

REDUCING CONTAMINATION IN CURBSIDE RECYCLING PROGRAMS



The issue of contamination in curbside recycling programs has grown in importance in recent years as its costs and safety impacts on recyclables processing at material recovery facilities (MRFs) become more widely recognized and better understood.

To address this issue, many state and local governments have implemented “recycle right” programs that provide clearer and simplified instructions to residents on what recyclables are included in their curbside programs. In addition, national organizations such as The Recycling Partnership (TRP) have developed “Recycling Anti-Contamination Kits” that are made available free of charge to recycling program managers and have provided grants to numerous communities to support cart implementation and inspection programs. SWANA appreciates and supports the efforts of these organizations and governments to address the curbside recycling contamination issue.

The SWANA Applied Research Foundation recently published a report to compliment those initiatives by identifying and addressing the key reasons why residents place contaminants in their recycling bins. A better understanding

of what causes these recycling behaviors should enable recycling and sustainability program managers to develop and implement more effective anti-contamination programs that address the underlying reasons for curbside recycling contamination.

One factor that is often overlooked in responding to the curbside recycling contamination issue is the varying levels of recycling commitments of residents who are provided with curbside recycling collection services. Recycling and sustainability program managers often overestimate the commitment of certain residents, and mistakenly assume that contamination issues can be resolved through increased spending on recycling public education programs.

The Solid Waste Authority of Central Ohio (SWACO) contracted for the conduct of a four-season waste characterization study in 2018 to determine the composition of refuse generated within its service area and destined for disposal. The study was performed by the Project Team of MSW Consultants and the Cascadia Consulting Group.

During the course of the waste characterization study, two communities in the SWACO district changed their recyclables collection methods. At the start of the study (February 2018), the cities of Gahanna and Reynoldsburg were using 18-gallon recycling bins for their curbside collection program. In May 2018, both communities converted to 64-gallon roll carts which replaced the bins. Conversion from bins to carts was sponsored by TRP, which supplied grant funds to help acquire the carts.

Two iterations of sampling and sorting of curbside recyclables were conducted for this project during February 11–15 and Aug 19–23, 2018. This sorting effort enabled contamination in randomly-selected recycling containers to be separated out and weighed.

Prior to the distribution of recycling carts, 39 percent of the households had contamination levels of less than 10 percent. Based on this low contamination rate, these households were classified as “High Performers.” A second group, representing 38 percent of the households served, had contamination rates of 10–24 percent, and were classified as “Learners.” Finally, a third group representing 23 percent of the households served had contamination rates of over 25 percent. This group comprised the “Under Performers” category.

Following the distribution of the recycling carts, the percentage of High Performers jumped from 39 to 50 percent of the households served while the percentage of Learners dropped from 38 to 22 percent. What is most interesting is that the percentage of Under Performers increased from 23 to 28 percent. This increase in contamination occurred despite the extensive educational outreach that was conducted during the bin-to-cart conversion program. This suggests that increased education outreach is not likely to have a significant impact on the contamination caused by this group.

Recognizing the distinctions between the Higher Performers, Learners, and Under Performers customer groups can help recycling and sustainability managers design and implement more effective anti-contamination programs. For example, the “High Performers” group may need occasional “oops tag” reminders and periodic mail inserts of acceptable recycling items to address their contamination issues. The “Learners” group may need more regular cart inspections and cart rejections to correct their behavior. Finally, if cart rejections do not result in reduced contamination levels, recycling services to Under Performers may need to be suspended to encourage them to comply with applicable curbside recycling rules. These options are discussed in the full report and case studies are provided for each option.

The full report, *Reducing Contamination in Curbside Recycling Programs* is currently only available to SWANA ARF subscribers. SWANA members receive free access to ARF industry reports one year after publication.