

Historically, Chicago has seen low recycling rates as well as low levels of access to recycling for its residents. An innovative program spearheaded by local government and corporate sponsors has laid out a path forward to boost diversion in the Windy City. BY CHRIS SAUVE AND ALEC COOLEY

In October 2014, the City of Chicago celebrated the one-year anniversary of its citywide “Residential Blue Cart Recycling Program,” which is available now to 600,000 households and has a presence in every neighborhood of Chicago. Nearly 20 years in the making, reaching this milestone was accelerated by Chicago Mayor Rahm Emanuel’s commitment to provide an easy-to-use, single-stream residential recycling collection program at the doorsteps of homes citywide. Mayor Emanuel’s commitment to blue carts created operational efficiencies in collection and secured public/private collaboration that ensured citywide residential recycling would become a reality in Chicago.

A “Blue Bag” beginning

In order to understand the development of recycling in Chicago, it is important to note that the City of Chicago provides taxpayer-funded recycling and refuse collection to low-density residential buildings, and this is handled by the Chicago Department of Streets and Sanitation (DSS). Low-density residential buildings are single-family homes, as well as buildings with up to four units. Residential buildings with five or more units and commercial buildings must utilize a private service provider for recycling and refuse collection.

Prior to the citywide expansion of the cart program, the City of Chicago collected recyclables through what was called the “Blue Bag” program. Beginning in 1995, low-density households were asked to purchase blue bags, fill the bags with recyclables, and place the filled bags for collection with the rest of their garbage. These bags were intended to keep the recyclable materials separate from the refuse. The bags would then be retrieved at a processing facility where they would be picked off a moving conveyor belt for secondary sorting by personnel.

The bag program faced many issues, including implementation difficulties and low participation, because residents did not purchase the colored blue bags and there was a lack of confidence that materials were separated for recycling since they were collected with the trash. As a result, recyclable materials were lost to the landfill. Additionally, sorting the recyclable materials raised health concerns for personnel who might come into direct contact with medical discards, animal waste and other rotting material. While the program was successful in starting the conversation around citywide recycling options in Chicago, collection and contamination issues brought it to an end in August 2008.

Carts and the recession

By the 2000s, the City of Chicago explored implementing a resi-

dential recycling effort that would be more convenient than the blue bag system but could still come at no extra cost to residents. The “Blue Cart” pilot program began in April 2005 with 1,000 households receiving 95-gallon recycling carts, and it expanded in 2007 to an additional 89,000 households. Through this program, all recyclable items were collected separately from refuse every two weeks and did not require the sorting of recyclables or special bagging.

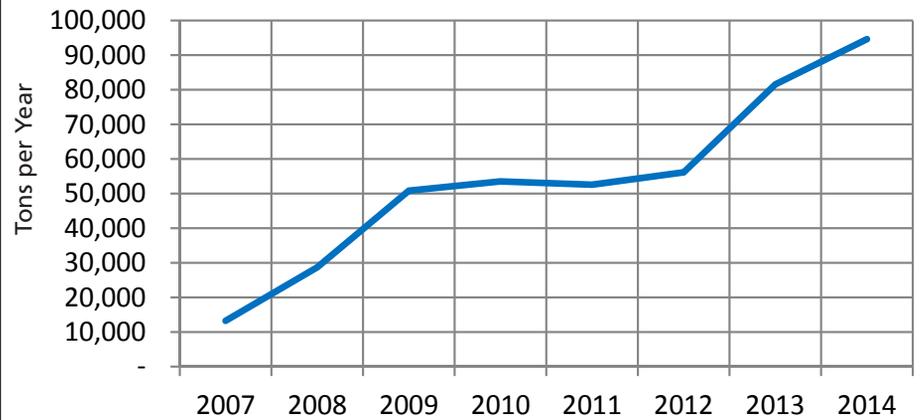
By 2009, blue carts had been distributed to 240,000 households. However, plans to expand the service to the remaining 360,000 households citywide were put on hold in June 2009 as the sputtering economy affected city finances. As an interim step, the City provided recycling drop-off locations for the roughly 60 percent of households without curbside recycling collection service. While 38 drop boxes were placed citywide, they were inconvenient for residents, and the drop-off locations were only able to divert at most 5,000 tons of recycling annually from the waste stream.

By recycling over 80,000 tons of material in 2013, Chicago saved \$3.7 million in tip fees, a number expected to grow to nearly \$4.6 million in 2014

Mayor Emanuel, elected into office in 2011, was looking to create a uniform recycling service citywide during his first term. The City began exploring a managed competition process to expand the easy-to-use blue cart program in a fiscally responsible way. Utilizing cost savings from this process as well as the transition to grid-based refuse collection in 2012 (see sidebar on page 34), Chicago began rolling out carts to remaining communities in 2013.

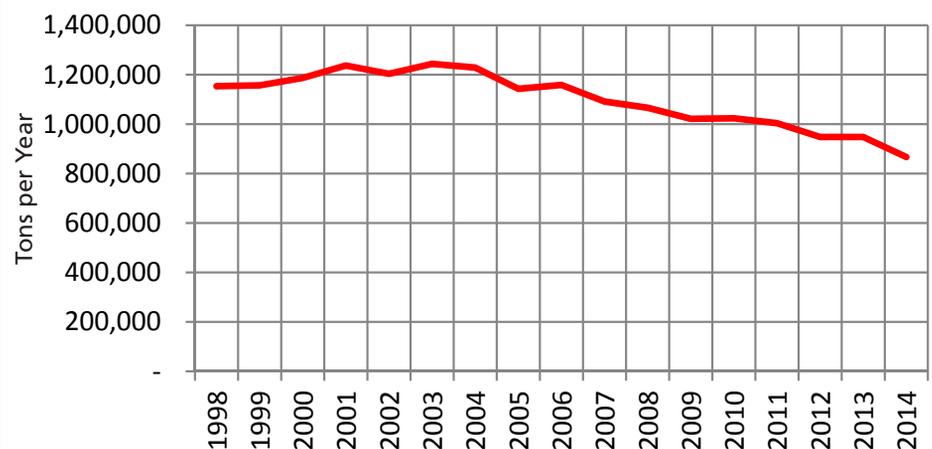
Through the managed competition system, the City was divided into six low-density residential recycling collection zones with private contractors or city crews designated to service each specific zone. Private contractors collect recycling from four residential zones, while municipal crews service recycling in the two remaining zones. Regardless of who picks up the recycling, the service is the same citywide, with uniform educational material provided to

Residential curbside recycling totals



Source: Chicago Department of Streets and Sanitation, 2014.

Low-density residential refuse totals



Source: Chicago Department of Streets and Sanitation, 2014.

each home and the same recyclable materials accepted across the city.

Prior to managed competition, the monthly cost to service each cart by a city recycling crew was \$4.77. As a result of the managed competition process, the operational efficiency gains reduced the cost of servicing each cart by city crews to \$3.97 per month, and the cost of servicing each cart by a private contractor to approximately \$2.82 per month. The reduced recycling collection costs realized through managed competition saves the City approximately \$10 million annually in recycling collection operating costs. The City plans to continue with this competitive environment to manage recycling costs and enhance efficiencies going forward.

Keeping his promise to save taxpayer dollars while expanding service and creating a unified collection system, Mayor Emanuel

announced the final expansion of the blue cart program to another 340,000 homes in 2013. As a result, for the first time ever, each of the 600,000 low-density households in the City would have a rollcart with curbside recycling collection every two weeks.

A 700 percent boost in recycling tonnages

With pressure mounting to address carbon footprint concerns and avoid additional landfills, Chicago has successfully increased recycling tonnages and reduced the amount of waste collected each year by improving and expanding recycling options.

Mayor Emanuel has said repeatedly that “Chicago is no longer the tale of two cities when it comes to recycling.” Expanding the Blue Cart Recycling Program to every neighborhood and every community

was an essential part of the City's integrated green approach to governing and represents an important investment in the future health and vibrancy of the city.

A decade ago, DSS crews were collecting over 1.2 million tons of refuse annually from low-density residential buildings. Today, crews are collecting less than 950,000 tons of refuse annually, representing a nearly 20 percent decrease in refuse collected each year. As refuse collection totals continue to decrease, recycling collection has shown marked growth since the initial implementation of the cart program in 2007. The City is on pace to collect 100,000 tons of recyclables from the cart program in 2014, a nearly 700 percent increase from the 13,000 tons of residential recycling city crews carted off in 2007.

By recycling rather than landfilling the 100,000 tons of recyclable materials collected in 2014, Chicagoans reduced greenhouse gas emissions by 220,000 metric tons of carbon dioxide equivalent.

While the environmental impacts are more widely understood, the positive impact to the city's bottom line are just as evident. Chicago pays approximately \$46 per ton in tip fees to dispose of refuse at landfills in surrounding communities in Illinois and Indiana. The City's total budget for tip fees is approximately \$40 million annually. By recycling over 80,000 tons of material in 2013, Chicago saved \$3.7 million in tip fees, a number expected to grow to nearly \$4.6 million in 2014, representing over 10 percent in savings in landfill disposal costs. The \$10 million annual savings from recycling collection operational costs coupled with the annual landfill disposal costs savings and future potential for income derived from recycling commodities are proof points that recycling can be a long-lasting municipal investment.

Sticking it to contamination

While the Blue Cart program has received an overwhelming positive response from Chicagoans, the City continues to struggle with post-implementation issues like recycling contamination and participation challenges.

In the coming years, the City will continue wide-ranging advertising and grassroots outreach efforts, including utilizing materials from Keep America Beautiful's national "I Want To Be Recycled" campaign, to reduce recycling contamination and raise recycling awareness with residents. Key to

What is "grid garbage?"

Prior to Mayor Emanuel's tenure, Chicago's residential refuse collection was organized around route boundaries defined by the 50 non-linear wards, or political precincts. With the transition to grid garbage completed in 2013, Chicago now collects refuse and recycling using main streets and natural boundaries to optimize route efficiencies. This change

decreased the average number of refuse trucks on the road each day from approximately 352 in 2011 to around 310 in 2014. The surplus trucks were then transitioned to other duties – mainly recycling collection – allowing the City to more efficiently pick up garbage and enhance or expand other services.

reducing contamination is the direct contact recycling crews are making with residents by placing bright orange contamination stickers on carts containing contaminated recyclables. The orange sticker is not a ticket, but rather a tool crews utilize to notify residents of contamination in their carts and inform refuse crews that a given cart needs to be treated as such. The street address is also recorded by crews, so DSS can follow up with the resident through a postcard to the household, highlighting allowable materials.

In 2014, 3 percent of households in the cart program (20,500 households) received an orange contamination sticker on their cart and a subsequent postcard. The number of households that received two or more contamination stickers this year significantly decreased to just 0.3 percent, or 1,800 households. The stickers have proven to be an effective tool in curbing recycling contamination when coupled with a direct recycling mailer and citywide message around recycling benefits. It's important to note the City has joined with important voices in recycling to enhance recycling messaging and boost participation.

For example, recognizing the potential to help grow recycling recovery rates, Coca-Cola formed a partnership with the City of Chicago, Keep America Beautiful and Keep Chicago Beautiful in 2013, and the beverage giant committed to a multi-year grant of over \$2.5 million to support expansion of the cart program. In the first year of the grant, 25,000 blue carts were provided to Chicago households, supplementing the City's initial distribution to households located primarily in southern neighborhoods. From 2014 through 2017 another 25,000 carts are to be provided.

In addition, to reinforce that recyclables are made into new products, Coca-Cola and KAB created a special arrangement with the cart manufacturer. The donated carts include lids made with post-consumer

PET content that is made from 420,000 recovered plastic bottles. This product helps provide a tangible example of how recycling can breathe new life into discarded items.

Finally, Coca-Cola, in partnership with multiple community leaders and DSS, launched the "Recycle and Win" contest in 2013 and continued the program in 2014. Coca-Cola implemented the contest to raise awareness around the Blue Cart program. In addition to distributing educational materials explaining what can be recycled, the contest rewards Chicagoans who recycle properly with the chance to win a \$50 gift card from Jewel-Osco, a local grocery chain.

From the City's standpoint, this partnership is a key investment for continued growth in the cart program. The resources available to Chicago through pacts with businesses and groups will continue to make recycling a priority and improve a recycling program that is already benefiting Chicago.

A future of green government

On top of the objective to collect 120,000 tons of recycling from the households participating in the cart program in 2015, the City of Chicago is exploring opportunities to further expand recycling opportunities for high-density residential and commercial buildings. Additionally, piloting food scrap collection and developing a dedicated yard waste collection system for the spring, summer and fall are part and parcel to Chicago's future.

The City of Chicago's Blue Cart Program is an integral part of Mayor Emanuel's approach to "green" governing and represents an effective long-term solution to providing citywide recycling that benefits Chicagoans, government and the environment. **RR**

Chris Suave is Recycling Program Manager for the Chicago Department of Streets and Sanitation and can be reached at chris.sauve@cityofchicago.org.

Alec Cooley is director of recycling at Keep America Beautiful and can be reached at acooley@kab.org.

Reprinted with permission from Resource Recycling, P.O. Box 42270, Portland, OR 97242-0270; (503) 233-1305, (503) 233-1356 (fax); www.resource-recycling.com.