

WHAT ACTUALLY HAPPENS WHEN YOU RECYCLE

Based on the **SINGLE-STREAM RECYCLING** process where all of the recyclables are placed into the same bin for curbside pickup and sorted at the recycling facility. This is the most common form of recycling in the United States.

ROTARY SCREEN SEPARATORS

Sort and separate cardboard and paper products by using air to push them up star-shaped wheels that bring them to a conveyor belt. The heavier objects fall through the wheel gaps and onto another conveyor belt below.

PAPER

1 Workers remove contaminants and sort paper into newspaper, mixed paper, and corrugated cardboard. The sorted paper is bundled and sent to a paper mill.

2 At the mill, it goes into a hot water bath that breaks it down into a mushy pulp slurry.

3 The pulp is filtered through screens to remove residue like glue, staples, or bits of plastic.

4 The pulp then goes into a de-inker bath to separate ink from the paper, after which it is ready to be turned into paper products.

Paper is recycled into: office paper, newsprint, toilet paper, paper towels, cardboard

CROSS BELT MAGNET

Attracts any iron-containing metals (mostly steel) and separates them from the rest of the materials

1 Steel is crushed, baled, and shipped to foundries.

2 There, it is melted down and mixed with new steel to create new metal products.

Steel is recycled into: cans, steel beams, sheet metal, automobile parts, appliances

GLASS

1 After being sorted, the glass goes through a rolling drum, where it is smashed to tiny pieces and filtered through sieve-like screens to ensure the pieces are small enough.

2 Glass color is permanent, and colors cannot be mixed to create new glass, so the pieces are sorted by color: clear, green, brown.

3 Once separated by color, it is crushed into tiny pieces called cullet, which are melted into molten glass and reused for new glass products.

Glass is recycled into: bottles, jars, floor tiles, garden ornaments, beads for jewelry

EDDY CURRENT SEPARATOR

A drum with a spinning magnetic rotor that creates a very strong magnetic field, called an induction field, that will magnetize aluminum. This causes the aluminum to repel away from the magnetic rotor and onto a separate conveyor belt.

1 Once sorted, aluminum products are added to a shredder and turned into chips.

2 The aluminum chips are melted and poured into molds.

3 The aluminum is sent to manufacturers, melted again, and rolled out into sheets that can then be bent, cut, and shaped into new aluminum products.

Aluminum is recycled into: cans, license plates, aluminum foil

INFRARED SENSORS

Identify the type of plastics based on the spectrum of light they reflect, as each reflects light differently. Once the plastics are identified, a small puff of air blows the plastic onto its designated conveyor belt.

1 Plastic is sorted into 7 different types, which helps to preserve each plastic's special properties when reused. Some plastics are easier to recycle than others.

2 After being sorted, the plastic is shredded into small flakes.

3 The plastic flakes are cleaned of contaminants and debris.

4 Then the flakes are dried, melted, and turned into pellets to be used to create new plastic products.

PLASTIC



Polyethylene Terephthalate

The easiest and most common plastic to recycle

- Can be recycled into: carpeting, new plastic bottles, fiberfill for sleeping bags and winter coats



High-Density Polyethylene

The second most commonly recycled plastic

- Can be recycled into: pens, plastic fencing, picnic tables



Polyvinyl Chloride

Difficult to recycle and toxic when heated, it can be ground into powder at a specialized plant and then mixed with additives to be reused.

- Can be recycled into: credit cards, vinyl flooring, window frames



Low-Density Polyethylene

Can only be recycled once, as the process degrades the quality too much

- Can be recycled into: garbage cans, flooring, bubble wrap



Polypropylene

One of the least recycled post-consumer plastics

- Can be recycled into: ice scrapers, rakes, battery cables



Polystyrene

This plastic is not practical to recycle, so it usually goes into the garbage.

- Can be recycled into: insulation, school supplies, license plate framing



Other Plastics

These are a combination of the other 6 plastics, making them the most difficult to recycle.

- Can be recycled into: plastic lumber, specialized products