



Recycling and Managing all Forms of Waste in a Single Bin

Xu Yang*

Department of Social Studies, University of Nankai, Tianjin, China

DESCRIPTION

Single-stream recycling is a system where all recyclable materials, including newspapers, cardboard, plastic, aluminium, spam, and more, are placed in a bin or cart for recycling. These recyclables are collected by a single truck and taken to a Materials Recovery Facility (MRF) for sorting into a variety of product lines for sale in markets, where they are converted to raw materials or other new products and these can be used in the production of new products.

Under a single-stream system, households combine paper and containers into a single bin or bag and are loaded into trucks. When the bins or bags arrive at the MRF, recyclable materials will be sorted and the impetus to adopt single-flow is twofold: The constrain that convenience is better than non-sorting will attract more residents to participate in their curb side recycling programs and a desire to save money by reduce collection costs. Although collection costs are lower with single-stream systems, disposal costs are much higher.

Other collection systems

Single-stream recycling was introduced in the late 1990s as a cheaper alternative to "dual stream" collection: the dominant curb side recycling method at the time ("source separation", where each material is kept in a separate bag or bin, and trucks with three or more compartments were common collection methods in the late 1980s, but were all phased out in the United States by the mid-1980s. 1990s).

Under a dual-flow system, residents typically combine all of their food and beverage containers (aluminium and steel cans, glass jars and bottles, and some or all of the plastic bottles) into one

bin, and they combining newspapers (such as spam, cereal boxes, and office paper) in another bin or in a brown paper grocery bag. Two stream of material are picked up and placed in separate compartments on the recycling truck, and taken to a processing centre (material recovery facility, or MRF). The fibre is sent to the market with no treatment, and the containers are subjected to a variety of automatic sorting and manual sorting equipment before being baled or crated and placed on the market.

There are also hybrids systems in which plastic and metal, and sometimes paper, are combined, but the glass is separated.

Quality of materials

There is substantial evidence that waste quality (and therefore revenue) is lower with single-flow collection than with dual-flow systems such as container depots, where materials are segregated. There is a particular concern that shards glass and PET bottles can contaminate paper loads and wreak havoc on paper mills, and glass, plastic and aluminium containers contaminate each other.

While collection costs are lower in single-flow systems, disposal costs are associated with disposing of contaminated material than higher. In general, the single stream costs about 3 dollars more per ton than the dual stream.

In summary, with the increase in disposal costs and the total loss of revenue far exceeding collection savings in most cases (and zero in the case of weekly collection), all over recycling stream does not yield the originally expected cost advantage. In addition, the predicted increase in capture rate is also apparent. In general, dual-stream recycling is still more profitable.

Correspondence to: Xu Yang, Department of Social Studies, University of Nankai, Tianjin, China, E-mail: yangxu@uon.cn

Received: 04-May-2022, Manuscript No. IJWR-22-16862; **Editor assigned:** 09-May-2022, PreQC No. IJWR-22-16862(PQ); **Reviewed:** 23-May-2022, QC No IJWR-22-16862; **Revised:** 30-May-2022, Manuscript No. IJWR-22-16862(R); **Published:** 08-June2022, DOI:10.35248/2252-5211.22.12.468

Citation: Yang X (2022) Recycling and Managing all Forms of Waste in a Single Bin. Int J Waste Resour. 12:468.

Copyright: © 2022 Yang X. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.