



## **100 Largest US Cities: Survey of Plastic Collection Programs *December 2008***

Through an initial web search of the 100 largest US cities (by population), Moore Recycling Associates determined that all of the surveyed cities have access to #1 and #2 bottle recycling through either curbside or drop-off programs, or both. After further in-depth research, we determined that 28 of the 100 largest US cities collect some type of rigid plastics beyond bottles through curbside programs.

In addition to rigid plastic collection, Moore Recycling gathered information about plastic bag recycling and encouraged recycling coordinators to link city web sites to [www.plasticbagrecycling.org](http://www.plasticbagrecycling.org) to bring greater awareness to consumers. Every city has access to plastic bag recycling through retail collection, but an additional 13 cities offer plastic bag collection through municipal drop off or curbside collection.

### ***Detailed Survey Results: Non-bottle Rigid Plastics***

- Out of the 100 cities (pop. 59,134,334) 28 cities (pop. 20,115,775) or 34% collect plastics beyond bottles
- 12 of the 28 cities collect all plastic bottles and containers
- 16 of the 28 cities collect rigid plastics beyond bottles and containers, such as toys
- 3 of the 28 cities instruct residents to include expanded polystyrene (PS)
- 11 of the 28 cities are in CA; in total, 13 are on the West Coast
- 5 of the 28 cities are in TX
- Most Midwestern communities that collect non-bottle rigid plastics have access to a large MRF (e.g. Waste Management) that has broad market power throughout the U.S.
- The survey was limited to the 100 most populous cities in the U.S., but many other communities beyond the 28 largest cities, collect non-bottle rigid plastics, including Montgomery County, MD and Boulder, CO.

### ***Survey Results: Plastic Bags***

- 8 cities collect plastic bags curbside
- 5 cities collect bags at a public recycling center (in addition to retail collection programs)

### ***Descriptions for Plastic Collection***

One major obstacle to non-bottle rigid plastic recycling is communicating clear and consistent information to the public, so they know what to do with any given plastic type. Listed below are examples of the many disparate ways that community programs instruct residents to recycle plastic material.

- Household containers 1-7
- All clean plastic
- Plastics labeled 1-7
- Bottles and containers 1-7
- Plastic containers
- All rigid plastic containers
- Plastic tubs and bottles
- Plastic food and beverage containers (bottles and tubs)
- Rigid plastics with the recycling numbers 1-7
- All bottles, and containers labeled #2, 4, or 5

An additional larger challenge is encouraging MRFs to generate good quality bales of plastic material that will attract the attention of domestic markets. Only a limited number of domestic markets take non-bottle rigid post consumer plastics and those are primarily interested in the bulky rigid plastic, which is primarily HDPE and PP. Some domestic markets also actively seek HDPE and PP “tubs and lids”. No domestic market accepts “mixed rigid bales” for recycling. Until the end of 2008, the export market was actively seeking bales of mixed rigid plastic, however in November of 2008, exporters stopped accepting these bales. By January of 2009, exporters began buying “mixed rigids” bales again, however, prices are much lower than they were before the fourth quarter 2008 market interruption.

### ***Financial Impact/Market conditions***

No communities reported a cost associated with their expansion of plastic collection. Most also said that their program underwent multiple changes (e.g., single stream, contract negotiations to account for rising fuel costs, etc.) at the time of expansion thus they were unable to draw a conclusion about the specific cost impact of expanded plastics collection. Some communities did mention a slight reduction of landfill costs associated with plastics expansion.

Market conditions have changed dramatically since the survey was conducted, as there has been a significant drop in all scrap prices. Demand from the export market initially waned and domestic markets are limited. Furthermore, as mentioned above, domestic markets are interested in HDPE and PP materials only. In 2002, market prices were slightly lower than the current value. It is important to note that San Jose began collecting non-bottle rigid plastics in 2002. Fremont, CA and Fort Worth, TX expanded collection in 2003. The decision to expand collection is financial but also depends on the ability to move material. Some communities are willing to recycle in order to reduce landfill costs. If there is a recycler that will accept the material, some communities will collect it, even if the material has no scrap value.

## ***Conclusion***

The number of programs handling mixed rigid plastics has increased significantly over the past few years. Export buyers have been aggressively seeking mixed rigid plastics since the middle of 2005. Quality has not been a high priority with the export market. Most MRFs are able to sort out the higher value plastic materials (bottles) and then bale all the remaining plastic and market it as a “mixed rigid” bale. Some MRFs have tailored operations to meet domestic or local market specifications.

Several recycling coordinators were contacted (Chandler, AZ; Buffalo, NY; and Phoenix, AZ) who expressed the possibility of program expansion. In the first quarter of 2009, pricing has increased, however, scrap values are still lower than a year ago and markets are not as robust as before. Therefore, program expansions may be unlikely at the present time for some communities. Collection of this material can be encouraged if value is low as long as there is domestic capacity to handle it and MRFs are willing to produce bales that will be marketable domestically.

The last few years of strong export markets, coupled with the export market’s lack of material quality feedback, discouraged potential domestic users from investing in end-markets or in the technology needed to process non-bottle mixed resins into usable post-consumer resin. In order to expand domestic markets, potential buyers need to be confident of a consistent supply of quality material and steady end-use buyer(s).