

MS Thesis
Department of Environmental Science and Policy
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Defense Date and Time: Tuesday May 12, 10:30am – 12:00pm

Defense Location: Online via WebEx Session

Title: Analysis of Problems Affecting the Management of Municipal Recycling Programs in the United States

Thesis Director: Dr. Younsung Kim

Committee: Dr. Cindy Smith and Dr. Diego Valderrama

ABSTRACT

From 1960 to 1985, recycling rate in the US increased approximately 5%. During the 10-year period between 1986 and 1995, it had rapidly grown to 25.7%. However, in the nearly 20 years following, the recycling rate started to stagnate at around 35% (EPA, 2019). The recycling rate is defined as the total amount of Municipal Solid Waste (MSW) recycled by the total amount of MSW generated in a year. Since recycling is becoming a cornerstone of waste management, the stagnated recycling rate raises a question of which problems are due to current management practices.

This study fills out this research gap and aims to investigate factors that may influence the management of public or private recycling programs. To this end, managers in waste management industry were surveyed and asked to rank already-identified problems as well as emerging problems that affect managing recycling programs. Recycling program managers play versatile roles as consumers, managers, and producers in the material flow of recyclable material. The findings indicate that market variability for recycled materials, contamination of recyclable materials, and public participation in recycling programs as key inhibiting factors in order. China's recent policy on banning imports of foreign wastes was also pointed out as an emerging concern for managing recycling programs. As industry experts' years of experience were added, the factors identified were confirmed as more significant. This study contributes to the field of waste management by offering a much-needed in-depth understanding of current recycling practices.