

Separation



In terms of recycling, separation is the organizing of collected material. One of the definitions of the word organize is "to prepare". Recyclables are processed in a manner that prepares them to meet *market demands*. This processing involves the distinguishing and removal of one or more recyclables from the total material gathered.

Like collection, separation is gauged by technology. The range of equipment includes everything from advanced electronics to second hand machinery especially adapted for recycling. The technology used is a function of many different variables. Perhaps the most important one is how the material arrives at the separation facility. Is it source separated first or collected as mixed garbage? Having the recyclables divided at the point of generation helps reduce the amount of further separation needed and lowers contamination. The quantity of material being separated, the number of products being removed, who is doing the separation (private contractor, municipality, etc.) and economics are other influences.

There are countless numbers of separation methods. Some businesses simply group material together, like mixed plastic or paper, and send them to another company for further processing. Other companies have recycling methods thorough enough to produce market ready materials. It would be impossible to explain them all, so we will look at a few interesting examples.

Let us start with a system most of us are familiar with. Recyclables are separated by the public, then put out for collection. A worker double-checks the material at the curbside, then loads the items into the appropriate compartments of a vehicle. The vehicle has four separate compartments for mixed metals and plastics, clear glass, paper products, and coloured glass.

At the processing plant, the content of each compartment is off-loaded into a distinct pile. Paper products move along a conveyor belt, where the workers first remove cardboard, *box board* and *kraft paper*. Other people stationed further down the conveyor check for catalogues, plastic bags, string, garbage and other contaminants. These items are removed and the remaining product arrives at a "fluffer". Finally, the paper is compacted in a baler (Figure D-4) and bound, readied for shipping. Cardboard and other lower grade paper goods are processed in much the same way, except there is no need for a fluffer; the material can go directly to the baler.