

# Making an Impact

## Stewardship Provides Universal Benefits



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At times, Indiana is labeled a “state that does not care about the environment.” But let’s look at what is actually occurring at the plant level.

It is well known that Indiana companies like Subaru and Cummins are doing their part, but what other Indiana organizations are leading the production industry in environmental stewardship? More importantly, what are they doing? How can your organization learn from and reap the benefits?

By no means is this meant to downplay what our state’s major players in sustainability are doing. Many of those companies participate in the Indiana Department of Environmental Management’s Environmental Stewardship Program (ESP), which collectively reduced water usage by 52.8 million gallons, enough to fill nearly 80 Olympic-sized pools. Other reductions include 1.6 billion BTUs of natural gas, five tons of hazardous waste and diversion of 475 tons of trash from landfills.

Many of these reductions also have continuous cost savings. Profit is a key component of the sustainability equation – People, Planet, Profit – and it takes a collective approach including vendors, customers and employees to achieve a sustainability goal.

### Resin efficiency

Ryan Morrell-Peters, OPEX/lean leader for Nyloncraft, an injection molding company located in Mishawaka, emphasized the importance of taking a collective approach by involving affected parties in its resin recycling program. In this case, the key parties were plant employees and the recycling vendor.

For Nyloncraft, Morrell-Peters says part of the success is due to the “understanding of process flows and flow of materials within the plant to maximize efficiency.” This lean approach allows recycling activities to be integrated into day-to-day operations.

First, Nyloncraft helped its recycling vendor better understand resin types. To maximize handling and recycling efficiency, the vendor needs to be able to identify the resins upon pickup; therefore, Nyloncraft must separate the materials.

Initially, a laborer was used to sort material, but a more efficient method was to locate color-coded containers and signage in the plant where operators could place material, essentially integrating sorting activities into the process. To do this, product mix and process flows within the facility were analyzed to maximize bin location without constraining space and production.

The company also works to reduce raw material usage by regrinding scrap into virgin material. Originally, as part of a customer initiative, laser cutters are used to cut out material to make the product more lightweight. This activity requires continued testing and

communication with the customer to determine an appropriate percentage of grind for each product.

### Equipment outcomes

What about when your company needs to buy new equipment? For Kevin Birchmier, president of TOPP Industries in Rochester, purchasing a new molding machine in May 2016 was purely a financial decision to increase productivity. In retrospect, the sustainable impacts are now being realized.

Rather than spraying water on the tooling as part of the cooling process, leaving water to be discharged or evaporate, the new unit circulates a glycol water mix through a closed loop inside the tooling components. Additionally, the new unit is equipped with more efficient components using less natural gas, and it is able to contain all scrap to be reused in the process. This move is poised to save TOPP several thousands of dollars over the next few years in utilities, including water and natural gas usage.

The return on investment (ROI) for Birchmier was that the new unit could produce 1,928 parts per hour compared to 156 parts per hours of the old machine, but the ROI is even more appealing when you factor in the cost savings of water, natural gas and reduction in raw material.

### Oil reduction

Another aspect Indiana companies are looking to improve on is oil usage. Companies have little say on the price of the oil they purchase, so reducing the usage allows those fluctuations in prices to have less impact on the bottom line. Mills across Indiana have hydraulic equipment, many of which may have recurring leaks due to age. One mill is working to limit equipment leaks and extend the life of the hydraulic oil.

The first step is to reduce oil usage. To do this, each unit is inspected and tagged. Each leak is then sealed and evaluated during SPCC (Spill Prevention, Control and Countermeasure) inspections to ensure effectiveness. Since the equipment consistently leaks, the current practice is to fill the equipment with new oil as oil levels drop, but this limits the company’s ability to maximize the life of the oil. By sealing the leaks, the company can now have its vendor test and clean the oil and have it eventually replaced at an optimal time.

Indiana companies have shown managing their environmental impacts is not only good for our communities, but there is an economic benefit too. A sustainable decision is one that positively impacts people, planet and profit.

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