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CHINA'S BAN ON MOST POSTCONSUMER PLASTIC SCRAP IMPORTS HAS SHAKEN UP TRADE AND LEFT EXPORTERS WONDERING WHAT'S NEXT FOR THIS DRAMATICALLY CHANGING MARKET. BY MEGAN QUINN

2018 could be both the end of an era and the beginning of a brave new world for postconsumer plastic scrap. On Jan. 1, China enacted new import policy changes aimed at cleaning up its environment.

For decades, China imported recyclables from around the world to fuel its manufacturing boom. But the country now says that system has brought in far too much “foreign garbage”: unrecyclable and hazardous waste hidden among legitimate recyclable commodities. Chinese officials, reacting to a directive from President Xi Jinping, are very serious about using the import ban as a swift way to cut down on trash and pollution, says Adina Renee Adler, ISRI’s senior director of government relations and international affairs.

During their visit to China in December, Adler and ISRI President Robin Wiener say it became clear just how dedicated the Chinese are to cleaning up the environment—and fast. Yet their haste to carry out new environmental directives has caused chaos for international recyclers and confusion within China. During meetings with Chinese officials in December, Adler and Wiener say, the officials were clear they do not want waste in their country “at any cost,” but in the rush to roll out the ban by January, they had not clarified the specifics of the new policies and what they consider recyclable commodities versus trash.

UNCERTAINTY OVER CARRIED WASTE AND POSTINDUSTRIAL PLASTICS

Postindustrial plastics are ostensibly safe to export to China—for now. But they face the many other barriers China has imposed, and experts believe that even if these plastics meet China's strict new technical standards, China might still phase them out of their allowed materials list by the end of the year.

China's crackdown on import permits could have a significant impact on scrap plastics not currently banned from its import list, says Adina Renee Adler, ISRI's senior director of government relations and international affairs. "Anecdotally, the rumors are that even though postindustrial [plastic] isn't banned, there's a significant decline in imports because people are going through environmental inspections ... that have caused them to go out of business or lose [import] licenses. The basket of importers has declined. And when there are fewer importers, there are fewer imports."

Also, for postindustrial plastics to enter the country, they must meet China's proposed new technical standards for contamination levels in materials that were not banned. Back in August, that threshold was a maximum contamination level of 0.3 percent for all materials—a move that, if implemented, could "effectively ban all imports," ISRI President Robin Wiener warned. After pushback from ISRI and other trade organizations, China revised its proposed standards to allow 0.5 percent prohibitives for most scrap and 1 percent for nonferrous. The proposed standards would apply to shipments arriving on or after March 1.

ISRI is "heartened" to see China consider the international community's concerns, Wiener says, but the minor changes, "like their earlier proposals, are not in line with standards followed globally by the recycling community and our industrial consumers," she wrote in a letter to ISRI members. "The new levels are still of great concern." The Bureau of International Recycling (Brussels) also asked China to reconsider the threshold. In a Dec. 7 letter, BIR stated it believes the carried waste standard is "extremely high" compared with other international standards, which are closer to thresholds of 2 to 5 percent.

The changes already have strained recovered plastics export markets around the world. One such change bans imports of 24 different "solid waste" materials, including several types of scrap plastic, most notably postconsumer plastic. The impact has been huge: Before the ban, China received more than half of the world's total scrap imports, including approximately 7 million mt of plastic scrap each year, according to ISRI statistics. In 2016, 11 percent (766,000 mt) of that plastic scrap came from the United States, constituting nearly three-quarters of U.S. plastic scrap exports that year. Now, exporters wonder how to fill the hole China's ban will leave. "The nature of the scrap trade to China, especially for plastics, is dramatically changing," Adler says.

Over the past few months, exporters have expressed widespread confusion over whether or not the ban covers their materials. The Chinese

government targeted postconsumer plastics because they typically have higher contamination levels than postindustrial plastics, Adler says, but in late December it was still unclear whether materials such as washed plastic flake—which can come from postconsumer sources but is cleaned and processed—are banned, too. On top of that, China announced new technical standards for materials that were not banned, calling for a 0.5 percent prohibitives threshold for most materials, including plastic, paper, and ferrous metals—a move that, if implemented on the reported March 1 date, could "effectively ban all imports," Wiener warns. In the meantime, recyclers are taking steps to improve the quality of their material in hope of meeting China's stricter regulations.

China also is cracking down on import permits and quotas, Adler says. Only companies that process or consume scrap are now eligible for import permits. Previously, brokers or traders of scrap could hold such permits. Some have not been able to get their permits renewed because inspectors have declared their business is non-compliant with certain environmental regulations. Such companies had not received that type of penalty in the past and had never had trouble receiving import permits before. Importers receiving such penalties are not allowed to appeal the process, nor can they renew their permit for a year, says Bernie Lee, ISRI's commodities research analyst.

On Dec. 19, the Chinese government announced its customs administration had initiated a crackdown on shipments of scrap imported by companies with faulty import licenses, including importers who were using rented, borrowed, or "illegally obtained" licenses. The crackdown, called "Blue Sky," resulted in 127 arrests and the seizure of 323,000 mt of materials, including plastics and materials the government categorized as "waste rubber" and other "solid waste," Adler says. The crackdown signals that "it is more important than ever to verify that the importing company that you contract with in China has a valid license," she wrote in an alert to members.

In North America, municipal haulers, materials recovery facilities, processors, and brokers who handle postconsumer plastics are all caught up in the change. Some companies have resorted to stockpiling postconsumer plastics or land-filling the materials, while several municipal recycling programs, especially on the West Coast, have stopped accepting postconsumer plastics

altogether. “Short term, there obviously has been a disruption,” says Dylan de Thomas, vice president of industry collaboration at The Recycling Partnership (Falls Church, Va.). “Medium term, there’s just uncertainty. No one is sure what will happen next.”

FEELING THE IMPACT

News of the ban disrupted post-consumer plastics recycling months before China officially implemented it, but the severity of the problem depends on how heavily any one recycler relies on exporting to China.

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Businesses along the West Coast are feeling the impact more so than some of their counterparts elsewhere in the United States because of their reliance on the Chinese market, de Thomas says. Of the 16.5 million mt of scrap exported from U.S. West Coast ports in 2016, 1.15 million mt was plastic scrap, and about 39 percent of that scrap, or 450,600 mt, went to China, Lee says.

Patty Moore, executive director of the Plastic Recycling Corp. of California (Sonoma, Calif.), which buys and sells postconsumer PET, says scrap plastics have started stacking up in California as recyclers struggle to find new buyers. MRFs are reporting major problems with finding buyers for commonly exported plastics like bulky rigids. “I don’t know anyone who is selling scrap plastic to China right now,” Moore says. Several plastics processors have told the MRFs that supply them with material that they can no longer accept the materials, and that means MRFs aren’t sorting and baling those materials, Moore says. Some MRFs are stockpiling plastic in anticipation of new markets emerging, but others “are letting it run off the end of

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PREPARING SHIPMENTS TO CHINA

In the wake of Chinese scrap import policy changes, ISRI recommends going above and beyond to demonstrate a commitment to responsible recycling. Follow these tips when preparing a shipment for export to China:

Keep waste out. To minimize the risk of rejections at Chinese ports, do not load dirt, wood, concrete, rocks, or any other material that doesn't belong in the container. Avoid scooping material from the ground up as that can introduce contaminants into a load, and make sure corrugated cardboard or aluminum cans aren't in loads of other materials, even though they are recyclable.

Include more photos. Take more photos of your load than what is required, and make sure the images show clean floors, clean and properly sorted material, and best handling and loading practices. Document the condition and contents of all shipments before export.

Be prepared for rejections. Expect more rejections of exported scrap to China, not necessarily due to the material's quality but to inspection officials' misunderstanding of scrap commodities and what to look for in such shipments.

Know your customer. It is important to verify that the company you sell to in China has a valid import license. Remember, only companies that are "in the business of processing and utilization" are eligible to obtain such licenses.

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the belts [and go to] the landfill, or they are paying someone to get rid of the material," she says.

PET enjoys a stronger domestic market than some other plastics, but in the months after China announced the ban, PRCC went from handling 30 percent of California's PET to 50 percent. "We now are moving about half the volume in the state because people don't have another buyer," she says.

Oregon is also feeling the pain. Municipal recyclers in Florence, Ore., asked residents in September to stop recycling their plastic jugs and other plastic containers. A "sense of panic" set in, says de Thomas, who lives in Portland, Ore. His local drop-off program stopped accepting any plastics other than PET and HDPE. "I don't want to call it an overreaction, but a bit of it was people reacting in advance of the markets changing," he says.

Recyclers in the rest of the country might be feeling less pressure, but they are in no way immune. Madison, Wis., for example, announced in September that its drop-off sites will no longer accept bulky rigids because of the ban. "Without the ability to export rigid plastic materials to China, and without another market available at this time, the rigid plastic program must be suspended," Madison's Streets Division stated in a Sept. 19 news release to residents.

Each of Canada's provinces is struggling,

too, says Tracy Shaw, president of the Canadian Association of Recycling Industries (Ottawa). Canada exported \$28.6 million in plastic scrap and parings to China in 2016, but Shaw says it likely won't be the same in coming years. Quebec, which recycles and processes 40 percent of its recycling inside the province, still sends 60 percent abroad, mostly to China. Quebec's waste authority told the Canadian Broadcasting Corp. it plans to store plastics and other recyclables in sorting centers until it can find other buyers. And British Columbia, which exports plastic scrap to China and the United States instead of sending it to other parts of Canada, is "more affected by the ban than our other provinces," she says.

Despite the early moves by some Oregon communities, reports of other municipalities refusing to collect plastics have been few, which de Thomas says is a good sign. It is more challenging for haulers to add plastic back into their stream once they get out of the habit of collecting it and finding markets for it, he says. "The feeling now is that people are a little more willing to wait and see what the market does," he says. International imports and exports tend to slow down or halt altogether in the weeks around Chinese New Year, which this year is in mid-February, says Maite Quinn, business development and marketing manager of Sims Municipal Recycling (New York). "We might get a clearer picture after the holiday." Further, Moore says, in December many importers were still waiting to see if their permits will be renewed sometime in the beginning of 2018. Even if an exporter has goods that meet the new Chinese thresholds, "nobody knows who will get renewed. They expect to hear, but not until next year," she says.

FINDING NEW BUYERS

Some say the ban is a good opportunity to look for other international markets, but with so many exporters scrambling to find "the next China," the process of identifying and working with new international buyers feels "like playing musical chairs," one recycler says. China and Hong Kong together took in 74 percent of all U.S. plastic scrap exports in 2016, or 1.42 million mt. The next three countries on the list—Canada, India, and Vietnam—together have less than half of that demand, Adler says. "China's demand was greater than the next 10 markets combined. No one country can make up that volume," she says.

Plastic that was once exported to China is

starting to go to other countries, notably India and places in Southeast Asia, Moore says, but it's hard to know whether these opportunities will last because so much plastic has flooded the market. PRCC has gotten interest from customers in those places, along with buyers in South America and Europe. Yet she suspects part of the interest is because "scrap prices have come way down, so it's more attractive," she says.

Moore and others say the long-term need is to increase domestic processing in the United States. She espe-

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cially hopes to see domestic markets and processing facilities for plastics that don't yet have deeply established markets elsewhere, such as bulky rigids and plastics commonly referred to as "3 through 7s": polyvinyl chloride, low-density polyethylene, polypropylene, polystyrene, and other plastics. "We have the end markets for PET and HDPE already, but we don't yet have enough capacity to separate 3 through 7s and bulky rigids," Moore says.

Some businesses are moving in that direction, albeit slowly, Quinn says. Sims has been somewhat insulated from the impacts of China's policy due to more domestic plastic scrap consumers on the East Coast, she notes. It has "taken the opportunity to purchase more 3 through 7s and 1 through 7s that once went overseas," she says. At Denton Plastics (Portland, Ore.), Chairman Dennis Denton says the changes in China could be "a tremendous opportunity to get more raw materials" for his business, which already processes 3 million pounds of plastic a month, 35 percent of which is from postconsumer sources, he says. Denton plans to open a new plant in Oregon



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“that will help MRFs process mixed rigid plastics [into] a salable form, and then we’ll buy it from them,” he says. But that project might not come online for 18 months or so, he says.

IMPROVING QUALITY

Whether you’re selling plastics domestically or overseas, cleanliness and quality are more important than ever. China’s policy changes are “a game-changer,” Adler says. “China is demanding cleaner product. But ... so are American customers,” she says. Denton says MRFs have taken notice. “Before, no one was paying attention to how decontaminated or clean the streams had to be. They put it all in one bin and baled it. You just can’t do that anymore,” he says. “We are retraining [MRFs] and telling them they need to get more automated equipment. Some people just have hand pickers. ... In order to have the economics work, the hand pickers need additional help to create higher volumes and cleaner streams.” Some MRFs have already made incremental changes to

make the overall quality of plastic much better, he says. “The good ones are really looking into it, really working to create cleaner streams,” he says.

It’s no secret these changes cost money—and businesses won’t necessarily make the investment in new sorting and reclamation equipment “until they’re really convinced that China won’t come back into the market,” Moore says. That could be a few years, she cautions. “It’s really wait and see. The infrastructure will be developed [here] once potential investors see they don’t have to compete with the low cost of doing business with China,” she says. Then she envisions reclaimers opening new facilities with auto-sorters or even robotics technology to make the stream cleaner than ever and to produce high-value sorted clean flake and pellets “ready to be made into new products.”

Fancy machinery isn’t the only way to clean up the postconsumer plastic stream, industry participants say. Better communication among haulers, MRFs, processors, and even packaging manufacturers can reduce contaminants, too. “If recycling



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companies can't find new markets in the foreseeable future, they can still be proactive by putting in a phone call to their municipalities," Adler says. The coming months are an opportunity to talk to participants in residential recycling programs and have them help clean up the stream, de Thomas adds. That means educating them about what to throw in the recycling bin, how to clean those items, and which items to discard, he says.

The Recycling Partnership published an outline of talking points to help recyclers talk with MRFs about how to reduce contamination levels. The organization recommends checking in to make sure MRFs are accepting the same materials you are asking for. Make a mutual list of the biggest contaminants, the talking points suggest—sometimes recyclers and MRFs have different opinions on which materials are the "bad actors." Most important, ask MRFs to assess their contamination rate by setting a baseline rate and measuring against it regularly, it recommends.

China's policy changes also create opportu-

nities for creative new recycling projects that can make use of plastics that can no longer get exported there, de Thomas says. One project, spearheaded by the Association of Plastic Recyclers (Washington, D.C.), aims to increase market demand for recycled plastic resins by working with large brands such as Target Corp. and Coca-Cola North America. These and other companies signed an agreement to use more postconsumer PP and PE resin in common "work-in-process" items used on factory floors, such as trash cans, pallets, and crates. In the first year of the program, APR estimates participants will use 20,000 tons of PCR instead of virgin resin. He hopes the project is one of many that boost the postconsumer plastics market in the United States for years to come. "Scrappers are scrappy, and that's one of the coolest things about the industry," he says. "They think on their feet. If they think they can sell something, they will." ■

Megan Quinn is reporter/writer for Scrap.



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