many bars and restaurants want to recycle but perceive it as solely a new cost,” he says. “And they may not be aware enough of their contract terms or are too locked in contractually to negotiate with their garbage hauler when they take glass bottles out of the Dumpster.”

In North Carolina, glass container recycling is required by law for all outlets selling alcoholic beverages, which has given a boost to small- and medium-sized recycling collectors.

## Collection containers, vehicles and routes

Over half of those surveyed (six) used public (state or county) and/or private grants to provide indoor and/or outdoor collection

containers to businesses at the start of the program. “One obstacle can be the purchase of inside and outside containers,” says Carbetta. “Using a grant to assist with this helped businesses participate who didn’t want to make that investment.” For inside collection, this means predominantly Slim Jim-style containers and 96-gallon lidded roll-carts for outside collection/storage.

Most collect glass containers once per week. The cost per month for each business ranges from no charge, to \$25 for once per week collection of a 96-gallon tote to \$125 for more pickups per week and/or larger or more containers. On average, once per week collection is about \$40-\$50 per month for each business. Prices vary based on size of collection container, number of containers and frequency of pickup.

Six surveyed programs use 96-gallon containers for final collection. These are loaded on to a collection vehicle using an automated arm/tipper; two haulers surveyed use automated lift gates to load 96-gallon containers onto 24-foot box trucks. Another three programs (two single-stream and one glass separated) use between 2-yard and 8-yard containers and front- or rear-loading collection vehicles. In the case of higher-generating customers, glass is collected and hauled in a roll-off container.

Typically a collection vehicle is used one day/week for a glass container collection route. There needs to be sufficient customers to a fill the collection vehicle on a daily

route to establish economic feasibility. One survey respondent stated that the minimum threshold for a once per week glass collection route is between 50 and 75 participating businesses within a designated area. This, however, varies for each program and the volume of glass containers generated at each business.

There can be challenges with outside storage space and enclosure limitations. “A lot of these streets and structures were not built for recycling,” says Barton. “So getting a truck in and out of alleys and other dense areas can create a space problem.” It’s also necessary to work with property managers. A property manager may not want to participate even though the leasing business does. This adds another layer to issues of participation and access to outside recycling storage locations.

## Target a closed-loop end market


In all programs surveyed, the collected glass containers are used in the manufacture of

new glass bottles and jars or to make fiber-glass insulation. This is largely because the glass bottles are being collected separated from other recyclables (six programs), thus bypassing the MRF and going directly to a cullet processor.

Recycled glass bottles collected single stream are taken first to a MRF (six programs) and then to the cullet processor. There is no data in this survey on recycled glass loss through this process, although a 2009 Container Recycling Institute study found that for single-stream curbside collection, 40 percent of glass gets recycled into new glass containers, on average, and another 40 percent ends up in landfills; the remaining 20 percent is presumably going to a secondary use.

“Make sure recycling facilities can manage the flow of materials. While it’s easy to collect glass containers, the biggest issue is at the MRF to make glass a viable product,” says Bill Worrell from the San Luis Obispo County (California) Integrated Waste Management Authority. “MRFs are set up so that it goes through

a series of screens, and while we’re able to create a viable glass products for making new glass bottles with very little going to landfill, not all MRFs can.” In California, the state’s beverage container redemption program provides an incentive to recycle glass.

As the glass container industry pushes forward to increase the amount of recycled glass it uses to make new glass bottles and jars, it’s clear that bar, restaurant and hotel programs have an important role. Both the volume and quality of recycled glass coming out of these programs is significant. To make this happen, glass container manufacturers will need to continue efforts to step up outreach and partner with recycling collectors, communities and other local resources to stimulate more foodservice glass recycling programs. 

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