Compatibility of Recycling Goals and the Continued Development and Operation of Integrated Waste Management Facilities, Including Landfills

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In view of recent media coverage about the costs of recycling, perhaps it is time to take a "fresh look" at the compatibility of waste diversion and ultimate waste management, i.e., landfilling. Whereas some suggest that Zero Waste enthusiasts and Landfill Management professionals have counterproductive goals, through our recent experience with integrated waste management systems we have a newfound appreciation of the common ground of the two groups.

Zero Waste proponents espouse many important goals such as behavioral changes in consumers (e.g., reducing the generation of waste, minimizing the use of products that contain toxins, reducing energy consumption, etc.). Others, in the "No Burn/No Bury" ZW camp, suggest setting a goal at zero waste of resources achieved through measures such as: bans on disposal of materials that can be beneficially used, mandatory recycling programs to address hard-to-reach constituents, separate collection of food scraps, extended producer responsibility of hard-to-handle materials, etc. Some ZW enthusiasts have stated, "We put a man on the moon, so surely we can achieve ZW".

On the other hand, many solid waste management professionals realize that landfills represent an important component of integrated solid waste systems and that other waste management options that are sometimes viewed as alternatives to landfills (e.g., material recovery facilities, composting operations, household hazardous waste collection programs, waste conversion and waste-to-energy plants, etc.) are more properly considered as complementary waste management tools. Further, most solid waste managers understand that landfills will continue to be required for residuals from other components of integrated waste management systems for decades to come.

While recognizing that recycling is presently common and an important component of modern waste management systems, particularly in large metropolitan areas, two questions remain:

- To what extent should our society make an investment in recycling in this era of overstretched public-sector budgets?
- Who pays for recycling?

Whereas in some areas, recycling can be a break-even proposition, in most areas, implementing recycling can cost from $0.50 to $3 per household, per month. One might ask with public school budgets being reduced, the nation's infrastructure needing extensive improvements, and forecasted water shortages warranting major water resource projects, what is the most appropriate method for determining how the costs of recycling should be born?

Perhaps the answers lie in addressing recycling goals in a manner that makes economic sense depending on the conditions of each community or, more appropriately, each waste-shed. When viewing the magnitude of the investment in a modern-day municipal solid waste landfill, one can gain a greater appreciation for the need for properly managing and amortizing such investments. Like any investment in infrastructure, the public's investment in disposal capacity should be valued and optimized in the interest of taxpayers. For instance, in areas with limited remaining disposal capacity and limitations for developing additional disposal capacity, investing in a more aggressive recycling program may be much more desirable and cost-effective than for areas with over 20 years of disposal capacity.

As prudent taxpayers, we need to work together to assure that the assets of waste management systems are optimized in a manner that protects the environment. This, of course, includes thoughtful consideration of recycling goals, which can contribute to a more cost-effective utilization of the available landfill capacity. As recycling enthusiasts provide an ongoing impetus for further waste reduction and enhanced recycling, optimization of waste diversion will continue to evolve. This evolution will be site-specific consistent with the variable impact of evolving waste management technologies and changes in the markets for recovered products. Given that the dynamics of each waste-shed can vary dramatically, many cities will benefit from a review of waste management alternatives. Based on my experience, it has been shown that such a review can not only result in an optimization of current assets, but also a plan for continued cost-effective solid waste service for many years in the future.