

All About ACCESS

By Clarissa Morawski

When it comes to increasing recovery of recyclables, one key element is often left out of the discussion – access. Our author shows how this growing metric is being identified and explains why it could change the way recycling is measured in the years to come.

With the proliferation of recycling programs for packaging and paper across North America, the need for meaningful performance measurements has become increasingly important. This is true for municipal and state governments as well as for manufacturers and retailers of packaged food and consumer goods.

Recycling rates, as we all well know, offer valuable insights into program performance because they take into account the entire recycling process, from collection to final disposition. It's not surprising then that recycling rates are calculated and cited all the time.

But another important indicator is the level of “access” or “reach” a recycling program exhibits. Knowing the percentage of the population in a state or region that has access to recycling different types of materials is especially useful for packaging stewards and brand owners as they face new regulatory compliance challenges in determining how to manage the post-consumer packaging they sell.

Access data can help inform collection strategies, particularly in underserved – or completely un-served – areas as well. It can also provide brand owners with an understanding of how recyclable their packaging or printed paper is in different jurisdictions. This information may influence a brand owner's choice of packaging when multiple options are available.

Let's take a deeper look at how municipalities and producers can calculate access statistics and also explore why the industry as a whole should pay more attention to what these numbers tell us.

The first problem: agreeing on definition

Defining reach or access to recycling is a subject of great debate. Some suggest that a resident has access to recycling when he or she can recycle discards for free via a municipal curbside program or municipal drop-off depots. Others, however, argue that access also includes those private recycling services provided on a subscription basis. In addition, away-from-home recycling is slowly growing and that realm also contributes to the access a consumer has to recycling. In general, however, it is more difficult to obtain data on away-from-home as those initiatives tend to vary by location.

Since 2005, CM Consulting has measured Canada's access rates for nearly 40 different types of materials, from traditional packaging and paper to newer forms of packaging, such as aluminum food trays and gabletop cartons. For our purposes, residents are considered to have access to recycling when they can recycle via their municipal curbside program, municipal drop-off depots and/or redemption centers for deposit-bearing packaging.

What's the best way to measure access?

Traditionally, recycling access rates have been determined through a series of data-call surveys to municipalities. Although this method

is reasonable, securing a high response rate to a survey is hardly a given. And even with a high response rate, there is the possibility that respondents may misreport information, either intentionally or simply due to a lack of understanding of material classifications. There are also problems associated with the various levels of extrapolation used to estimate the results.

Given these constraints, CM Consulting believes, for now, access is best measured based on what residents are informed they have access to. To understand what information is available to the public, our team utilizes a series of tools that residents would typically use to learn about the various recycling services available in their areas, such as community websites or a call to the municipality. In order to avoid the problems presented by different terminology, CM uses specific guidelines, which are continually updated and improved upon as new packaging materials are introduced. This “virtual” tour of nearly all Canadian recycling programs – in municipalities with a population of more than 5,000 – offers real-time accuracy.

Finally, to determine national and provincial access rates for various materials, CM Consulting compares the list of communities to population statistics from the 2011 census. The data can then be organized to show the percentage of the population (nationwide or provincially) that has access to recycling programs for different materials. Alternatively, the information can be used to compare recycling access among different types of materials in different provinces.

Some top-line findings for Canada

- 95 percent of Canadians have access to recycling for PET plastic bottles, jugs and jars (beverage, household cleaning, food, etc.) via curbside collection or a drop-off facility.
- While the majority of plastic container types have access rates similar to that of PET plastic, some systems do not accept containers that are not bottles with screw-on caps. Other systems exclude containers made of certain resins, such as No. 6 polystyrene or No. 3 PVC.
- Nearly 90 percent of Canadians have access to recycling for PET non-bottle rigid containers. However, at only 52 percent, the access rate for non-bottle rigid containers made from polystyrene (e.g. bakery trays) is significantly lower.

- Traditional paper materials (such as OCC, boxboard, glossy magazines and newsprint) can be recycled by more than 90 percent of Canadians.
- Most of the programs that accept these traditional paper materials also accept less traditional materials, such as fiber-based egg cartons and hot beverage trays, such as those used to serve multiple coffee cups at a drive-thru.

CM Consulting collects this data every year, providing valuable trending information for needs assessment, program planning and policy development activities. For example, in 2009, only 25 percent of Canadians had access to recycling for expanded polystyrene food packaging. By 2013, the number of municipalities accepting this material increased to 30 percent, as a result of improvements in densifying technologies.

Among other things, the 2014 update will offer insight into the impact China's Green Fence has had on recycling access rates in Canada for some materials. In addition to recycling, the research also covers access to curbside food waste composting (40 percent nationally), as well as the percentage of Canadians living in regions where recyclables are banned from disposal (13 percent of residents nationwide).

Assessing access in the U.S.

Several organizations have attempted to quantify this measure in the U.S., and each has employed a different methodology. A 2012 study conducted by Moore Recycling Associates on behalf of the American Chemistry Council, for instance, looked at the percentage of the U.S. population with access to plastics recycling. The first step was to survey a wide range of communities, both large and small. Using web research and phone calls, Moore Recycling determined which plastics were collected in each city and county, either via curbside recycling or other collection programs (data for deposit programs or retail drop-off programs was not collected). For each community, the specific materials accepted by the program were documented; any exclusions to the programs (for example, film or polyvinyl chloride) were also recorded.

Moore Recycling also conducted a similar study to determine the percentage of the country's population with access to plastic retail bags and plastic film recycling. After gathering all publicly available data on the location of film and bag recycling sites (in-

cluding retail drop-off, curbside collection, municipal drop-off and other sites), Moore Recycling followed up with phone research to ensure their initial findings were accurate.

For the purposes of the film study, Moore Recycling defined access as having curbside collection service or living within 10 miles of a drop-off location. Performing the reach analysis based on ZIP code and then using software package ArcGIS and census data, the consultants determined that 91 to 93 percent of the U.S. population has access to plastic bag recycling and 72 to 74 percent also has access to plastic film recycling.

A 2009 recycling survey, meanwhile, prepared by the environmental firm R.W. Beck for the American Beverage Association, measured access to recycling for a more diverse range of consumer packaging, including bottles, cans and paper packages. The company contacted local officials (county-level recycling coordinators, and in some cases municipal level) with firsthand knowledge of their area recycling programs, and the study was designed to capture a larger sample of the population. The methodology combined direct responses from the largest counties and cities in the U.S. with a sampling approach that aimed to capture a representative sample of many small communities. For the remaining communities covering 10 percent of the U.S. population not captured in the direct survey, a random sample of communities was targeted and responses were used to extrapolate nationwide totals for the number of communities with access to container materials recycling.

In total, the survey targeted 270.6 million people (90 percent of the country's population) and more than 1,200 counties containing more than 20,000 communities. Incorporated into the survey methodology was a follow-up phone call to survey respondents as well as data entry and quality control checks.

The study estimated 228.8 million Americans, or 74 percent of the U.S. population, have access to some sort of curbside recycling at home. This includes subscription programs. The American Beverage Association, in a press release following the completion of this study, reported that the infrastructure is in place for millions more to gain access to curbside recycling (an estimated 36 to 60 million Americans currently have trucks that come to their curb to pick up trash, but not their recyclables). An estimated 256 million Americans, or 83 percent of the U.S. population, have access

to drop-off recycling programs. Therefore, 92 percent of the population has access to either a curbside or drop-off recycling program.

Weaknesses of existing methods

There are limitations to some methodologies that have been employed in the area. First is the extent of extrapolation used to obtain results. In the R.W. Beck study, for example, regardless of the survey response rate in each state (which ranged from 2 to 100 percent), results were extrapolated to the entire state-wide population. Though a certain amount of extrapolation is required, too much of it tends to lead to overestimates. The implications of overestimating access to recycling are serious: With incorrect data, public and private efforts to increase the recycling rate may be trying to solve the wrong problem. Furthermore, money spent on motivating people to recycle is wasted if a significant percentage of the population does not have actual recycling access.

Assumptions that recycling services are applied uniformly to the multi-family portion of the population can also serve to skew access numbers. Often, large municipalities may collect a wide range of plastics, but the collection is only available through curbside service to single-family residences, leaving multi-family homes without access. Even when municipal contracts require that service be “offered” to multi-family dwellings, the majority of building managers fail to subscribe to the service. Clearly, more ques-

tions need to be asked about the accessibility of multi-family recycling, especially since estimates show at least 18 percent of the U.S. population lives in housing structures with more than five units. Moore Recycling has acknowledged this limitation, and the firm is working with stakeholders to determine a statistically acceptable methodology to account for multi-family programs.

Existing methods also vary in terms of how they define access, and that becomes a problem because different collection strategies vary in terms of convenience. For example, curbside recycling access is far more convenient to participate in than having to go to a designated municipal depot. Similarly, tax-funded curbside service is far more likely to be accessed than subscription services, which carry a monthly charge.

Tracking access as a more granular set of measurements, which would take into account the pros and cons of each program, can offer more transparency. There is high correlation between participation in recycling and convenience so it behooves the industry to bring the convenience factor into access estimates.

What comes next?

GreenBlue’s Sustainable Packaging Coalition (SPC) and CM Consulting have coordinated a meeting with key stakeholders to discuss a regularly updated “national access” study that would cover a large range of packaging and printed paper materials.

Working with the U.S. Environmental

Protection Agency as well as states, brand owners, materials groups and associations, the initiative is aimed at bringing together more resources for research and data analysis. The goal is to create a consistent, fully vetted data-gathering methodology that would cut down on the problems that come with employing multiple approaches at the same time.

This new research can offer valuable information to project partners beyond what has historically been captured or published by individual organizations. For example, we may be able to identify high-population areas that do not have reasonable recycling access, effectively offering a roadmap to brand owners and states on improving programs. The research can also bring consistency to the terminology used to describe different materials and provide feedback on how municipalities are communicating their recycling access information to their residents. Lastly, the research can further inform public awareness initiatives and effectively push North American recycling even further forward. **RR**

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