



Workers at Cal-Waste Recovery Systems pre-sort raw recycling. The company has been struggling to sell its mixed-paper recycling to its usual customer, China. Max Whittaker for The Wall Street Journal

Recycling, Once Embraced by Businesses and Environmentalists, Now Under Siege

Local officials raise fees and send recyclables to landfills as economics erode

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The Wall Street Journal
May 13, 2018 7:00 a.m. ET

The U.S. recycling industry is breaking down.

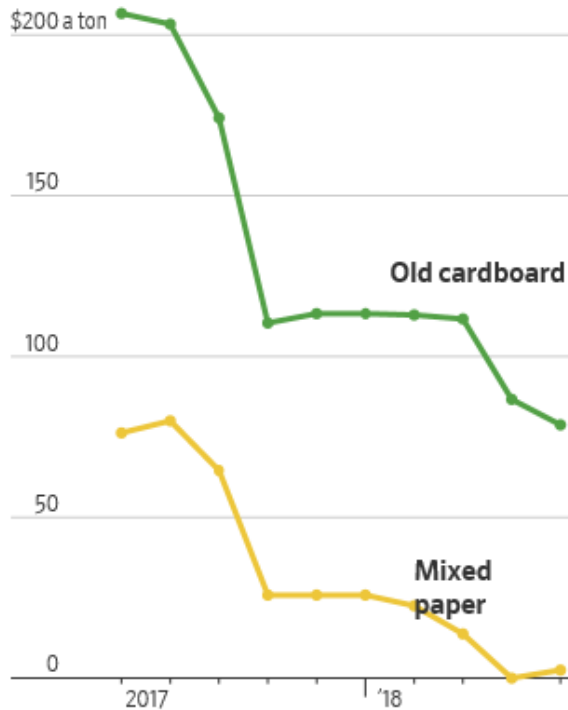
Prices for scrap paper and plastic have collapsed, leading local officials across the country to charge residents more to collect recyclables and send some to landfills. Used newspapers, cardboard boxes and plastic bottles are piling up at plants that can't make a profit processing them for export or domestic markets.

“Recycling as we know it isn't working,” said James Warner, chief executive of the Solid Waste Management Authority in Lancaster County, Pa. “There's always been ups and downs in the market, but this is the biggest disruption that I can recall.”

Paper Loss

Prices for scrap paper and cardboard have plunged as China buys less recyclables from the U.S.

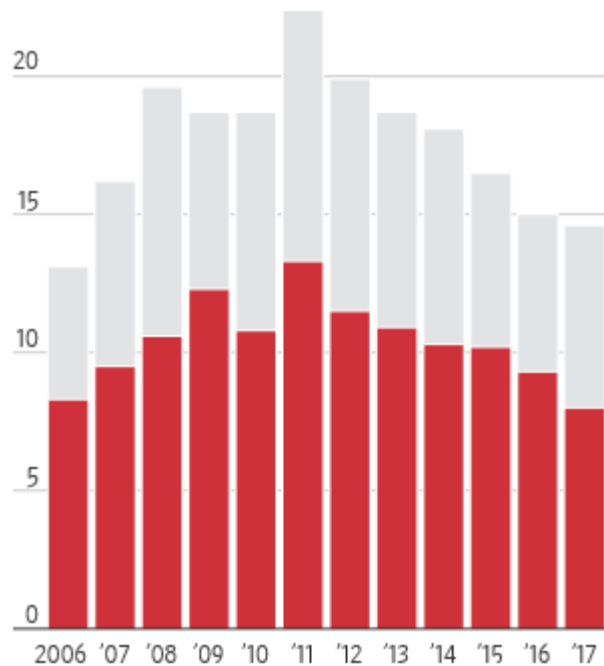
U.S. average price for scrap paper



U.S. recyclable exports from California ports

China Other countries

25 million tons



Sources: Paper Stock Report (scrap); Cal Waste (recyclables)

U.S. recycling programs took off in the 1990s as calls to bury less trash in landfills coincided with China's demand for materials such as corrugated cardboard to feed its economic boom. Shipping lines eagerly filled containers that had brought manufactured goods to the U.S. with paper, scrap metal and plastic bottles for the return trip to China.

As cities aggressively expanded recycling programs to keep more discarded household items out of landfills, the purity of U.S. scrap deteriorated as more trash infiltrated the recyclables. Discarded food, liquid-soaked paper and other contaminants recently accounted for as much as 20% of the material shipped to China, according to [Waste Management Inc.](#)'s estimates, double from five years ago.

The tedious and sometimes dangerous work of separating out that detritus at processing plants in China prompted officials there [to slash the contaminants limit](#) this year to 0.5%. China early this month suspended all imports of U.S. recycled materials until June 4, regardless of the quality. The recycling industry interpreted the move as part of the growing rift between the U.S. and China over trade policies and tariffs.

The changes have effectively cut off exports from the U.S., the world's largest generator of scrap paper and plastic. Collectors, processors and the municipal governments that hire them are reconsidering what they will accept to recycle and how much homeowners

will pay for that service. Many trash haulers and city agencies that paid for curbside collection by selling scrap said they are now losing money on almost every ton they handle.

The upended economics are likely to permanently change the U.S. recycling business, said William Moore, president of Moore & Associates, a recycled-paper consultancy in Atlanta.



Cal-Waste Recovery Systems plans to invest more than \$6 million on new sorting equipment to produce cleaner bales of recyclables. PHOTO: MAX WHITTAKER FOR THE WALL STREET JOURNAL

“It’s going to take domestic demand to replace what China was buying,” he said. “It’s not going to be a quick turnaround. It’s going to be a long-term issue.”

The waste-management authority in Lancaster County this spring more than doubled the charge per ton that residential trash collectors must pay to deposit recyclables at its transfer station, starting June 1. The higher cost is expected to be passed on to residents though a 3% increase in the fees that haulers charge households for trash collection and disposal.

The additional transfer-station proceeds will help offset a \$40-a-ton fee that the authority will start paying this summer to a company to process the county’s recyclables. Before China raised its quality standards at the beginning of this year, that company was paying Lancaster County \$4 for every ton of recyclables.

Mr. Warner may limit the recyclable items collected from Lancaster County’s 500,000 residents to those that have retained some value, such as cans and corrugated cardboard. He said mixed plastic isn’t worth processing.

“You might as well put it in the trash from the get-go,” he said.

Environmentalists are hoping landfills are only a stopgap fix for the glut of recyclables while the industry finds new markets and reduces contaminants.

“Stuff is definitely getting thrown away in landfills. Nobody is happy about it,” said Dylan de Thomas, vice president of industry collaboration for the Recycling Partnership in Virginia. “There are very few landfill owners that don’t operate recycling facilities, too. They’d much rather be paid for those materials.”

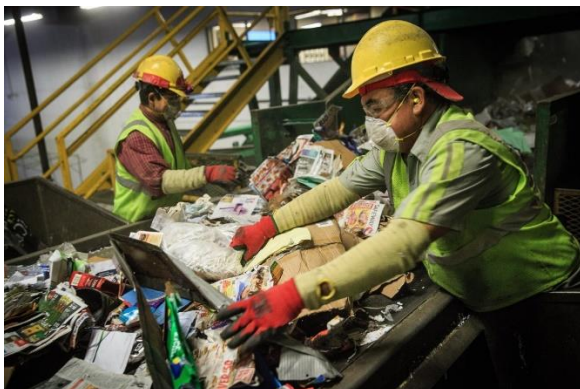
Pacific Rim Recycling in Benicia, Calif., slowed operations at its plant early this year to meet China’s new standard. But company President Steve Moore said the more intensive sorting process takes too long to process scrap profitably. Pacific Rim idled its processing plant in February and furloughed 40 of its 45 employees.

“The cost is impossible. We can’t make money at it,” Steve Moore said. “We quit accepting stuff.”

China stopped taking shipments of U.S. mixed paper and mixed plastic in January. Steve Moore said mixed-paper shipments to other Asian countries now fetch \$5 a ton, down from as much as \$150 last year. Other buyers such as Vietnam and India have been flooded with scrap paper and plastic that would have been sold to China in years past.

Dave Vaccarezza, president of Cal-Waste Recovery Systems near Sacramento, Calif., intends to invest more than \$6 million in new sorting equipment to produce cleaner bales of recyclables.

“It’s going to cost the rate payer to recycle,” he said. “They’re going to demand we make our best effort to use those cans and bottles they put out.”



China stopped taking shipments of U.S. mixed paper and mixed plastic in January. Cal-Waste Recovery Systems workers sift through recycled trash. PHOTO: MAX WHITTAKER FOR THE WALL STREET JOURNAL

Sacramento County, which collects trash and recyclables from 151,000 homes, used to earn \$1.2 million a year selling the scrap to Waste Management and another processor

from scrap. Now, the county is paying what will amount to about \$1 million a year, or roughly \$35 a ton, to defray the processors' costs. Waste Management paid the county \$250,000 to break the revenue-sharing contract and negotiate those terms.

County waste management director Doug Sloan expects those costs to keep climbing. "We've been put on notice that we need to do our part," he said. The county hasn't yet raised residential fees.

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—James Warner, chief executive of the Solid Waste Management Authority

Some recyclers said residents and municipalities need to give up the "single-stream" approach of lumping used paper and cardboard together with glass, cans and plastic in one collection truck. Single-stream collections took hold in the waste-hauling industry about 20 years ago and continue to be widely used. Collecting paper separately would make curbside recycling service more expensive but cut down on contamination.

"We're our own worst enemies," said Michael Barry, president of Mid America Recycling, a processing-plant operator in Des Moines, Iowa, of single-stream recycling. "It's almost impossible to get the paper away from the containers."

Even relatively pure loads of paper have become tough to sell, Mr. Barry said, noting the domestic market for paper is saturated as well. He stockpiled paper bales at Mid America's warehouse, hoping prices would improve. They didn't. He has trucked 1,000 tons of paper to a landfill in recent weeks.

"We had to purge," he said. "There's no demand for it."

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