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STRENGTH IN NUMBERS

To boost efficiency and tonnages in commercial recycling streams, coordinators must achieve a critical mass of businesses willing to participate. Three case studies illustrate strategies that can make that happen. **BY AARON BURMAN**

Inspiration for development of commercial recycling – and recycling performance in general – can come from many sources. One place we could look is the urban bicycling movement.

Here in the U.S., cities are evolving to be more bike-accessible, but there is a turning point that needs to be hit in terms of the number of people riding. As bike demand increases the urban infrastructure will be retrofitted to accommodate them, and such improvements will make bicycling safer and more appealing to those who may otherwise choose to drive.

In the meantime, there is Critical Mass, a monthly cycling event in over 300 cities trying to spur that change. A group of cyclists ranging from a few dozen to a few thousand meet and bike through the streets together. When there is a critical mass of riders, the streets are a safe place to ride, making it easier for even more people to participate.

A waste-centric world

While commercial recycling may not provide the same adrenaline rush as thousands of cyclists taking over a major byway, the idea of critical mass driving participation still applies. Many commercial areas throughout the country continue to be dominated by the traditional waste disposal infrastructure. The businesses that want to recycle are at a disadvantage because there is less competition for their contracts.

Meanwhile, the collection routes are less efficient for recycling and traditional disposal options remain lower cost. Just as cyclists ride in a car-centric city, recyclers still work in a waste-centric world. Yet the battle to re-shape commercial recycling should be far easier than, say, turning Los Angeles into a two-wheeled paradise. According to internal data gathered by Resource Recycling Systems (RRS), overall, nearly 70 percent of the material U.S. businesses dispose of is recyclable or compostable and for many establishments, that percentage is even higher.

It's of little surprise then that more and more municipalities are looking to commercial recycling to help reach aggressive recovery goals and reduce community waste generation. And the time may be right for collaboration on this issue. Many businesses now see recycling as a necessary part of providing a quality work environment for their employees and meeting supply chain requirements.

Others, however, hesitate because they are concerned it will increase costs or aren't sure how to approach it. Still others are hindered by contracts that limit savings even when businesses reduce the tonnages of waste they send to landfill or incineration.

Profiled here are three progressive counties that have developed different programs to encourage businesses to catch up with the residential sector, sometimes by targeting the low hanging fruit and in other cases pushing the limits of recovery. Together, these examples offer a range of approaches to reaching critical mass on the commercial recycling front and pushing recovery efficiencies ever higher.

	Hennepin County	Orange County	Alameda County
Type of Commercial Program	Voluntary business assistance.	Landfill ban (and collection ban in municipalities).	Mandatory recycling and hauling franchise.
Staff Devoted to Program	Three full-time employees.	Minimal (was part of landfill staff duties and municipal waste enforcement).	Three full-time employees for enforcement.
Funding Source	Fees from state and county on waste collection.	County recovery fees leveraged to all residents and businesses.	Tip fee surcharge at landfills.
Benefits	Politically popular. No requirements on businesses. Helps those who want it.	Low cost to enforce. Allows market to provide solutions.	Drives comprehensive programs throughout community. Keeps costs low through economies of scale.
Challenges	May not drive down local prices. Needs consistent funding.	Need to enforce at the generator if landfill is not county-owned.	Can be difficult politically. Needs consistent enforcement.

Hennepin County, Minnesota

Even in environmentally minded communities like Minneapolis, adding recycling and composting collection can increase costs for businesses. Andre Xiong, commercial recycling coordinator for Minnesota's Hennepin County (which includes Minneapolis), emphasizes, "There is a chance that costs will go down but it may not be the case, especially for small businesses that are adding recycling and composting but can't reduce the frequency of their waste collection, which may already be at its lowest level."

To help address such implementation hurdles, Hennepin County developed its current business recycling assistance program in 2012. The program has three components: staff devoted to providing technical assistance, free standardized stickers and signs for the businesses to use, and a grant program to help get businesses started.

The staff component is key. Employees working on the assistance program are knowledgeable about the state and county solid waste fees for trash, recycling and composting, allowing them to pinpoint the materials that should be allowed in the collection bins. This helps businesses know when they are getting a good deal on services and builds stronger partnerships between business owners and the municipalities.

The grant portion of Hennepin County's program, meanwhile, has been crucial for driving increased participation. Even if the long-term business case for recycling is evident, the initial capital expenditure can stifle change at some establishments. Hennepin County businesses can apply for grants to purchase recycling containers, compactors, balers or other equipment. For businesses that haven't recycled before, the funding can even cover the first three months of collection service costs.

Financial backing for the grants comes from solid waste fees leveraged on waste collection contracts by both the county and the state. Grants have ranged from less than $500 for a small restaurant to $40,000 for the Best Buy headquarters building in the Minneapolis suburb of Richfield. In 2013, county officials awarded $142,000 of $300,000 set aside for the program. This year, they committed the full $500,000 that was available (and did so by mid-October).

Such voluntary assistance programs work as long as the hauling and processing infrastructure is in place and businesses have competitive options for each. As Hennepin County's Xiong notes, "Here, most haulers offer the full range of recycling and composting services." To drive the point home even further, a recent survey of a set of Minneapolis companies indicated 90 percent had recycling services.

But that is certainly not the case everywhere in the country. In many areas, businesses struggle to find cost competitive recycling services and organics collection is not an option. In those cases, voluntary assistance programs can't create the critical mass to overcome deficiencies in infrastructure.

Orange County, North Carolina

In some regions, the push for commercial recycling has been driven by declining landfill space. Data RRS has compiled from landfill characterization studies throughout the U.S. puts commercial waste disposal at approximately 38 percent of the total material directed to municipal solid waste (MSW) landfills. This is consistent with EPA estimates, and the figures are significantly higher if one includes multi-family establishments that are collected in the same manner as commercial (often on the same collection routes).

Orange County, North Carolina recently reached its landfill capacity, closing the site in June 2013. But prior to its closure, the County was able to extend the landfill's life by many years through programs targeting recycling – including strong commercial recycling programming. A waste characterization study in 1995 found that over 10 percent of the commercial sector waste going to the landfill was cardboard. In 1996, the County instituted a landfill ban for cardboard generated outside the residential sphere: Any hauler that tipped at the landfill with more than a *de minimis* amount of cardboard was fined. This gave haulers an incentive to pass the fines down to the generator or work with the businesses to ensure cardboard was hauled away for recycling.

The three major towns in the county

adopted corollary ordinances that banned cardboard from commercial containers they serviced. Local staff enforced the ban at street level to avoid penalties on town trucks hauling cardboard. The University of North Carolina, Chapel Hill, meanwhile, worked with its private hauler to place cardboard receptacles throughout the 25,000-student campus.

"The haulers all immediately started to offer cardboard collection service, and the businesses pretty much all got the cardboard Dumpsters," said Blair Pollock, solid waste planner at Orange County. "There were a few cases where haulers started hauling to other landfills, but that wasn't common." The ordinance created the needed critical mass and competition in the market to keep costs down for businesses.

The main cost to the County for this program was an extensive education and outreach campaign targeting businesses for the six months prior to the ban taking effect. Since the County owned the landfill, enforcement was low-cost. In the program's first four years, the percentage of cardboard in the commercial landfill stream slimmed down to 3 percent. Based on this success, scrap metal and clean wood were added to the list (in 2002) and showed similar results.

With the landfill closing in 2013, the County has lost its direct enforcement mechanism. Foreseeing this event, however, the County had been working with towns for many years to enforce the ban both residentially and commercially at the point of generation, either through hauling contracts or inspections of businesses.

The bottom line is that the ban served as a catalyst for many businesses to make a switch to more recycling. In the first year of non-enforcement, there is little evidence that businesses have dropped the service.

Alameda County, California

It's important to remember that even progressive cities will find it difficult to garner support for bans. Boulder, Colorado, for instance, is considering one as part of an update to its zero-waste plan. However, a survey by the primary local waste hauler found businesses didn't want to take the time to educate staff and tenants about recycling and were worried about cost.

These were the exact reasons that drove Alameda County, California to adopt a slightly different strategy: a mandatory recycling ordinance that went into effect in July 2012. According to Tom Padia, the source reduction and recycling director for county agency StopWaste, "We had a voluntary program for years but just couldn't move the needle significantly on commercial recycling. Even when we could show a 10 to 20 percent savings from moving to recycling and composting, we couldn't always get the businesses to care enough to sign up and follow through with a program." In 2008, the County conducted a characterization study of the commercial waste stream and found that approximately 60 percent of material could go to either recycling or composting.

Unlike most other parts of the country, it is common in the San Francisco Bay Area to have exclusive franchises for commercial waste, recycling and even organics collection. This paradigm gives one hauler the right to collect all commercial waste within a city, county or sanitary district, achieving economies of scale that theoretically drive the price down for everyone. Each business contracts with the hauler or sometimes with the municipality at rates set in the contract, often bundling waste and recycling services in the same price package.

But even with an extensive voluntary program, high landfill and transfer station tipping fees and franchises already in place, Alameda County struggled to get participation and diversion up. Officials realized the need for a mandatory recycling ordinance to achieve their diversion goals, and a study showed that instituting the ordinance would not increase the overall cost for providing waste and recycling services within the county. In fact, the research indicated an ordinance would likely save approximately 2 percent overall on waste and recycling services.

The program enacted in 2012 is being phased in to target the largest generators first. The program in Alameda County is similar to a California state law on the issue but is more aggressive in its implementation. The Alameda County regulations already require recycling for all businesses, and the County utilizes three full-time enforcement staff to ensure compliance with the program. Inspectors can ticket businesses for not having adequate service or even for disposing waste loads in which 10 percent or more of the material is recyclable or compostable. At the outset of implementation, each city was given the option to opt out of the countywide ordinance, but municipalities representing over 90 percent of the county population (1.55 million people) chose to stay in. The mandatory approach seems to be doing the trick when it comes to developing critical mass.

Honing habits

While recycling has become a habit for millions of individuals across the U.S., many businesses still do not have materials diversion ingrained in their day-to-day operations. Recent studies from social psychologists have shown it takes anywhere from 18 to 254 days to form a new habit, depending on complexity and circumstances. In order for all businesses to achieve participation at Alameda County's levels, they will need to set up programs that allow for easy participation by both their employees and customers.

And easy participation is crucial as recycling coordinators aim to build critical mass within society as a whole. The existence of complementary materials collection everywhere within a community – at the coffee shop, gas station, shopping mall and every place of business – helps to reinforce the habits of recycling and composting that are being developed in so many households.

Taking an even wider view, we can see that having comprehensive programs throughout the county or throughout a state can also help move the needle forward, pushing communities toward the ideal circular economy. This is a challenge that businesses and municipalities can't solve alone, but they can work together to find solutions that achieve shared financial and environmental benefits. The first step is choosing an approach, such as those detailed in these case studies, and then implementing it with focus and data collection in mind. **RR**

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