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## NEW YORK BUSINESS

## Bill de Blasio Thinks the City Can Stop Dumping Its Garbage By 2030. Is He Dreaming?

*New Yorkers recycle, burn or compost only a third of the 44 million pounds of daily waste they generate. The rest goes to landfills as far away as Kentucky*

By Emily Bobrow

July 10, 2016

Most cities use machines to hoist their garbage from curb to truck. New York has guys like Julius Brewster. The 56-year-old works most nights from 7 p.m. to 4 a.m. hauling commercial waste for Metropolitan Recycling in Brooklyn.

"The smell used to get to me," Brewster said from behind the wheel of his 22-ton truck on a recent Wednesday.

Brewster and his partner hopped out at the corner of Avenue U and 26th Street in Sheepshead Bay to throw heavy cardboard boxes piled with rotting fruit into the maw of the truck. When some of the slop fell to the pavement, Brewster scooped it up with his hands.

"My father told me, 'You stay in the garbage business and you'll never get laid off,'" said Brewster, who's been collecting trash since he was 17. "There's always more garbage."

Keeping it all out of landfills by 2030 isn't just ambitious, it's pretty much impossible.

New Yorkers generate more than 44 million pounds of residential and commercial waste every day, almost a ton per person per year. Only a third of it is recycled, composted or burned to generate energy. The rest is dumped, some as far away as Kentucky. Mayor Bill de Blasio wants to radically change that equation. Last year, he pledged that New York would send "zero waste" to landfills by 2030. "This is the way of the future if we're going to save our Earth," he said.

But anyone who knows anything about waste in New York seems to agree: Keeping it all out of landfills by 2030 isn't just ambitious, it's pretty much impossible.

"This zero-waste idea seems to be without any real plan behind it," said Kendall Christiansen, manager of the New York City chapter of the National Waste & Recycling Association. "Other cities, like Austin and Calgary, went through a very deliberate process of developing a detailed set of goals and plans to achieve them. New York's plan has been pretty loose, without much public discussion, just rhetoric."



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The job of coordinating this moon shot appears to fall to the city's Department of Sanitation. Commissioner Kathryn Garcia recently sat in her wood-paneled office on Worth Street to talk about how she planned to eliminate the city's residential waste.

"We're focusing on our low-diversion areas," she said. "Brownstone Brooklyn, there's not much more I can get out of them. To bring the overall city rate up, you need to be in areas where the environmental message may not be resonating."

The mayor raised eyebrows when he appointed Garcia in 2014. As chief operating officer of the Department of Environmental Protection, she got the city's sewage-treatment plants back online after Hurricane Sandy. But Sanitation can be tough on newcomers, and Garcia was filling the well-worn boots of John Doherty, who began as a trash collector in 1960.

She has since won over her critics, but the job ahead is tough. Since Staten Island's Fresh Kills dump was closed in 2001, fewer places want to take New York's trash, and they are asking more money for it. In May, the Seneca Meadows landfill, 270 miles northwest of the city, backed out of a \$3.3 billion, 20-year deal to take New York's waste.

The problem for Garcia is that New Yorkers have few incentives to throw away less. At home and at work, it is often easier and cheaper to put things in black bags rather than in colored bins down the hall. "Unless it's convenient, people won't do it," she said. Getting to zero, Garcia explained, will demand a complete rethink of how the city handles its trash.

"Garcia is one of the most innovative commissioners I've worked with," said Greg Bianco, chief executive of Metropolitan Recycling. "It's not an easy thing she's trying to do."

### **Excess capacity**

To understand the scale of the problem, visit the 11-acre Sunset Park Material Recovery Facility on the Brooklyn waterfront, where nearly all of the recyclables collected by Sanitation Department workers end up. In a space the size of an airplane hangar, barges and trucks dump plastic bags filled with recyclables into enormous piles. A fragrant mix of brine, rot, old milk and stale beer hangs in the air, and swallows flit around the building's beams. The \$120 million facility opened in late 2013. Most of it was paid for by taxpayers, but \$55 million came from Sims Municipal Recycling, the local arm of a global scrap-metal and electronics recycling firm, which won a 20-year contract to process and market the metal, glass, plastic and some of the paper collected from homes, public schools and government buildings.

Optical sorters, drum magnets and massive machines called ballistics separators make recycling at Sunset Park a mostly automated process. "From a manpower standpoint, it's extremely efficient," said Tom Outerbridge, who runs the plant and joined Sims in 2003 after a decade of recycling



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consulting and some years with the Sanitation Department. “Most facilities have one or two optical sorters. We have 16.”

Recycling is a capital-intensive, high-volume, low-margin business. Sims' long contract created an incentive to invest in top-of-the-line equipment. That should make recycling more cost-effective for the city. The Sanitation Department pays Sims around \$75 to process a ton of recycling, but \$90 to \$100 to dump a ton of waste in a landfill or burn it in a waste-to-energy plant. When the market for recycled commodities is good, the city shares in the profits.

### *Facts*

*16% RECYCLED: The portion of New York City waste that's recycled.*

*2,000 POUNDS: The amount of trash each New Yorker produces annually.*

Outerbridge has a front-row perspective on just how haphazardly New Yorkers recycle. Gazing at a new hoard of dumped material, Outerbridge grimaced at an unrecyclable wicker basket. His eyes then wandered to glass jars filled with baby food. “We would've preferred they empty that out,” he said, “but what are you going to do?” There is no market for mixed glass—most recyclers either sell it at a loss or dump it in landfills—but clear glass, if separated out, fetches more than \$30 a ton.

New York City may have the largest curbside recycling program in North America, collecting around 500,000 tons of recyclable material a year, but it should be much more, Outerbridge said. Twenty-seven years after the city required residents to sort their trash, they do so at the anemic rate of 16%. Half the recyclable waste is going to landfills.

Recycling rates for businesses average around 19%. But because private-sector haulers self-report their data, it is hard to know just how much is kept out of landfills. The lesson for Outerbridge is simple: “Without public participation, you can build the fanciest recycling plant in the world and you don't have anything.”

### **High cost of collection**

Many American cities treat waste as a utility and charge people for what they generate. In Los Angeles and San Antonio, residents pay based on the size of their homes. In San Francisco and Seattle they are charged for the trash they set out, while collection of recyclables is either cheaper or free. In Houston, households receive one free trash bin but must pay for any additional bins or bags.

New York is different. The city uses general tax revenue to cover residential and public waste collection, so residents have few incentives to recycle or produce less waste. New York also has the nation's highest collection costs at \$449 per ton for the Sanitation Department. In Washington, D.C., it's \$212.



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Anxiety over climate change may motivate Upper East Siders, who recycle nearly a quarter of their waste. But something else is needed in poor areas such as Mott Haven and Port Morris in the Bronx, where diversion rates hover below 6%.

The city is considering a collection charge. "When something costs you money, you pay more attention," Garcia said in her office. She pointed to the way water usage dropped when the city stopped charging flat rates for water and installed meters. "In the 1980s, New York City used 1.5 billion gallons of water. It's under 1 billion gallons today and we have a million more people."

Imposing a trash charge will be difficult. Mayor Michael Bloomberg liked the idea, but the City Council saw it as a new tax.

New York also has more apartment buildings than any other U.S. city, making it especially hard to penalize and reward individual behavior.

"Recycling is all about creating a social norm," said Chaz Miller, director of national policy at the National Waste & Recycling Association. "This is easy to do when everyone sees what their neighbors are putting out on the curbside. In multifamily homes, it's much harder."

The tight spaces in which New Yorkers live make it difficult to store garbage in separate bins. The city aims to solve this problem by letting residents put all their recyclables in a single bag by 2020. Single-stream recycling would also let the Sanitation Department send out one recycling truck per route instead of two.

The city's recycling challenges are particularly acute in public housing, where one in 10 New Yorkers lives. "When I got here, a chief said, 'They pretend to recycle and I pretend to collect it,'" Garcia said of New York City Housing Authority buildings. The de Blasio administration has begun introducing recycling to these developments, but it is not easy. Most have no indoor space for bins, so the only place to toss cans and paper is outside.

At the Gowanus Houses in Brooklyn, Isabella Hernandez said the new bins in the courtyard are easy to ignore. "Who wants to go downstairs to go recycle when it's so far away?" she said.

Hazel Duke, an 84-year-old resident of the Gowanus Houses, said she sorts her trash despite the inconvenience. "It's a hassle for me because I can hardly walk."

Another Gowanus Houses resident, who calls herself "Miss Dee," is happy to recycle, just not quite in the way the city hopes. In her fifth-floor apartment she collects empty plastic bottles and soda cans on her dining table. When she has enough to fill a cart, she heads to the redemption center around the corner. "Last time I got \$9," she said.

New York's litter-fighting bottle bill offers a nickel for each redeemed bottle or can. Private redemption centers sell the empties back to beverage distributors at a small profit. But New



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Yorkers who try to live off these fees often collect plastic bottles and aluminum cans from bags of already-sorted recyclables, reducing the value of what arrives at facilities like Sims'.

"Our aluminum bales in New York are worth less than in New Jersey, where there is no bottle bill," Outerbridge said. "We're talking roughly 12 to 15 cents a pound, which adds up when you're selling thousands of tons." Scavengers take about 70,000 tons of material from recycling bins a year, a city study found. That means the only real incentive many New Yorkers have to recycle comes at a cost to the city.

New Yorkers' habits at home are just one piece in a complicated puzzle. Businesses have their own system for managing waste, with practices dictated largely by the market.

More than 200 private carters pick up from hundreds of thousands of businesses. That seems inefficient, but Ben Velocci, principal of Bronx-based Avid Waste Inc., has little patience for critics. "All of the solid waste collected by private haulers is done without any help from the city," he said. "New York City provides no transfer stations, no recycling facilities, no composting, but we still make sure thousands of tons of trash disappear every night."

### Private carters

New York privatized collection for businesses in the 1950s, but only after the city flushed out the mob in the late 1990s did the industry become safe for legitimate players. Now, private carters—from mom-and-pops to 100-truck goliaths—jockey for contracts with every office building, nail salon and grocery store. The Business Integrity Commission, which oversees their practices, limits their contracts to two years and caps their rates without a floor.

The opportunities of this free market inspired Velocci to start Avid Waste in 2005. Private carters "deal with a lot of regulations," he said. "It's why there are no national waste companies here." The hustle was apparently too much for Houston-based Waste Management, which sold its local hauling operation in 2007. Republic Industries followed suit in 2010.

Competition for contracts creates some value: New York's businesses pay less than half the \$1.7 billion the city spends to collect and dispose of a similar amount on the public side. Yet because different haulers serve businesses on the same block, private trucks drive a collective 47 million miles a year—nearly four times the distance covered by the city's trucks.

The prices carters get for recycled material also affects their willingness to pick it up. "When commodity prices are low, recycling rates are lower," Velocci said. High landfill fees nudge some recycling—paper is so valuable that Avid picks it up for free. But for metal, glass and plastic, Avid charges around 60% to 70% of the price of garbage collection—not enough savings for most businesses to bother sorting, he said.



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Volatile commodity prices, capped rates and a two-year limit on private-hauling contracts deter big investments in private recycling plants. Other cities often subsidize recycling facilities to ensure the machinery keeps humming when commodity prices drop. Not New York. “The private sector can’t run a facility that isn’t going to be profitable,” said Velocci.

The city is introducing new recycling rules that could simplify things for businesses, but they will likely raise carting costs further. Starting in August, every business must sort paper, cardboard, metal, glass and plastic into either two streams or one.

“They should’ve talked to us first,” said Tom Toscano of Mr. T Carting, a hauler that runs its own \$2 million facility for recycling paper and cardboard. His customers don’t pay for cardboard pickup, but this will change if they throw all their recyclables into one bag. “I’ll have all these extra costs in breaking that bag open, putting materials through different conveyor belts,” he said. “I have to charge customers for that. I’m not making that money back.”

Don’t mention glass to him. “There’s no market for it. It gets in conveyors, it gets in sorters, it jams up materials,” said Toscano.

Carters are concerned by a proposal City Hall is reviewing to divide New York into zones and have private haulers compete for longer contracts, with clear diversion targets.

“Without certainty of business, haulers will never do the work necessary to reach zero waste,” said Greg Good, who is overseeing Los Angeles’ move to a franchise zoning system. The bids L.A. received show private haulers will adhere to higher standards and invest in equipment to keep waste out of landfills if they have the right incentives, he said.

### Organics chemistry

Food scraps and yard waste make up at least a third of the waste stream, and when dumped in landfills release methane, a greenhouse gas six times more potent than carbon dioxide. Keeping this waste out of landfills is the trickiest part of getting to zero.

Since 2013, brown bins for organic waste have been placed in select neighborhoods and schools. The pilot program now serves over 700,000 residents, and de Blasio boldly claims all New Yorkers will be composting by 2018. But the material the city collects is often too contaminated to be used, and a Delaware composting facility that took most of the city’s organics closed in 2014 after locals protested the odors.

“They really need to invest in some education,” Toscano said of the city’s pilot, which offers little instruction on the brown bins. “People are throwing diapers in there, people are throwing in whole cans of food. It’s awful.”



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Mr. T Carting is one of several companies with contracts to clean up the residential organics stream. Separating bottle caps from banana peels will cost taxpayers up to 50% more than dumping garbage. Toscano now has a year or so to ready his transfer station. The city already spends a bundle on collecting and schlepping organics to processors hundreds of miles away. **The Citizens Budget Commission said citywide composting could cost \$250 million a year, and a commission survey of composting facilities within 150 miles found capacity for only 10% of the city's organic waste.**

What may be a tricky job for residents is about to become a costly undertaking for businesses. Starting this summer, the city is also requiring large food manufacturers, arenas, stadiums and restaurants in hotels with at least 150 rooms to keep their organic waste out of trash bins.

Samuel Linder, the Swiss-born chef of the Peninsula New York hotel, said he is startled by how wasteful New York is. The problem begins before the food arrives in his kitchen. "Literally two boxes of soft-shell crabs will give you half a container of waste." In Switzerland, food is delivered in washable, reusable crates. "That doesn't exist here." The city's failure to reduce troublesome materials, notably polystyrene foam and plastic bags ("The most time-consuming contaminant," said Outerbridge), has not helped.

Linder is eager to green his kitchen, but said he was surprised by the cost. He cites the extra bins, separate pickups for organics and recyclables, and the time spent training staff. The hotel has bought a stainless steel machine called an ORCA that in one hour breaks down 25 pounds of food waste into effluent that's flushed down the drain (creating a sewage treatment headache of its own). "It's a lot more work for us," he said.

When Massachusetts banned the dumping of commercial food waste in 2014, the state paid for new infrastructure, a renewable-energy tax credit and research on the technologies available to process organics on-site.

New York City will levy fines on businesses that don't comply with its new organics policy, but offers no incentives. That may not be enough to meet de Blasio's zero-waste goal.

"It's unrealistic to think you're going to have high rates by government fiat," and New Yorkers will need incentives to make sorting their trash worth their while, said Velocci of Avid Waste.

Looking over his half-empty recycling facility, Sims' Outerbridge agrees that big goals still have value, especially with the city's population expected to reach 8.8 million in 2030. The mayor's priorities are in the right place, he said, "but when you start digging into it, how do we get there?"