A COMPUTER EVALUATION OF THE PHILADELPHIA CURBSIDE RECYCLING PROGRAM

JACK P. SIDERER AND MARK BERSALONA
City of Philadelphia Streets Department
Philadelphia, Pennsylvania

Discussion by

Theodore R. Siegler
Ascutney, Vermont

Increasing disposal costs and public concern over landfills and energy recovery facilities have spurred interest in recycling programs throughout the United States. To date, limited data has been published on the costs associated with collection of source separated materials, despite the probability that collection of separated materials is more costly then collection of mixed waste, and may represent the most significant variable in determining the feasibility of source separation programs.

The computer system described by Mr. Siderer and Mr. Bersalona to evaluate a voluntary curbside recycling pilot program in Philadelphia provides an opportunity to develop the type of data needed to determine the costs and feasibility of implementing separate collection programs. The following questions would appear to be relevant to analysis by the system described by the authors.

(a) How do participation rates affect per ton or per mile costs?

(b) Recycling: The Alternative to Disposal (Quimby, 1975), illustrates the difference in costs associated with collecting high volume/readily available materials compared to low volume/dispersed materials. Do different income levels or other household variables affect the quantity of material per household sufficiently so that unit costs per neighborhood vary significantly?

(c) What effect does separate collection of a portion of the waste stream have on per ton collection costs for the remaining mixed solid waste? Does an adequate data base exist to describe costs associated with the current system?

(d) How do collection costs vary as the number of categories increase? For example, what happens to costs as the separate collection program goes from separate collection of newspapers, to separate collection of newspapers and mixed glass, aluminum, and steel beverage containers, to separate collection of a third category such as plastic?

Finally, the authors do not describe the time frame for the analysis. Will the surveys be conducted over a long enough period of time to account for seasonal fluctuations? For example, it could be postulated that participation rates and collection efficiency might be different in the winter months than in the summer months. Further, participation rates and costs may change significantly as the program matures.

REFERENCE

Quimby, T.H.E. *Recycling: The Alternative to Disposal.* Baltimore: Johns Hopkins Press, 1975.