

RESETTING CURBSIDE RECYCLING PROGRAMS IN THE WAKE OF CHINA



The SWANA Applied Research Foundation's Recycling Group identified the need to provide solid waste managers with up-to-date information and guidance on how to reset curbside recycling programs in the wake of the China National Sword policy implemented in January 2018.

In 2013, China launched a temporary customs program called "Operation Green Fence" aimed at increasing environmental quality by reducing waste importation and contamination in recyclable materials. In 2017, China announced more stringent restrictions that are hereafter referred to as "National Sword."

China's National Sword policy banned the import of several recyclable materials from all countries—including mixed paper and mixed plastics—on January 1, 2018, and reduced the level of contamination in scrap and recyclable materials not banned to 0.5% effective March 1, 2018. China also imposed tariffs on many recyclables specifically from the United States including cardboard, other recovered fiber, metals, and plastics in August 2018.

As China was a major purchaser of recyclable materials from North America and around the world, the China National Sword policy resulted in a significant reduction in demand for these materials and the prices paid for them. In addition, the extremely low new contamination limit of 0.5% forced managers of materials recovery

facilities (MRFs) that processed recyclables collected through municipal recycling programs to reexamine the sources and causes of contamination in their recovered materials.

This report provides a number of important observations and insights regarding the impacts of the China National Sword Policy on curbside recycling programs and the resets that can be made to addresses them, including the following:

- About 65 million households in the US are provided with curbside recycling services. Collectively, these programs divert about nine million tons of recyclables from disposal each year.
- The China National Sword Policy has resulted in about a 50% reduction in the revenues received from the sale of recyclables recovered through curbside recycling. This represents a reduction of over \$400 million per year.
- The major recycling commodities that have been impacted by the China National Sword Policy have been mixed paper, mixed plastics, and corrugated containers.
- An analysis of the collection and processing costs and current revenues associated with curbside recycling programs indicates that these programs cost homeowners about \$6.85 per household per month when recyclables are collected on a weekly basis. The impact of the China National Sword policy on MRF recycling revenues and processing costs is estimated to account for \$0.75 per household per month or about 11% of this cost.
- Certain resets to curbside recycling programs can result in cost savings that will more than offset the cost increases resulting from the China National Sword policy. These include the switching of recyclables collection from a weekly to a bi-weekly basis and the switching of glass recycling from curbside collection to drop-off center recycling.
- Contamination/residue levels at MRFs typically range between 15% and 25% and are costing curbside recycling programs over \$1 billion per year on a national basis when additional collection and processing costs associated with contamination are considered. While contamination has not been caused by the China National Sword Policy, it has been highlighted and exacerbated by it.

Single Stream Curbside Recycling: St. Petersburg, FL



The full report, “Resetting Curbside Recycling Programs in the Wake of China,” is currently only available to SWANA ARF subscribers. SWANA members receive free access to ARF industry reports one year after publication.