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TENNESSEE PUBLIC WORKS MAGAZINE

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Single Stream Curbside Recycling in Collierville

The town of Collierville's Public Service Department began its new single stream curbside recycle collection program on June 30. In an effort to reduce cost, improve service levels, and increase recycle participation, the town has converted from its privately contracted dual stream collection operation utilizing 17-gallon recycle bins to a more efficient town employee operated single stream collection utilizing automated collection trucks and 96-gallon recycle carts.

Prior to implementation of the new recycle collection program, research was gathered from other municipalities in the region that had previously made the switch from 17-gallon recycle containers to the larger 96-gallon recycle carts. All reported a 10-15% increase in participation over the first 12 months and a 20-30% increase in recycle volumes collected.

Upsizing to Carts

Transitioning to a new collection system can be challenging. There are multiple factors to consider such as program and contract type as well as how to battle a shrinking budget. A cart manufacturer should include a team of dedicated professionals capable of providing guidance and innovative solutions to streamline the processes, products, and financial solutions necessary to meet budget requirements and implementation deadlines.

Issues with Bagged Waste at Curb

- Inclement weather can displace trash into the street
- Sharp and hazardous waste increases worker injury
- Diversion of reusable or recycled materials is more difficult
- Facilitates pest infiltration

Advantages of Carts

- Tidies neighborhood streets
- Reduces exposure to hazardous waste by citizens and collection workers
- Keeps pests at bay
- Protects recyclable materials from inclement weather
- Improves program efficiency and effectiveness



To reduce collection time and improve collection efficiency, the Public Service Department purchased two new Heil manufactured 37-cubic yard Starr Automated Trucks.

Prior to delivery of the new 96-gallon Otto Manufactured recycle carts, the department recorded that only 8,700 of 14,700 residential customers were participating in the dual stream recycle collection program. During the first month of delivery of the 96-gallon recycle carts to existing participants in the town's recycle program, 400 new customers requested delivery of a new recycle container. Each residential customer requesting a new recycle cart was provided the cart at no additional cost. With the additional carts delivered, the town's recycle participation had increased from an average participation rate of 50-55% over the past five years to 62% within the first 30 days of delivery. Based on this increased participation over a short period of time, department staff has projected that the department goal of a 10% increase in recycle participation will be met within the first 12 months of the new program's implementation.

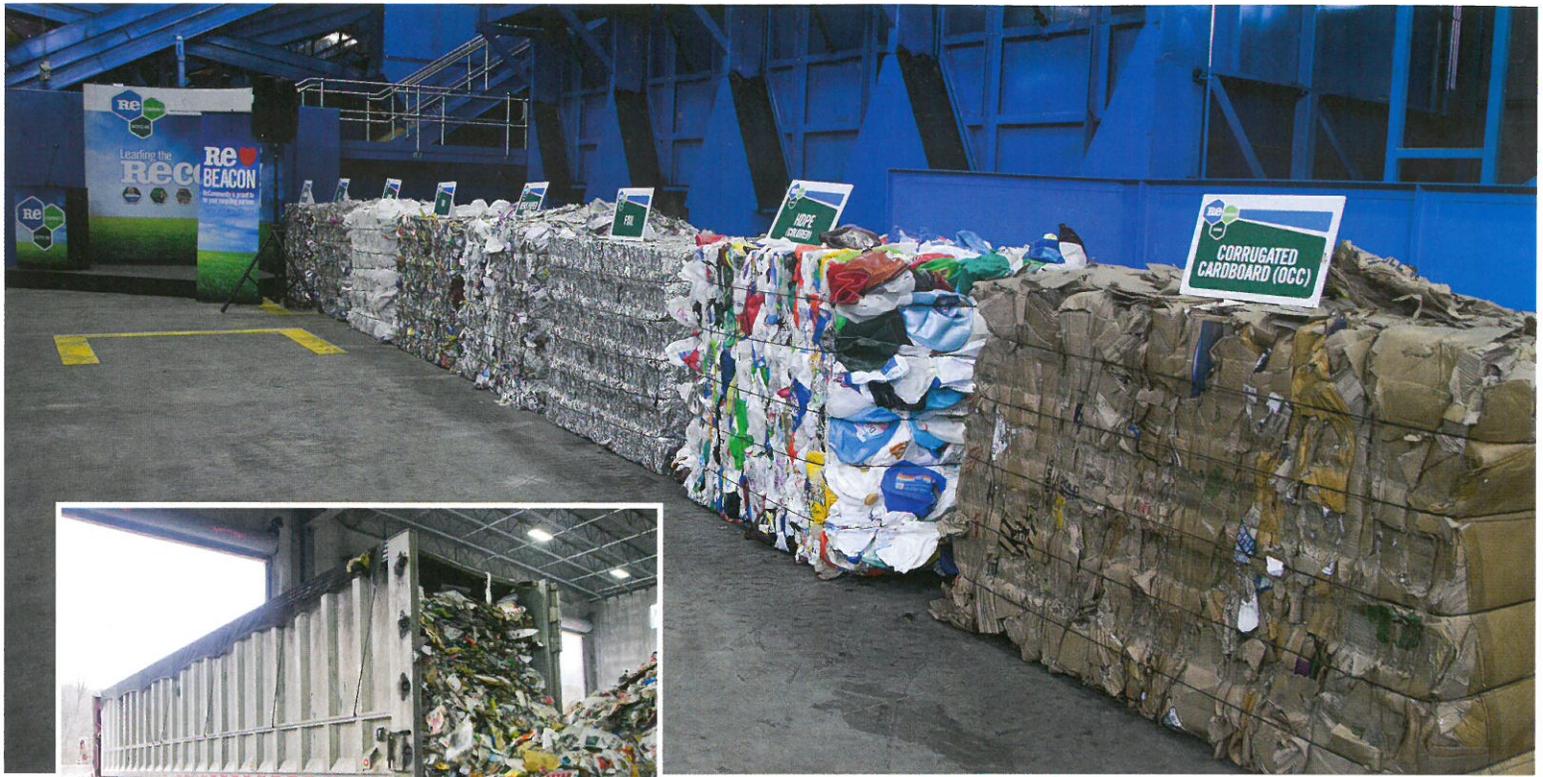
In addition to the increased customer participation, department staff also expects to see an increase in the recycle volumes collected. Public Service staff has estimated that during the first year of the new collection program, the town will collect an estimated 2,600 tons of mate-

rial, up from an average of 2,000 tons under the prior program. This increase in volume will assist the town in its goal of increasing the number of tons diverted from the landfill on an annual basis and generating additional revenue from the sale of recyclable material.

ReCommunity Memphis MRF

With the estimated increase in volume and the conversion from a dual stream to single stream collection operation, the town will also benefit from the changes in how revenue is generated from the recyclable materials collected. With the previously contracted dual stream collection operation, the town received payment only for fiber material delivered to the recycle processing facility by the town's contractor. Of the 2,000 tons collected on an annual basis, only 40% of the material by volume was fiber material. With the new collection service, the town was able to contract the processing and sale of the recyclable materials with ReCommunity, a local single stream processing facility which pays the town based on a price per total tons collected. This change in revenue generation is expected to increase recyclable material revenue by 60%.

As of July 1, Collierville recyclables are



Left: ReCommunity's single stream MRF processes commingled recyclables from municipal collection programs. The facility opened in 1996 and completed a single-stream processing retrofit in January of 2014. Above: At ReCommunity MRF, the recyclables are sorted into 15 high quality recyclable commodities. Learn more about what happens to recyclable materials collected at the curb by visiting ReCommunity.com/Education.

directed to the ReCommunity Memphis Materials Recovery Facility (MRF). ReCommunity Memphis, opened in 1996, completed a single-stream processing retrofit in January. At full capacity, the 20+ tons-per-hour processing line is capable of managing upwards of 90,000 tons of recyclables annually. This single stream MRF takes commingled recyclables from a municipal collection program and sorts those into over 15 high quality recyclable commodities.

In 2013, ReCommunity Memphis processed 20,000 tons of recyclables, and in the process helped reduce greenhouse gas emissions by 50,000 MTCO_{2e}, or the equivalent of removing more than 9,000 cars from the road. Memphis residents can download a copy of the report at [<http://www.ReCommunity.com/ASR>] for fun comparisons equating the amount of recycled material to the amount of trees and oil saved, jobs created and more.

ReCommunity Memphis has the capacity to give communities such as Collierville the confidence to divert the maximum amount of recyclables from the waste stream. With a baseline of 2000 tons/year, the town projects an increase to 3000 tons and hopes for 4000 tons/year as participation improves due to transitioning to 96-gallon carts and single stream collection. Likewise, the city

of Memphis is rolling out carts one sector at a time. The city expects to grow to at least 30,000 tons/year as recycling is embraced by the community.

ReCommunity took a long view of recycling when making the decision to reinvest in its 15-year operation in Memphis. Municipalities in the South are continuously adopting the best solid waste management practices including curbside collection of source-separated recycling using wheeled 96-gallon carts. Public works departments need a MRF that can separate commingled glass, metal, plastic, paper, and cardboard. Without the single-stream MRF within a reasonable distance, it's impractical to switch to single stream collection. With ReCommunity's investment, the communities of the greater Memphis area can make that switch with confidence.

Meeting the Demand

The increased material collected by Collierville will go directly to feed industrial demand in Tennessee and the Southeast. The Southeast Recycling Development Council, SERDC, recently identified over 200 manufacturing facilities in the region that rely upon material from municipal recycling programs for material feedstock in

the production of consumer goods. The demand for the material is strong in the area.

"What started as an environmental movement 30 years ago is now a significant driver in our economy," said SERDC Director Will Sagar. Due to energy and transportation savings, more and more companies are seeking recycled material to replace virgin material. These firms are creating manufacturing jobs and strengthening our economic recovery. Steady job growth in the industry is documented from several sources. Collierville's commitment to improved recycling will assist in the expansion of these efforts.

The ReCommunity Memphis MRF processes recyclables from most municipalities in the nearly one million people MSA. ReCommunity Memphis' acceptable recyclables is expansive and includes metal cans, plastic containers, paper, cardboard, glass bottles, and cartons. It also recovers rigid bulky plastics like large plastic toys, plastic lawn furniture and five-gallon pails. In addition, ReCommunity Memphis collects and processes commercial recyclable materials, leveraging its client-tailored collection programs, which have strengthened ties to the Memphis business community.

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Collierville from page 8

Significant Savings

Although the increased program participation and recycle volumes will create a significant savings for the town's new recycle collection program, the greatest savings will be found through the improved efficiency in how material is collected at the curb. With the 96-gallon recycle containers and the availability of a local single stream recycle processing facility, the town was able to move away from the dual stream collection. To reduce collection time and improve collection efficiency, the Public Service Department purchased two new Heil manufactured 37-cubic yard Starr Automated Trucks. With the purchase of the two new automated trucks, the time required for collection at each residential collection point was substantially reduced. This allowed for an increased number of households to be collected per day in comparison to the town's previously contracted operation. With the addition of a four-day, 10-hour work schedule and the reduced collection time, the town was able to reduce the number of vehicles required for collection from four to two collection trucks. This improvement in efficiency will result

in reduction in annual manpower and equipment costs for the town's curbside recycle collection program.

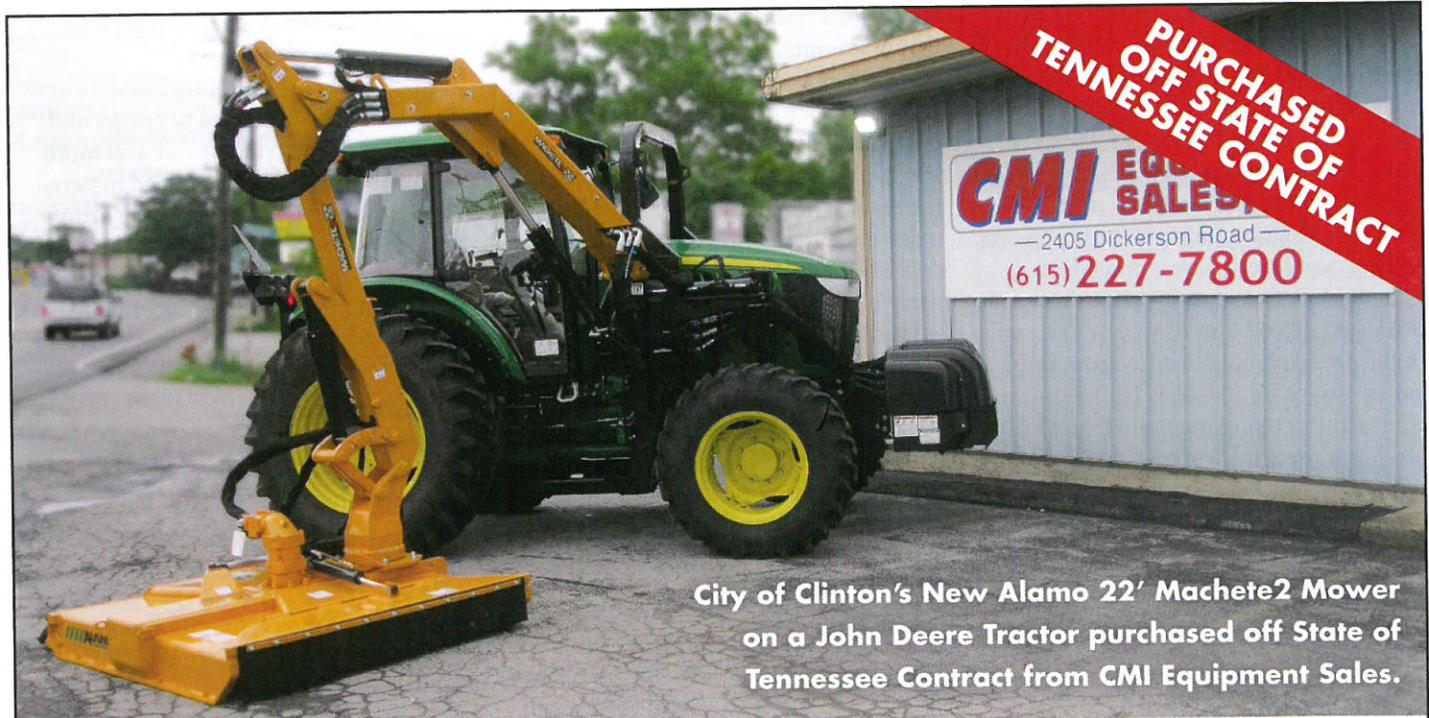
Although change is something that some municipalities may shy away from, it is something that the town of Collierville has embraced in its new curbside recycle collection program. The program has not

only improved the level of service provided to its customers but it also will make a substantial difference for the environment while reducing service costs. The town's new program has been a great success, and the department looks forward to continuing to improve upon that success in the years to come. [iDOW](#)

**SERVICE COMPARISONS
18 Gallon Bin Collection vs.
96 Gallon Cart Collection**

	Contracted Service 18 Gallon Bins	Town Provided Service 96 Gallon Cart*
Total Sanitation Customers	14,900	14,900
Average Tons Collected per week	39	65
Participation Rate	58%	68%
Total Customers Participating	8,700	10,087
Avg. Missed Collections per week	53	0
Cost for Service per customer/per month	\$2.65	\$2.10

**Figures listed are based on the first months collection statistics for the new Town provided recycle collection program. Public Services is currently receiving an average of 20 requests per day for new recycle carts. It is expected that this trend will taper off over the next several weeks resulting in a 70-75% participation rate.*



City of Clinton's New Alamo 22' Machete2 Mower on a John Deere Tractor purchased off State of Tennessee Contract from CMI Equipment Sales.

CMI Equipment Sales, Inc.

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