

Engineering Management  
Field Project

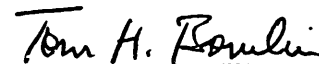
**Municipal Solid Waste Generation:  
Feasibility of Reconciling Measurement Methods**

By

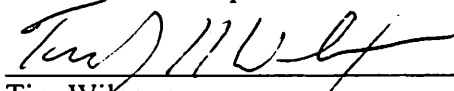
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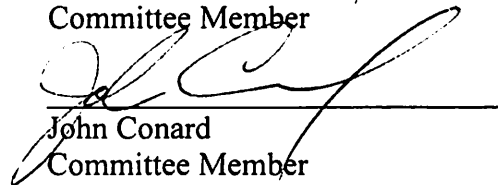
An EMGT Field Project report submitted to the Engineering Management Program  
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in partial fulfillment of the requirements for the degree of  
Master's of Science



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The views expressed in this report are those of the student and do not necessarily express the views of Eastern Research Group, Inc.

## Executive Summary

Federal regulations require state governments provide for the safe and environmentally sound management of wastes generated within their borders. In order to effectively manage wastes, the types and quantities of material requiring management needs to be measured.

This research investigates the reconciliation of results from two methodologies for estimating municipal solid waste (MSW) generation, and assessing the potential for solid waste planners to combine the two methods in a cost-effective manner to predict local baseline data in order to meet governmental solid waste planning regulations.

This research investigates measurement methods and the feasibility of reconciling the output of two commonly used methodologies for estimating MSW generation:

1. Indirect measurement by a materials flow analysis (MFA) and published by the U.S. Environmental Protection Agency (EPA) and
2. Direct measurement of the MSW stream at the local, state, or regional level.

The MFA used by EPA to estimate the quantity of MSW on a national level looks at products sold and assumes a useful product life. At the end of the product's useful life, EPA follows the product flow through end-of-life management—generation, recycling, composting, disposal.

The direct measurement method involves the collection, sampling, and measuring of statistically valid portions of MSW. MSW is physically sorted at the disposal or transfer facility and recovery through recycling and composting is estimated directly from facility records or through various types of reporting requirements. Disposal is then added to recovery to estimate generation.

Each method has advantages and disadvantages. The goal of this research is to highlight the differences and similarities and issues that arise when comparing MSW data collected under the two different methods.

Understanding the individual product and material components that make up the total measurement, instead of just the bottom line total, is required when striving to reconcile measurement methods. Additional research is required before it can be determined if the potential exists for combining data collected by the two methods in a cost-effective manner that would be useful to solid waste planners.

**Due to proprietary information, this  
project is not available.**