Rochester Committee
for Scientific Information
Rochester, NY

RCSI Bulletin 302
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Prepared by William F. Cosulich Associates, P.C.

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July 1989

THE ROCHESTER COMMITTEE FOR SCIENTIFIC INFORMATION
P.O. Box 29236, River Campus Station
Rochester, N.Y. 14627

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Introduction

Monroe County had no coherent plan for solid waste management prior to the 1960s. Waste collection and disposal services were provided by municipalities and private firms, and most waste was taken to poorly supervised and regulated open dumps. Only in recent years, prompted by rising costs of landfill disposal, increased stringency of State regulations governing siting of new landfills and the failure of Monroe County's costly Resource Recovery Facility, have County officials begun to develop a long-term solid waste management plan. In June, 1986, the Monroe County Legislature was presented with a report by its Solid Waste Task Force which identified the technical and management consulting services needed for development and implementation of a county-wide plan. The Legislature agreed to fund part of these services, and William F. Cosulich Associates, an engineering firm based in Woodbury, New York, was hired as environmental consultant for a fee of $380,000. The bulk of their work was recently completed with the submission of a report outlining their solid waste management plan. This Bulletin summarizes the six sections of the Cosulich report and reviews its recommendations for a County source separation and recycling program.

I. Existing Solid Waste Management Practices in Monroe County

This section of the report outlined recent environmental regulation efforts that have led to the closing of dumps, the evolution of landfills (with no reference, however, to the County's efforts to develop a landfill in Riga), and the story of the Resource Recovery Facility and its demise. Included are the results of a survey of the solid waste practices of Monroe County's eleven villages, nine towns, and one city, and the private haulers and the landfill operators who receive the County's waste.

There is presently no organized recycling program in Monroe County, and many areas object to landfill siting within their boundaries. With the exception of the City of Rochester, which collects some residential waste and contracts for the hauling of commercial and industrial waste, garbage in Monroe County is generally handled by private contractors. Two-thirds of the municipalities and 56% of the City population are served by private collection services. Costs for solid waste disposal were difficult to determine due to local government subsidies and varying levels of service, but averaged between $60 and $120 per household per year. Essentially all waste generated in Monroe County is landfilled, 87% outside the County. Some municipalities are involved in yard waste collection. Irondequoit, for example, shreds bushes and trees and uses the material both in parks and as a fuel for Eastman Kodak Co. There are also six landfills in Monroe County, operated by municipalities, which handle construction and demolition debris and other non-putrescible waste.

II. Evaluation of Markets for Recyclable Materials

The second section identified potential markets and market conditions for materials that could be removed from Monroe County's solid waste stream. It points out that while demand for recyclable materials is variable in this country, and U.S. tax laws actually favor the use of virgin materials (due to depletion allowances and the greater uniformity, purity, and availability of such materials), export demand for waste paper, for example, is strong throughout the world, especially in Europe and Japan. In fact, waste paper was the leading commodity exported from the Port of New York in 1986.

Sixty-five potential dealers and consumers of source-separated materials located within a hundred-mile radius of the City of Rochester were gleaned from the yellow pages, recycling directories and trade journals. These businesses were surveyed for their attitudes toward and interest in purchasing source-separated materials. Twenty-one of twenty-six companies, including four of the six in the Rochester area, expressed an interest in source-separated metals, with non-ferrous metals more highly sought than ferrous. Prices varied with contaminants. In the paper market, the interest was strongest for computer paper, corrugated, and office ledgers. Eight of eleven companies were interested, including three of the four in Rochester. In the glass market, five of the six companies in the radius were interested in recycling glass, including one company in Rochester. In plastics, three of the four regional companies identified as recycling plastic were located in Rochester, and all were interested in source-separated plastic.

The consultants noted that the survey generated much interest and enthusiasm. Development of a materials recovery facility to facilitate marketing to distant domestic and foreign sources of demand was advised.

III. Attitudes Toward Recycling in Monroe County

Summaries of this section of the Cosulich Report were published in the area media when it was released in November, 1987. In October, 1987, the Gordon S. Black Corporation interviewed 405 randomly selected Monroe County residents in order to (1) assess current attitudes and perceptions with respect to source separation and recycling and (2) determine the extent to which residents would be willing to routinely separate recyclable materials (including newspapers, magazines, glass, plastic and metal).

Interviewees were found to consider solid waste disposal a serious problem, and many expressed willingness to participate in a local recycling program. Results were as follows:

- 70% believed recyclables should be separated at the source of the waste generation;
- 60% were very willing to separate garbage into three groups;
- 83% said the provision of curbside collection would be important for participation;
- 64% said provision of separation containers was important.

Along demographic lines, the rural population was most concerned about solid waste and most willing to participate in source separation. They were followed by suburban and urban residents in concern for the issue and willingness to participate. Willingness to recycle correlated positively with age, income and level of education. Most respondents believed that source separation should be mandated by law.

IV. Solid Waste Quantification and Characterization Program

The fourth section summarized observations and testing done on twelve tons of waste deposited in 2,000 vehicle loads at the four major disposal sites used by the County between October 5 and 9, 1987. With each resident generating 5.2 pounds of solid waste each day, Monroe County adds an estimated 657,000 tons of waste per year to landfills. Of this total, 38% comes from the City of Rochester; most of this is transferred at the Emerson Street Resource Recovery Facility and landfilled at the Modern Landfill. Only 13% of County waste is deposited within the County, at the High Acres Landfill in Perinton; the rest is taken to the Monroe-Livingston and Orleans Landfills. The waste was of the following composition: 38% paper (11% newspaper, 5% magazines); 13% food; 10% plastic; 9% glass; 8% wood; 5% yard waste; 4% ferrous metal; 2% disposable diapers; and 1.5% hazardous waste. The report also quantifies waste that could be handled by an incinerator, assigning both caloric values and percentage moisture. The study notes that the bottle bill has resulted in 90% return of all bottles, reducing the waste stream by an estimated 2.5%.

V. Discussion of Source Separation and Recycling Components

The consultants addressed each component of a recycling program in detail, with the aim of providing options to the County for the design of its own recycling program. The material makes little direct reference to the specific conditions prevailing in Rochester, focusing instead on the problems and opportunities associated with different approaches to waste generation, collection and processing.

Procedures for development of a county-wide recycling program were also considered. The report notes key characteristics of successful programs (e.g. curbside pick-up, mandatory source separation) and provides some policy guidelines regarding program parameters (e.g. goals for waste reduction) that the county must define. Further discussion deals with legal arrangements, financing options, management structure and public education needed for a successful recycling program. An appendix outlines case studies or recycling programs now operating in New York State.

VI. County Source Separation/Recycling Program Definition

Recent State government initiatives aimed at reducing the waste stream in New York State by 50% over the next ten years were discussed in the sixth section, including the new requirement for solid waste management plans (with components similar to the work now provided by Cosulich Associates) as a prerequisite to obtaining a permit for any solid waste processing or disposal facility within the State. This section of the report also summarized regional conditions, including the previously mentioned resident attitude survey and present solid waste practices, which are relevant to the design of Monroe County's recycling system. Finally, adoption of a three-phase recycling program to take place over ten years was recommended.

In the year-long Phase I, a new agency would be established to organize the County into "regional recycling management areas" — demographically similar municipalities in a single geographical area (e.g., Rochester and Irondequoit) — in order to streamline planning of source separation practices. The County would obtain municipal and hauler commitment to recycling , with provision of technical support by the County. The report was vague as to just what these arrangements and activities should be, and how they should be accomplished. Phase I would also see the establishment of drop-off centers, public education programs and contracts between County recyclers and compost users. Only a 5% reduction of solid waste was estimated in this first year.

In Phase II, to be completed within three years, the report recommended that the County require all municipalities, through ordinances, to source-separate "those materials which

have markets." It does not, however, specify categories of garbage to be sorted. A materials recovery facility would be started to receive, process, and market paper and containers. The consultant estimated a 14% reduction in the waste stream with these steps. Unfortunately, the failure to substantiate the figures plugged into an equation used to calculate a "recovery rate" for the recyclable materials makes this estimate questionable.

In Phase III, to be implemented in years 4 through 10, the report recommended that municipalities be asked to document compliance with the County's recycling policies, and that recyclable materials be prohibited from disposal facilities. It also recommended the expansion of separated materials to include plastics, scrap wood, tires and textiles. The County would also procure recyclable materials for its own use. Continued public education efforts were suggested, along with surveys to monitor progress in public understanding of the problem. The report fails, however, to provide details on the programs believed most effective in this area. With completion of Phase II, a reduction of 31% is projected, a figure far short of New York State's ten-year goal of a 50% reduction of the waste stream.

Summary

The report provided by Cosulich Associates appears to meet many of New York State 's requirements for a county solid waste management plan, now a prerequisite for obtaining a permit for a landfill, incinerator, or other solid waste facility. Unfortunately, the usefulness of this report is limited by three notable flaws:

(1) Recommendations for development of a recycling program are lacking in important details.

(2) The calculation of anticipated waste stream reduction is inadequately substantiated.

(3) The ten-year plan outlined falls significantly short of New York State's goal of a 50% reduction of the waste stream over this period of time.