The life cycle of recycling

Materials recovery facility (MRF)

Collection trucks bring recyclables to a MRF. The recyclables are unloaded onto an area called the “tipping floor.” Notice that this is a “single-stream” MRF. That makes recycling easier for residents and businesses since recyclables don’t need to be separated for collection. However, it requires intensive processing on the back end to separate materials to prepare them for sale to end users. This is why it is essential to recycle right to prevent breakdowns in the processing lines and to ensure commodities are sellable, which is integral to recycling program sustainability.

From the tipping floor, recyclables are placed on conveyor belts where they are sorted by machine or hand into broad categories of paper, plastic, glass, and metal.

**Paper**
- Recyclables are separated into
  - Cardboard
  - Corrugated boxes
  - Office mix
  - Old Newsprint
  - Mixed paper
  - Paper recyclables are separated into 4 categories:
    - Courrugated Boxes
    - Old Newsprint (ONP)
    - Mixed paper
    - Office Mix
  - Paper recyclables are baled and sold primarily to paper mills.

**Plastic**
- Mixed plastic containers are sorted by type and color. Air is blown into the mix to separate heavier and lighter plastics. In some facilities, plastic containers are optically scanned for separation into types, such as PET, HDPE, etc.

**Glass**
- Glass recyclables are crushed to form cullet, which is then cleaned of debris and contaminants. Depending on the facility, glass may be sorted by color before or after crushing, or it may be shipped to end users without sorting.

**Metal**
- Steel attracted to the magnet is removed to a storage bin for baling.

**Textile, plastic, bottle, carpet and other manufacturers**
- Baled, recycled plastics are sent to a plastics remanufacturing plant. The plastics are ground up, washed, melted and formed into plastic pellets. The pellets are used to make containers, bottles, paint, clothing, furniture and many other consumer goods.

**Old newspaper**
- De-inked by washing and rinsing in large vats of water. This process also separates the short fibers from the long fibers.

**Closing the Loop**

Choose Wisely!

There is currently no economical technology for separating waste from recyclable materials. The success of recycling depends on you: Place recyclables in the proper recycling container.

Recycled containers and products are purchased by manufacturers, who use them to produce or package their products that are shipped to retailers.

Consumers buy the products from a wide variety of retail stores. As we use the products, we create waste that begins the cycle over again.