Where does all the plastic go?

Park 48 and Ellettsville North facilities find new solutions for recycling plastics

▲ *Collection of solid plastics from Park 48. These items are currently going to the Monroe County Solid Waste District in Bloomington. The majority of what's in the image has came out of our production and lab areas.*

We often don't think of the impact of pitching our plastic water bottle in the trash. Did you know that since the dawn of mass production of plastic in the 1950s, 8.3 billion metric tons of plastic has been generated, and 6.3 billion metric tons of it is considered plastic waste? In our world today, we have only recycled 9%, and the rest is settling on the earth in landfills and in our environment.

"We continue to recognize the importance of recycling plastics at Cook. Our society has developed a huge reliance on this inexpensive and flexible material, resulting in an astronomical rise in plastic waste," **Erin Kunkel**, manager of Corporate Social Responsibility (CSR), explained. "Plastics do not tend to break down easily in the natural environment, so landfilled plastic waste will remain in the environment (and potentially leach harmful chemicals to humans or to the detriment of the environment) for decades to come."

Recycling plastics is significant in Cook's sustainability and Corporate Social Responsibility efforts.

Understanding plastic recycling

Understanding the types of plastics that can be reused or recycled and the recycling process has helped the Environmental Health and Safety (EHS) team identify vendors and methods for recycling plastic waste at Cook, including mixed plastics.

When we refer to plastics, explained Erin, we're talking about any plastics within categories 1–7 (defined in the plastic ratings chart). Mixed (or co-mingled) plastic recycling is a mechanism for capturing a greater volume of plastic waste by reducing sorting of specific types of plastic and accepting all types in one receptacle. Mixed plastics are ultimately sent to a material recovery facility (MRF), where plastics and other recyclable materials are sorted into like groupings, baled, and sold on the market for recycled materials.

"It is a struggle to find vendors that will accept all the varieties of plastic waste we produce. We have been using separate vendors over the years that would only accept one or the other (soft plastic or hard plastic). Since we have not had any luck with a plastic recycling vendor accepting mixed plastics, Cook has recently removed the majority of our mixed plastic collection bins from the facility," **Karl Schiefer**, EHS specialist, said. The EHS team continues to research vendors who accept mixed plastics.

A coordinated recycling effort

What happens to plastic waste at Park 48 and Ellettsville North (EN) could be described as a well-orchestrated journey from waste to reprocessing to useful repurposing, using the expertise of multiple vendors.

Collaborative partnerships with Big Boys Moving, a Bloomington-based local and long-distance moving company, and Recycle Force, a recycling service in Indianapolis, enable Cook to collect soft plastics such as bags and shrink wrap for recycling.

To help streamline recycling, Cook purchased a baler for baling soft plastics and cardboard at the Profile Park facility. Workers from Big Boys

Moving take one full gaylord (a type of large container) of soft plastics every day from Park 48 to Profile Park for baling. Big Boys employees are specifically trained on how to safely use the dock and baler.

"It takes approximately two months for enough plastic to be baled to fill a semi. It takes about 36 bales, which have an average weight of 600 to 800 pounds, to fill the truck," Karl said. "Big Boys employees also load the truck for us. Once we have enough bales, we contact Recycle Force, and they schedule a truck to take the soft plastics to another vendor, Brightmark, a plastics renewal facility, in partnership with Recycle Force."

Brightmark converts plastic waste into ultra-low sulfur diesel fuel, naphtha blend stocks (used as blending agents in gasoline), and wax.

Another vendor, Monroe County Solid Waste District, picks up hard plastics once a month from the EN facility and once a week from Park 48. Hard plastics generated throughout the facilities include water bottles, soda bottles, clamshell trays, and plastic utensils. Specifically from the controlled manufacturing areas (CMAs), common hard plastics like IPA (isopropyl alcohol) spray bottles, blue Cook trays, wire guide holders, plastic tubes, and clear needle protectors are recycled.

"Eventually, we will be working with Recycle Force for most of our plastic recycling. They can now accept all water bottles and trays with foodstuffs and other plastics in the mixed plastic stream, which opens the potential for us to recycle even more and keep plastics out of the landfill," Karl said.

Reused and repurposed plastics

Other plastics generated from Cook that are not recyclable are being repurposed and reused in unique ways. Empty plastic spools, for example, that were once used to store wire for coiling and wire guide manufacturing are shipped back to Fort Wayne Metals for reuse. In turn, Fort Wayne Metals gives Cook credit for future purchases of wiring, enhancing our supply chain.

Cook also gathers empty printer toner cartridges to be shipped back to the vendor, Toshiba. Toshiba partners with a recycling company that breaks down the cartridges into recycled material for products like furniture and even flowerpots.

"Commodity markets for plastic waste need to adapt to meet increasing volume; however, it is critical to recognize that consumer behavior is the single largest barrier to effective recycling," Erin said. "Only we as consumers can change that. The more recycled plastic we redirect from the landfill to reclaimers, the less we contribute to pollution and environmental degradation."

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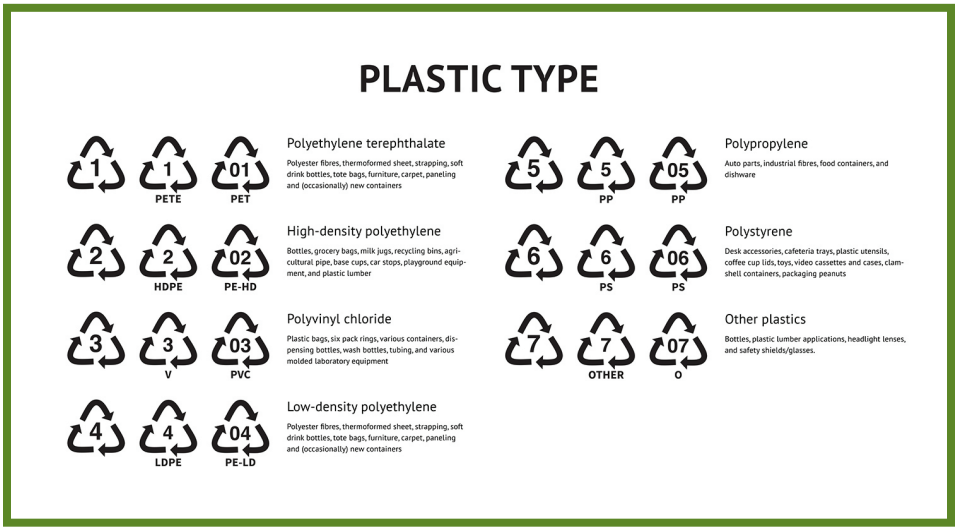
Plastic recycling stats for 2020, for Park 48 and Ellettsville North

- 33.13 tons of clear plastic bags or shrink wrap (soft)
- 9.88 tons of solid plastics #1–7 (hard)
- 4.06 tons of nitrile gloves
- 3.04 tons of plastic spools (Fort Wayne Metals)
- 1.63 tons of toner cartridges (Toshiba)



Sources
How is plastic recycled: step by step. Greentumble Web site. https://greentumble.com/how-is-plastic-recycled-step-by-step/. Published May 24, 2018. Accessed December 21, 2020.