

Recycling : an
essential part of
the supply chain



History of Midland Davis

- ▶ Founded in 1892 as an industry scrap metal recycling center
- ▶ Family-owned business - currently in the 5th generation of ownership
- ▶ Started Paper Recycling in 1986 and wood recycling in 1991
- ▶ 2005 started nationwide Brokerage division - buying and selling recycled material across the country
- ▶ 2008 - started curbside residential recycling in Moline
- ▶ 2016 - started a freight brokering division called MDX Freight
- ▶ 2023 - started a pallet division - recycling and refurbishing wooden pallets



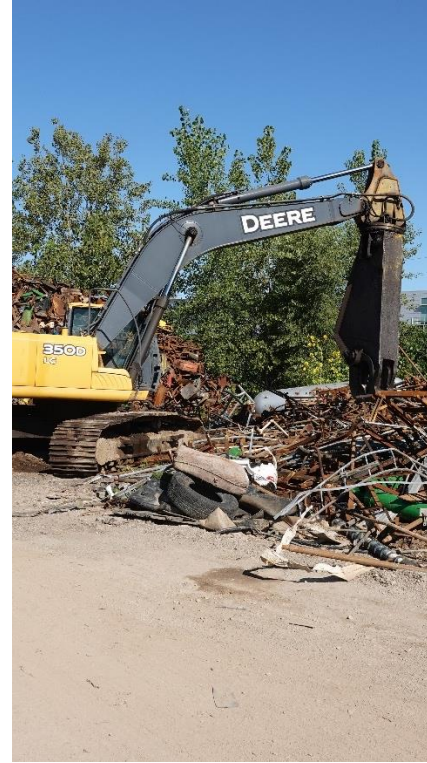






Midland President & Sons
1978/2013





What we do - Ferrous Metals





What we do - Nonferrous Metals

What we do

- Paper





What we do

- Document Destruction





What we do - Plastics

What we do - Curbside Pickup and Partnership with the Waste Commission of Scott County



What we do - Public Drop off bins



What we do - Wood Recycling





What we do - Pallets - Repair and Refurbish





Recycled Materials Facts

Ferrous - Iron and Steel Facts

- ▶ Recycled iron and steel are the most important raw material inputs for U.S. steel production. In 2019, U.S. steel mills consumed more than 60 million metric tons of the recycled material to produce 87 million metric tons of steel.
- ▶ Producing new steel from recycled content requires 60 percent less energy and reduces CO2 emissions by 58 percent compared with producing steel from virgin materials.
- ▶ Recycling one car saves more than 2,500 lbs. of iron ore, 1,400 lbs. of coal, and 120 lbs. of limestone. The industry recycles approximately 17 million vehicles in the U.S. annually, according to recent data.
- ▶ The U.S. is the world's leading recycled iron and steel exporting country, selling to buyers in 70 countries around the world and generating about \$5 billion in export sales.
- ▶ **FUN FACTS**
 - You can tell if something is ferrous by holding a magnet up to it. If the magnet sticks, it is iron or steel.
 - On average, the United States processes enough iron and steel every day to build 25 Eiffel Towers.

Nonferrous - Aluminum, Copper and Other Metals Facts

- ▶ Metals do not degrade or lose their chemical properties in the recycling process, which allows them to be recycled an infinite number of times.
- ▶ More than 60 percent of the aluminum consumed by U.S. mills comes from recycled material.
- ▶ Manufacturing products from recycled aluminum saves up to 95 percent of the energy needed to manufacture them from virgin materials.
- ▶ Recycled nonferrous metals only account for around 10 percent of the volume of all recyclables in the United States but generate about half of the value in dollar terms due to their high per unit prices.
- ▶ In 2019, the United States exported \$10.6 billion worth of recycled copper, aluminum, brass, and other nonferrous metals (including precious metals) to more than 95 countries for use in manufacturing.
- ▶ **FUN FACTS:**
 - About 75% of aluminum produced since commercial manufacturing began in the 1880s is still in productive use as a secondary raw material.
 - It takes as little as 60 days for an aluminum beverage can to go from the recycling bin back to a grocery shelf.
 - The United States recycles enough copper each year to equal the copper content of more than 30,000 Statues of Liberty.

Paper - Facts

- ▶ The paper recycling industry's total annual economic impact in the United States is over \$35 billion and supports 145,000 jobs.
- ▶ About 80 percent of U.S. paper mills rely on recovered fiber to make some or all their products, due in part to recovered fiber's significant cost and energy savings compared with virgin fiber.
- ▶ Recycling 1 ton of paper saves 3.3 cubic yards of landfill space. Since 1990, Americans have recycled more than 1.4 billion tons of recovered paper and fiber.
- ▶ Manufacturing paper and paperboard with recycled materials uses up to 68 percent less energy than virgin paper materials
- ▶ The U.S. exported 18.5 million tons of recovered fiber in 2019, generating nearly \$2.8 billion in export sales.
- ▶ **FUN FACTS**
 - In 2017, the amount of paper recovered for recycling averaged 315 lbs. for each man, woman, and child in the United States.
 - The first-ever industry specification for a recyclable commodity was for linen rags, likely used in papermaking.

Recovered Paper

START

Today's newspapers can be recycled into tomorrow's cardboard boxes.

Your new computer arrives packed in a box made from this recycling process.

A factory uses the cardboard to make boxes for packaging new products.

The pulp is used to make the new cardboard sheets.

The bales are sent to a paper mill where they are made into paper pulp.

The recycler presses the newspaper into huge bales, containing about 1000 newspapers.

Old newspapers are bundled, tied and sold to scrap paper recyclers.

Plastics - Facts

- ▶ The plastics recycling industry's total annual economic impact in the U.S. is \$6 billion and directly and indirectly supports nearly 30,000 jobs in the US
- ▶ Recycling 1 ton of plastic bottles reduces greenhouse gas emissions by 3,380 lbs., which is the equivalent of 173 gallons of gasoline.
- ▶ Using recycled plastics in manufacturing saves up to 88 percent of the energy needed to produce plastics from virgin materials.
- ▶ Containers from food, beverages, and household products are a large part of the recycled plastics in the residential stream. But engineered and industrial plastics are other important sources of recycled plastics, including auto parts, appliances, and construction materials
- ▶ **FUN FACTS**
 - Recyclers sort plastic by color using optical technology combined with air jets.
 - Recycled plastic is often turned into small pellets that can then be melted down and molded to make new products.

Tires and Rubber - Facts

- ▶ The tire and rubber recycling industry's total annual economic impact in the U.S. is \$2.47 billion. The industry supports more than 12,400 U.S. jobs.
- ▶ Using recycled rubber in molded products reduces greenhouse gas emissions anywhere from 25 percent to 80 percent compared with using virgin resins.
- ▶ In one year alone, 80 million discarded tires are processed into so-called crumb rubber, which becomes playground surfaces, synthetic turf infill, and other products. Another 20 million tires are used for civil engineering projects such as road embankments and rail vibration dampening.
- ▶ **FUN FACTS**
 - Today's tire recyclers have two approaches for tire processing: Ambient shredding uses powerful interlocking knives to cut tires into pieces at room temperature. Cryogenic processing uses liquid nitrogen to change the physical properties of the tires to make them brittle. They are then smashed into small pieces.
 - Farmers use recycled rubber for vegetation protectors and windbreaks, sheds, livestock mats, feeders, and other needs.

Recycling Market Outlook

- ▶ Dependent on the manufacturing economy
- ▶ Fluctuates dramatically in all markets
- ▶ Exports

What can we do better

- ▶ Lots of Aluminum cans, cardboard and plastics are going to the landfill - make sure you are recycling at home and at work
- ▶ Use Recycled Materials in manufacturing your product
- ▶ Recycle any scrap generated in your manufacturing process

Questions?



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