Reducing Waste

Boeing is making strides to protect the land, water and air in our communities by reducing waste from work sites and our supply chain. Waste streams are as complex as our facilities, which range from office space to part fabrication to assembly of aircraft and space vehicles. Solid waste includes material that has been discarded or abandoned or that is no longer useful or usable and has been designated for removal. Items that are reused or reclaimed are excluded from solid waste. Boeing has dedicated teams working to prevent waste from going to landfills and to assess opportunities to return or reuse packaging for parts.

Boeing generates hazardous waste primarily from a variety of research, manufacturing and facilities maintenance processes. Hazardous waste may be recycled upstream or downstream, as on-site or off-site reclamation and avoided generation through processes that extend useful life of consumable chemicals to avoid hazardous waste. We look to reduce hazardous waste in upstream activities by preventing or reducing the amount of hazardous waste generated through extending system life through contaminant removal. Downstream, we look at hazardous waste generated from site operations. We implement several recycling and recovery activities to reduce the need for new chemicals.

Progress Toward 2025 Hazardous and Nonhazardous Waste Goals

- **Solid Waste – 40%** reduction compared to 2017. The continued trend of increased remote working conditions influences the overall reduction in solid waste. Conservation initiatives and vendor management continue to be opportunities to drive further reductions.
- **Hazardous Waste – 9%** reduction compared to 2017. Hazardous waste was 1% higher than anticipated during the year. Benefits from implementing conservation initiatives were outweighed by key events across the enterprise, including a historical flood event in St. Louis, which caused an unplanned increase in hazardous waste disposal from a water treatment system.

The Stingray gets Lean

As the U.S. Navy's uncrewed aerial refueler, the MQ-25 Stingray is a model of efficiency, in the air and on the production line.

The digitally engineered aircraft features a highly efficient engine and lightweight composite skin, allowing it to stay in the air much longer, using little fuel itself to complete its mission.

Within the factory setting, robotic automation and advanced assembly techniques eliminate the need for drilling during aircraft assembly.

Now, the futuristic aircraft is setting new standards for efficiency with a renewed focus on reducing waste through Lean manufacturing.

Across Boeing's production system, teams are building momentum with Lean principles. The MQ-25 is the first program within Boeing Defense, Space & Security to undergo a renewed focus on Lean.

A focus on the customer: "We know what Lean means to our Navy customer — operational excellence, stability and execution," Troy Rutherford, MQ-25 vice president and program manager. "When we focus on removing waste from the system and listening to those who do the work, then production, innovation and creativity all take a huge leap forward. We're excited to be the first program to engage with the Lean workshops."

What is Lean? Lean is a way of thinking and acting that enables us to solve problems and continually improve. It is the foundation of Boeing's production system and embraces just-in-time delivery, error-free production and continuous flow. Lean helps spot and eliminate waste, wherever it is found, which also reduces costs.

The MQ-25 Stingray is an uncrewed aircraft system, designed for the U.S. Navy, providing robust refueling capability. (Boeing photo)