

Waste Characterization Study

In early 2003, the Ohio Department of Natural Resources (ODNR) retained Engineering Solutions & Design, Inc. (ES&D) to perform a series of waste Characterizations - also referred to as waste picks or waste sorts - at 11 selected solid waste management districts located throughout Ohio. The waste Characterization study process included field sorting events at facilities located within each of the selected solid waste management districts. One field sorting event was undertaken in May or June 2003 (Spring Sort) and the other field sorting event was undertaken in September or October 2003 (Fall Sort).

One of the main objectives of the study was to determine the characteristics of the Ohio-generated municipal solid waste stream at various locations throughout the state. Sites were selected based on location, size, and willingness to partner with ODNR and to allow access to the solid waste facility or facilities serving the solid waste district.

Summary of Results

The Waste Characterization Study defined the three standard recyclables, paper fibers, plastics, and metals, as the major components of Ohio's waste stream. A number of other materials were considered as separate categories: yard waste, textiles, diapers, food, glass, empty aerosol cans, medical waste, fines and superfines. Other items, such as computer parts and wood, were classified as miscellaneous.

The 2003 Waste Characterization Study found that *the three major components comprise more than 60%, by weight, of Ohio's total waste stream.*

Paper fiber was the number one component statewide (41% by weight and 44% by volume). Within this component, *about 31% of the weight measured was mixed paper, newsprint, office paper and corrugated paper.*

Plastic was second, comprising 16% by weight and 25% by volume. *HDPE#2* (commonly used to produce food containers such as milk and juice jugs, liquid detergent bottles, trash bags and cereal box liners,) *accounted for approximately 38% of the plastics component weight and 40% of the total by volume.*

Of these three components, metals were third (4% by weight and 7% by volume).

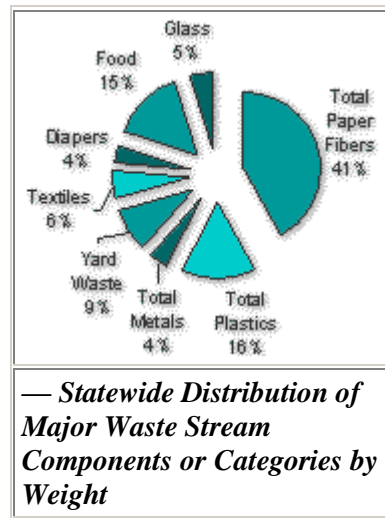
Overall, food and yard waste also were present in notable weights and volumes. *Food comprised 15% by weight and 6% by volume. Yard waste comprised 9% by weight and 8% by volume.*

Visual inspection was made of all 460 loads sampled to identify large items. *More than 75% of all loads contained loose wood. Carpet was observed in 62% of the loads and construction and demolition debris was seen in 52% of the loads. Additionally, 42% of the sampled loads contained small appliances, while almost 30% of all loads included wood furniture. More than 17% of the loads yielded computers.*

Of the 460 loads sampled during the 2003 Waste Characterization Study, *58 loads were pure commercial loads*, containing only waste generated by retail businesses, offices, schools, nursing homes and/or medical centers.

Paper fibers accounted for nearly 50% of the weight of pure commercial loads. The percentage of *total* paper fibers in *the commercial loads* was 7.54% higher than in all loads (49.18% compared to 41.64% in all loads).

Plastics represented a 1.85% higher content in the pure commercial loads than in all loads (17.49% vs. 15.64% in all loads). Yard waste, textiles and food waste were less evident in these pure commercial loads.



— Statewide Distribution of Major Waste Stream Components or Categories by Weight

Sampling from these 58 commercial loads, combined with results from mixed commercial/residential loads and interviews with drivers and facility staff, *point toward a need to focus commercial waste reduction efforts on corrugated paper, office paper, mixed paper and plastics.*

Ohio Department of Natural Resources
Division of Recycling and Litter Prevention
<http://www.ohiodnr.com/tabid/18030/Default.aspx>
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