

Overview: Changes to China's Import Policies

Ban of all Mixed Paper and Mixed Plastics

The Ministry of Environmental Protection of the People's Republic of China (MEP) informed the World Trade Organization (WTO) on July 18th of its intention to ban the import of 24 recyclable commodities, including "unsorted mixed paper" and "mixed plastics" effective January 1, 2018.

Reduction of Contamination Threshold to .5%

On January 11, 2018, China finalized its contamination standard limiting contamination for any material imported into the country to less than 0.5%.

Suspension of all New License Approvals

The Chinese Ministry of the Environment (MEP) began limiting the flow of material last May by restricting the issuance of required import licenses to mills. We expect ongoing volatility in the approval of import licenses in 2018.



.5% = 10 pounds of contamination in a ton of recyclables (China threshold)

27% = 540 pounds of contamination (City of Surprise current levels)

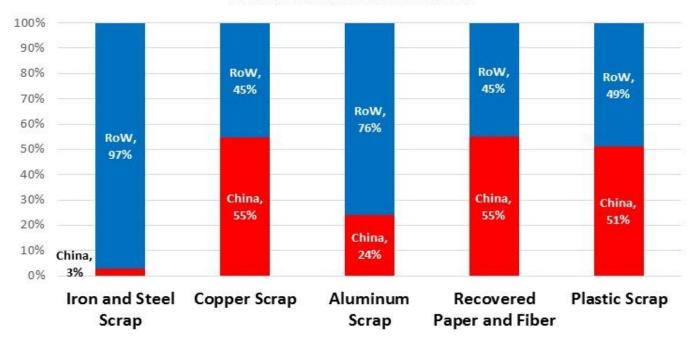
Contamination reduction is the only lever that recyclers have to mitigate the impacts of China's new policies



China's Position in the World as a Recycler

Mainland China's Share of Global Imports for Selected Recycled Commodities, 2016(p)

Source: UN Comtrade Database



*RoW = Rest of the World



Global Impacts

- China is largest importer of recyclables in the world. These measures
 by the Chinese Government have implications to all countries with
 recycling programs. The European Union exports over 95% of its plastic to
 China, and the US and the EU are the largest importers of paper grades
 into China.
- China is the single largest consumer of recyclable materials generated in North America. One-third of all scrap material collected in the U.S. is shipped overseas, with the large majority of this material going to China. In 2016, the US exported \$5.6 billion in scrap commodities to China (Institute for Scrap Recycling Industries). Also in 2016, according to the U.S. Census Bureau's and U.S. International Trade

WM shipped 30% of its paper to markets around the world



Trends

- Uncertainty and volatility are the name of the game and are expected to continue throughout 2018
- WM continues to move commodities, although at lower prices and to a broad variety of customers across the globe:
 - ✓ Our primary goal is to move material avoiding landfilling and warehousing
 - ✓ Plastic is moving to domestic buyers
 - ✓ Paper is moving to domestic mills, and to India, Vietnam, Malaysia, and S. Korea.

Quality rules

- On January 11, 2018, China finalized its contamination standard limiting contamination for any material imported into the country to less than 0.5%.
- With supply exceeding demand, all buyers will demand the highest quality
- Inbound quality affects outbound quality.
- We are working to improve inbound quality to reduce our cost
- Price and quality are must connect back to our customers







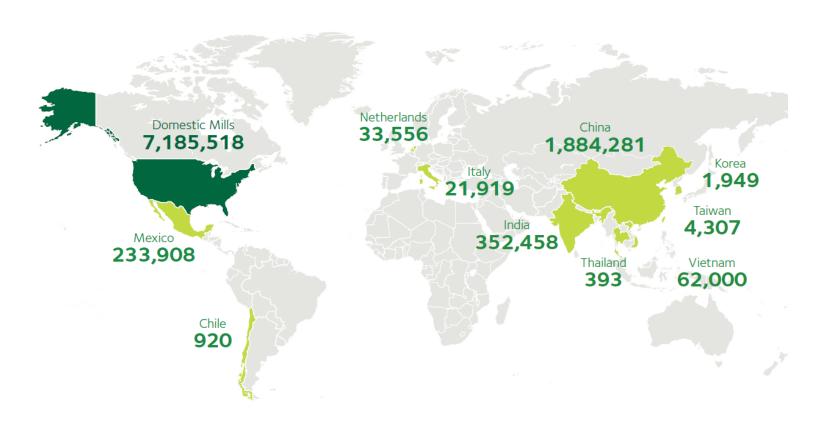
15 Month Recycle Commodity Trends







Waste Management Exports Material to Commodity Markets Around the World



In 2017 WM shipped 27% of its material to markets around the world



Single Stream Recycling





Quality, Quality, Quality

- Pricing and markets are likely to continue to be extremely volatile in 2018.
 Quality will impact pricing and movement. Quality, quality, quality is important.
- WM has not dropped material from its curbside recycling programs. There are pockets of the country where a some cities/recyclers have dropped mixed plastics from their programs. While these examples are extremely rare, they are highly publicized and give the impression that the sky is falling.









We will continue to work with customers to improve quality at the curb, and to diversify end markets.

What Does All This Mean?

- Emphasis on education to help residents on cutting down contamination.
- WM is here to help. Visit our <u>Recycle Often. Recycle</u> <u>Right</u> ® website for tips and tools to help <u>reduce and</u> <u>eliminate contamination</u>.
- From an environmental, economic and safety perspective, addressing quality of recycling paves the way to sustainable future.

"When in doubt, leave it out."

