

## China Doesn't Want Your Trash

*That means a lot more of what Americans put in their blue recycling bins is going into their local landfills.*



*A worker sorts plastic bottles at a recycling mill in Wuhan, China. The country is halting its practice of importing millions of tons of recycled material annually.*

MORE OF AMERICA'S recycling is ending up in local landfills. And it's China's fault.

Decades after activists and environmentalists first began beseeching Americans to separate their bottles and cans – ultimately conditioning even the most recalcitrant consumer to believe that filling a blue bin could benefit the earth and ease their conscience – it turns out that an increasing amount of that waste is being thrown away.

Two states recently told residents that – at least

for now – a healthy share of their recycling is going to end up in the dump. And after long emphasizing its benefits, the waste management industry is looking at ways to let the American public know that maybe they would be better off not recycling certain things.

“A lot of the stuff that we've been telling Americans that they can put in their curbside bin and it will get recycled, that's not going to happen right now,” says Mark Murray, executive director of Californians Against Waste.

It's because of an abrupt regulatory change in China.

See, once your receptacle is emptied at your curb and processed through a nearby sorting facility, much of it is compressed into 1-ton bales and sold overseas. Merchants in China for years have bought scrap paper and cardboard to make into things like packing boxes, which are sent back to the U.S. filled with Chinese-manufactured goods, and plastic that is remade into, well, other plastic things. Why? Because making cardboard or plastic out of recycled cardboard or plastic is cheaper than making it from scratch.

About 30 percent of all recycled material collected in the U.S. is exported, with about half of that total going to China. In 2016, China imported some 17 million tons – more than 2 1/2 times the weight of the Great Pyramid of Giza – that it bought from U.S. providers for about \$5.5 billion, according to the Institute of Scrap Recycling Industries Inc. Different regions of the U.S. export varying types and amounts of recycling to China, with the Chinese market particularly important to states out West.

But everything changed in July 2017 when Beijing abruptly notified the World Trade Organization that beginning in 2018 it planned to stop importing what it called “foreign garbage.”

“We found that large amounts of dirty wastes or even hazardous wastes are mixed in the solid waste that can be used as raw materials. This polluted China's environment seriously,” the WTO filing said.

The effect was that on Jan. 1, in conjunction with its ominous-sounding “National Sword” program, Beijing roiled the global recycling markets by banning the import of 24 different kinds of solid waste, including most kinds of plastics. And it

imposed draconian standards on the type and the condition of cardboard and paper that it had previously accepted under requirements that were either unenforced or selectively enforced.

Industry standards in the U.S. say only 2 percent of paper or cardboard exports should consist of things like stray plastic grocery bags, grease-stained pizza boxes and wax-coated frozen-food packages that Americans mistakenly toss in their bins. The Chinese government cut that standard drastically – to the almost unattainable measure of 0.3 percent – and implemented a rigorous program of inspections to reject bales contaminated by trash, food waste or even just moisture.

Speculation varies as to why China suddenly decided to rethink its solid waste imports. Some say Beijing hopes to tap its own growing consumer base as the foundation of its recycled materials industry. That could still be a long way off, though. As the WTO filing noted, part of it seemed to be that the country is simply trying to clean up its own environment.

Murray notes that processing operations in China have grown up around the manner in which recycling has been collected in the U.S., and that has imposed environmental costs the Chinese are looking to mitigate.

“It used to be there were three-bin systems,” Murray says of the earlier days of collecting recyclables. “Now there's just a single can and you throw all the recyclables in. Local governments in California and elsewhere have been focused on, ‘Let's just get as much in that recycle bin as possible, and then we'll just ship it to China and let them sort it out.’”

That type of operation, he says, cultivated “third world-like sorting operations” in China, where

in Beijing alone one estimate suggested 300,000 people – mostly poor, rural migrants – were employed in manually rifling through loads of papers and plastics in order to recover the good stuff and throw the rest away because things that were not recyclable were ending up in Americans' curbside bins.

“In many cases, they were never being recycled, just the decision to throw them away was being made in China,” Murray says.

Dylan de Thomas, vice president of industry collaboration at a Virginia-based nonprofit called The Recycling Partnership, points to a 2016 documentary film feted at festivals worldwide titled “Plastic China” that detailed how that process poisoned the environment and compromised public health. The notoriety of the award-winning film has, in part, been credited with a new and wildly popular emphasis on the environment in the communist country – for political as much as practical purposes. President Xi Jinping sees the issue as populist in nature, one that connects a man many believe is positioning himself to be a leader for life with the subjects of his authoritarian rule.

The Chinese movement to stem the environmental harms of recycling the globe's refuse had shown signs of ramping up. As part of National Sword, Beijing had been cracking down on companies within its borders that processed imported recyclables – fining, closing and withdrawing licenses from those that brought in too much “contaminated” material.

But with the announcement of its restrictions last year, seemingly overnight there was nowhere to sell all that scrap paper and plastic that China had voraciously imported for decades. Some U.S. communities that once collected small profits from their recycling programs started seeing

costs associated with them instead.

“Right now, the market is crashed, and materials that we used to sell for \$150 a ton now have zero value,” says Hilary Gans, senior facilities and contracts manager for Rethink Waste, a waste management authority in San Carlos, California, that sorts and processes materials from 12 jurisdictions.

As a result, the U.S. exports of mixed paper, for example – junk mail, newspapers, office filings – fell 95 percent in January from what had been shipped to China in January 2017. Only about half of the remaining material was unloaded in other markets.

So with China no longer wanting it and no other markets immediately emerging to absorb it, a not-insignificant portion of the plastic and paper collected for recycling stands to simply be thrown away. A couple states so far have addressed that eventuality head-on.

In Oregon, for example, the Department of Environmental Quality issued a fact sheet urging residents to be more mindful of the products they put in their bins and to avoid what they called “wishful recycling.” It also suggested there might be difficulties finding markets for selling recyclable materials.

“In such circumstances, DEQ may concur that landfilling these materials on a temporary basis is an unfortunate but needed option at this time on the issue,” the agency said. “This will be the first time in Oregon's decades of strong recycling programs where this may occur on a large scale.”

The department's website notes that from Oct. 1, 2017 through March 16, 2018 – a period that includes China's domestic crackdown as well as the beginning of its import restrictions – some 8,300 tons of recyclables, or about 2 percent

of the state's total collection, had been sent to landfills.

Washington state's Department of Ecology issued a similar statement.

"In the short term, more potentially recyclable materials are likely to go to the landfill because no market is available for them," it said.

The Sacramento Bee reported that, in an effort to get a cleaner stream of recyclables, California's capital city is looking at fines for residents who improperly mix garbage with their recycling.

De Thomas says a couple jurisdictions in Idaho and Oregon are telling residents not to recycle mixed paper at all, though that's not the case everywhere.

"It's only really being felt at the curb in a couple of places," he says.

Those hardest hit by the restrictions are the U.S. companies that process recycling. Called "materials recovery facilities," they're the places the trucks take what they collect from your curb. They're frequently private enterprises that work with municipalities to sort and sell the raw product. Reports last year documented how the Chinese crackdown forced some facilities to take the recyclables they collected straight to the landfill.

"They're the ones who are really being squeezed because they produce these bales and then they have a hard time moving them," de Thomas says.

Oftentimes, the facilities load the recycling on a conveyor belt and, through a combination of manpower and technology, they pull out errant items like plastic clamshell to-go containers, discarded electronics and garden hoses so the rest can be packed and sold.

They don't get it all. Some facilities across the country have been considering hiring additional employees or installing more effective equipment for screening, even as they slow down the conveyor belts to more thoroughly inspect for trash. But margins are tight, unemployment is historically low, and China's goals seem difficult, at best, to attain.

"The material quality standards that China has and is enforcing now, no recycling facilities in the country that I'm aware of can meet that standard," Gans says, adding that the technology needed to achieve the measure could require an outlay of some \$5 million to \$10 million.

Companies are hesitant to invest that kind of money until they're sure the new standards are going to last. The possibility remains that Beijing will eventually be forced to relent on the standards simply because China needs the raw materials. U.S. firms are also looking for different outlets to sell their product, but other Asian nations that process recyclables appear not to have the capacity to absorb China's share of the market.

Until the situation stabilizes, the message from everyone is that Americans need to do a better job of sorting their recycling – even if that means throwing out more of the things they used to think were reusable because they're just going to end up in the trash eventually anyway.

De Thomas says jurisdictions have a role to play by improving the behavior of their consumers, to ensure "that they're not recycling every single thing that comes into their house, because not every single thing that comes into their house belongs in a recycling cart."

But he says that at this point municipalities would be better off not restricting the materials

they collect from residents.

“You can’t turn on and off materials like a switch,” he says, noting that some cartons 10 years ago weren’t recyclable and that the industry worked hard to get them into curbside collection.

“Everybody I talk to believes that this is not a forever situation and at some point they’re going to want the public to recycle this stuff again,” he says. “And I would just caution that it’s going to be hard to get them to recycle again once you tell them to throw it out. So my hope is that won’t happen, that people won’t change their programs.”

Recycling is still a fairly new phenomenon, and the industry seems sensitive to what happens in municipalities that have instituted mandatory compliance when residents learn their recycling is getting trashed.

Gans says that’s a political issue – and a perception issue.

“There are always naysayers to environmental programs, and the naysayers, I think, have undermined the value and contribution that recycling makes to the environment. Or there’s some economic argument that it’s not worth the effort or cost. And this just feeds into that,” he says.

But he suggests there could be an upside to the Chinese action, though, if it makes Americans more cognizant of their habits.

“People don’t think deeply about garbage – most people,” he says. “And so this allows people to think about what happens to this material after they set it out on their curb – Where does it go? What is the collateral impact of exporting recyclables that contain some garbage to other countries, and how are these materials handled in other countries?”

Murray says most of the time people get it right with what they recycle. While guidelines vary from jurisdiction to jurisdiction, there are some basic rules of thumb.

“I think it’s pretty simple: clean paper, No. 1 or No. 2 bottles (the plastic type in which water or soft drinks are typically sold, as well as milk and detergent containers) and all the steel and glass that you have – that’s it,” he says.

He says the real goal is to get manufacturers to quit using environmentally harmful products.

“That is the message – that we have been lulled into a sense of, ‘Well, it’s OK to buy this stuff because I can put it in the recycling bin because they will take it away and turn it into a polyester blanket,’” Murray says. “But the fact is, for most plastic we’re generating, that just isn’t the case.”

