Recycling Online

How is recycling measuring up?

by Roger Guttentag

Jerry Powell's article "Death to Recycling Rates" from the March 2011 issue of *Resource Recycling* really pushed a big, hot button for me for several reasons. First, his criticism of how different agencies and organizations calculate recycling rates was dead-on (as well as amusing). Second, his account of the strategies used to game the system – making waste diversion rates look better than they may actually be – is a long standing problem that has been with us since we started trying to ascertain what municipal waste recycling programs are really accomplishing. Finally, it is distressing to see that these measurement issues are still dogging us after decades of discussion (or, more likely, non-discussion). Most of us treat the topic of measurement like we do with vegetables: We all solemnly agree that it's important and then quickly return to our routine (dietary and statistical) bad habits until the next sermon.

This situation needs to change because we are confronting a changed legislative environment on the state and federal level that is, at best, skeptical and, at worst, hostile, to a whole range of environmental policies, including recycling and waste reduction. If an advocate like Jerry can spot the gimmickry used to make recycling look good, then so can our opponents. For this reason, the call for a new round of dialog on recycling and waste reduction metrics should be acted on as soon as possible. One good way to start the ball rolling is to review what measuring systems have been proposed, implemented or evaluated.

Alameda County (California) Waste Management Authority (ACWMA)

One of the supporting documents to the ACWMA's five-year program assessment audit (2008) is "Measuring Success in Diversion" that was published in 2007. The report does a great job of describing and evaluating the different methods used to determine waste disposal reduction as well as program effectiveness. My recommendation is to read this report after looking at the California Department of Resources Recycling and Recovery (CalRecycle) and U.S. Environmental Protection Agency (USEPA) sites described later in this column. The report also has a set of detailed recommended best practices regarding various measurement tasks.

CalRecyle

California's AB 939 legislation (enacted in 1989) requires all local governments with solid waste responsibilities to achieve a 50 percent waste diversion rate starting in 2000. The methodology for determining compliance with this goal was changed in 2008 by SB 1016 to focus on disposal rate reduction as the key compliance metric, rather than diversion rates. This site provides a very good example of the complexity of this process through its detailed discussion of how it's to be done through online documentation, graphs and PowerPoint presentations. The organization of its content is frankly somewhat confusing which makes finding what you need a real challenge. Start with the link "Basics: Per Capita Disposal and Goal Measurement (2007 and Later)" and then move on to the "Frequently Asked Questions About the Per Capita Disposal Measurement System."

U.S. EPA

The U.S. EPA published "Measuring Recycling: A Guide for State and Local Governments" in September 1997 to provide a standard, program-based methodology that could be used by any local government. There are five main report sections covering an introduction to the subject; planning, design, implementation and enhancement with the balance of the report consisting of supporting appendices which I think can

Web Address Directory

Alameda County (CA) Waste Management Board – Measuring Success in Diversion	http://tinyurl.com/StopWaste Diversion
CalRecycle – Local Government – Goal Measurement	http://tinyurl.com/CalRecycleLocal
U.S. Environmental Protection Agency – Recycling Measurement	http://tinyurl.com/EPArecycling
Waste Diversion Ontario – Municipal Datacall – Tonnage Reports	http://tinyurl.com/WDOtonnage

be ignored with the exception of volume to weight conversion factors. The organization and underlying logic of this recycling program tonnage measurement methodology is, in my opinion, still relevant though it is badly in need of updating and revisions especially with regard to what is or is not to be considered municipal solid waste or recycling and the suggested data collection practices. This report came out just as the Web was transitioning from an academic to commercial network, so its potential contribution to the measurement process in terms of facilitating data collection was not known. While an update to this document would be really valuable in terms of helping to structure the debate over how measurement should be done, it is uncertain that it will occur due to the impending budgetary cutbacks to all federal programs.

Waste Diversion Ontario (WDO)

WDO's role is to design, establish and manage a wide range of waste diversion programs in the Canadian province of Ontario. One of its primary responsibilities is the collection and dissemination of recycling program statistics provided by Ontario municipalities through its municipal datacall (MD) program. These statistical surveys cover curbside collections, organics, electronic waste, household hazardous waste and other waste materials such as construction and demolition debris. One of the reasons the data coming out of the MD program is so strong, is that industry is paying for it and wants to make sure the numbers are accurate. WDO also calculates the diversion rates for all municipalities participating in the MD program and publishes, in addition to the actual data, a description of the methodology which is called the GAP (generally accepted principles) Diversion. The background document for each MD year discusses what are the principles underlying GAP, what is included in the GAP Diversion calculations and a brief overview of the actual calculations.

Final Thoughts

There is no question that this small survey has only scratched the surface of this deeply complex and often confusing topic. It is my intent to return to measurement issues periodically based on additional resources I have found, new developments that hopefully will be occurring and suggestions from readers. However, I would like to focus on what I believe is the key challenge for this endeavor: Making sure you are collecting the right data in the first place. Or, to put it a different way – just because you can measure something doesn't mean you should. I think that is what Jerry was thinking when he complained about our over-reliance on measuring gross tonnage. We should also not lose sight of his other key point that he made regarding our need for evaluating outcomes such as energy conserved or greenhouse emissions reduced. I believe all these ideas can be linked together by insisting that any data we do measure should be able to address concomitantly how recycling and waste reduction impacts policies, programs and outcomes.

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