The Wrong — and Right — Way to Recycle

Single-stream systems have produced stagnating collection rates and soaring costs. Localities need to go back to the dual-stream past and invest in the future.

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For close to two decades, local governments and the waste-hauling industry have been making the wrong investments in recycling. One former CEO of a waste-hauling giant admits that the multibillion-dollar investment in single-stream collection and processing was a big mistake.

Indeed it was. It took the country off the dual-stream track that had grown over 30 years, from the 1970s to the 2000s, driven by grassroots recyclers who developed equipment and procedures and organized citizens to get rules passed that drove recycling rates from below 5 percent of municipal waste to around 34 percent, where it has stagnated since 2010.

By requiring small additional effort by households (separating paper from other recyclables), dual- and multi-stream recycling achieved a high level of purity for the materials, enhancing their marketability. Single-stream recycling (everything jumbled in the same bin) was a convenience, but the price of that convenience was higher levels of contamination. That worked when we could export contaminated wastes to China. But last year China said no, plunging U.S. recycling into disarray exacerbated by the dominance of single-stream collection.

In 1995, only five U.S. cities had adopted single-stream recycling. By 2003, this had risen to 94. Soon single stream became the norm, with 65 percent of the recycling population using that system in 2010, up from 29 percent in 2005. By 2018, nine of the nation's 10 largest cities were using single-stream collection.

Single stream spread by dint of successful marketing and lobbying on the part of the waste-hauling companies. As Susan Kinsella, the executive director of Conservatree, points out, cities were confused about recycling mandates and wanted to have the private sector take this problem off their hands. Immediately after five planned incinerators were cancelled in Los Angeles in 1986, for example, the city proposed to contract for citywide recycling with one national hauling company until citizens intervened.

But large-scale single stream is now struggling. In New England, tip fees for recyclables have risen from $30 a ton to over $100. Along the South Carolina coast, recycling now costs $128 a ton, compared to $78 for landfilling. In Philadelphia, 50 percent of recyclables are sent to an incinerator.

Public and private investment can mitigate these costs, add value to collected materials and end the stagnation of recycling rates by:

• Returning to dual stream collection and local processing. Three neighboring towns on Long Island with more than 600,000 residents have converted. Legislation proposed in California calls for incentives for cities to revert to dual stream. Fortune 500 firms have created investment programs for municipalities. These consumer-product corporations want to ensure a viable recycling system for their packaging as required by Federal Trade Commission regulation.

• Implementing unit pricing -- charging households for the amount of non-recyclable garbage set out on the curb while collecting recyclables for free or at a much lower fee. This can quickly reduce non-recyclable waste by 40 percent while avoiding the costs of landfilling and incineration. Unit pricing has enabled Worcester, Mass., to realize $100 million in cost avoidance over 25 years. Some cities that use unit pricing by the bag have reduced per-capita non-recyclable waste generation to less than one pound per day, compared to the national average of three pounds.

• Focusing on composting. Compostable materials comprise 35 to 45 percent of the waste stream. Finished mulch and compost products have robust year-round markets and are job-intensive.

• Investing in local and regional market development. Austin, Texas, and Alachua County, Fla., are building industrial parks for recycling companies. California has 39 Recycling Market Development Zones hosting more than 100 companies with thousands of employees. Alameda County, Calif., uses a garbage-disposal surcharge to raise $10 million annually to support local infrastructure investments for private, community and public-sector recycling.

There's good news for municipalities that are moving to push recycling rates up and invest in the infrastructure that supports it: Markets for paper and plastic are coming back. Chaz Miller, a veteran industry analyst, has identified no less than 17 paper mills scheduled to come on line in the next two years. And orders for plastic pellets from China are increasing.

A new remanufacturing sector is being created to meet those demands, but there are concerns that it may end up being dominated by Chinese companies setting up shop in the U.S. to collect higher-grade recyclables and convert them into intermediate raw materials that can be exported to their homeland.

However all of this plays out, it's clear that U.S. cities need to get ready for the new wave of recycling. Dual- and multi-stream systems are the future of successful programs. Let's not make another big investment mistake.

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