



Zero Waste Program – Case Study

SPRAYING SYSTEMS



Spraying Systems Co.[®]

Founded in 1937, Spraying Systems Co. is the world's leading manufacturer of industrial and agricultural spray products, offering more than 87,000 different spray nozzles and accessories. Their products are readily available in thousands of sizes, hundreds of configurations and dozens of materials, and with 12 manufacturing facilities throughout North America, South America, Europe and Asia, they can quickly deliver to customers anywhere in the world.

PURPOSE AND OBJECTIVES

Spraying Systems Co. is committed to being a leader in sustainable manufacturing in its industry. They continue to implement sustainable business practices in their own facilities worldwide, reducing their environmental impact wherever possible and addressing important issues ranging from energy and environmental management through fair labor practices.

The main objective for the zero waste assistance at Spraying Systems was to help Spraying Systems reduce its waste generation and increase diversion. This was achieved through multiple steps: (1) provide Spraying Systems with an accurate and precise baseline measurement of the waste materials generated at its corporate headquarters, located in Wheaton, IL; (2) collaborate with Spraying Systems' operations, manufacturing, and sustainability teams in devising an implementation plan for improving waste diversion; and (3) conduct a post-implementation waste stream characterization to measure success and identify opportunities for further improvement.

THE WASTE CHARACTERIZATION PROCESS

The waste characterization process is a part of Illinois Sustainable Technology Center's (ISTC) zero waste assessment and assistance efforts. The information obtained from the waste characterizations and input from the facility were used to reduce the volume of waste generated and increase the diversion from landfill for Spraying Systems. The sorting of the waste was conducted at the Wheaton Facility in ISTC's enclosed trailer. The study was designed to capture a week-long material generation profile for the building. All samples were hand-sorted into 23 material categories (results summarized on the next page).



CASE STUDY HIGHLIGHTS

Key stats



62% diversion rate achieved a year after program launch (up from 52%)



44% waste reduction through process modification



45 estimated greenhouse gas avoidance (mtCO₂e)

About Spraying Systems

Founded: 1935

Headquarters: Wheaton, IL

Industry: Fabricated Metal Product Manufacturing

NAICS Code: 332999

Building Type: Manufacturing & Offices

ABOUT OUR ZERO WASTE PROGRAM

ISTC's Zero Waste Program offers a variety of cost-effective, sustainable waste minimization and diversion services, provided by our staff of trained engineers and scientists.

Our team provides information and technical assistance on issues such as integrated waste management planning and process redesign to minimize waste generation and increase process efficiency.

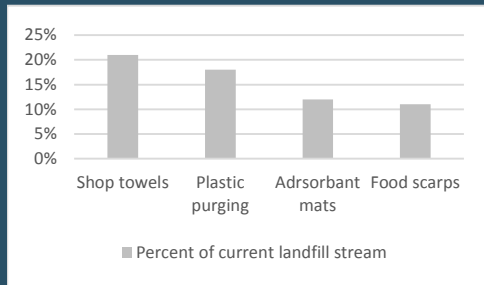
Find out more at:

istc.illinois.edu/zerowaste

WASTE CHARACTERIZATION RESULTS

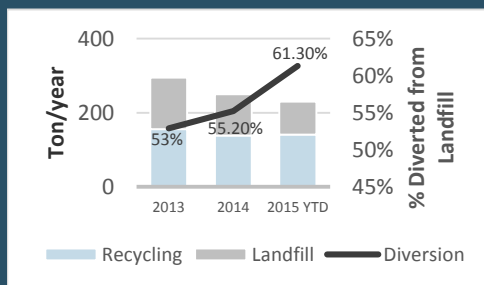
Before

Spraying Systems had established a recycling and waste minimization program before the Zero Waste team's assistance. Due to the lack of data and a targeted plan, Spraying Systems' diversion program had plateaued. The initial waste characterization revealed the four largest streams to be lightly used shop towels, industrial plastic, adsorbent mats, and food scraps. The waste team worked on a strategy to reduce and divert these waste streams that would increase diversion to 60%.



After

The post-implementation waste characterization revealed a decrease in total waste by 44%. The data also revealed an increased diversion rate to 62% from 53% in 2014 – a result of the solutions devised by Spraying Systems and our Zero Waste team:



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INCREASED PLASTIC RECYCLING

The Zero Waste team worked with Spraying Systems to increase the kinds of plastics being recycled. The Zero Waste team reached out to its network of local recyclers to find end markets for the various kinds of industrial plastics generated at the facility. By upgrading the collection infrastructure and bringing new recyclers into the program, Spraying Systems was able to increase their post-industrial plastics recycling by 20%, with over 10 tons of plastic regrind and purging diverted to secondary markets.

PAPER TOWELS AND FOOD SCRAPS DIVERSION



The baseline data identified lightly used shop towels and food scraps to constitute 21% and 11% of the waste stream destined to landfill, respectively. The Zero Waste team assisted Spraying Systems in establishing a food scraps collection system as well as connect them with a local family owned hauling company that composts the material. Lightly used shop towels are diverted through their existing recycler who has found a unique method to process the material. Spraying Systems has been able to divert close to three tons of food scraps and shop towels in 2015 alone.

ONGOING IMPROVEMENTS

Other than the zero waste efforts, Spraying Systems continues to reduce their environmental footprint through:

- ✓ ISO 14000 Environmental Certification
- ✓ Offering products that reduce consumption of resources
- ✓ Water refill stations
- ✓ Water management program
- ✓ LED lighting upgrades
- ✓ HVAC upgrades with variable speed drives
- ✓ Integrated building management system
- ✓ Sustainable electronics recycling policies



Spraying Systems Green Team Logo

