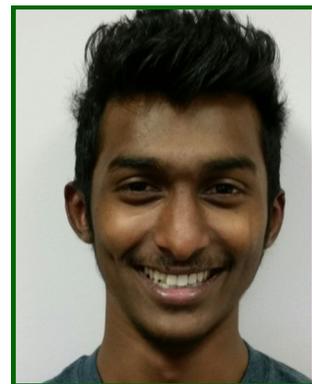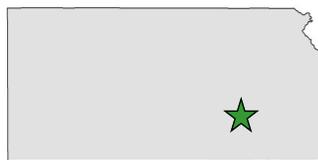# Wichita Food Recovery

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Company background

For the third year, the Pollution Prevention Institute, or PPI, has teamed with retail grocers, focusing on work with two large chain stores and two smaller local stores. All stores are in Sedgwick County, and offer other consumer services such as a retail pharmacy and dry-cleaning drop-off.

Project background

According to the Environmental Protection Agency, or EPA, in 2014 alone, 38 million tons of food waste were generated, with 95 percent of that waste either landfilled or incinerated. The United States Department of Agriculture, or USDA, estimates Americans waste 30 to 40 percent of their food supply, with 31 percent of this at the retail and consumer level. The 2017 food-recovery internship targeted reductions of food and food-related-product waste landfilled from retail grocers. The objective was to determine baseline food waste, and then identify, document, and quantify food-recovery options, including prevention and diversion to hungry human or animal populations.

Each of the four grocery stores studied already had programs in place to reduce food and food-product waste. The larger grocer has a markdown program that allows for price reductions as product reaches its sell-by date, financially incentivizing customers to buy the food before it is discarded. It has an internal policy that dictates quality standards for produce donation. Produce that does not meet standards for human consumption is diverted to a bin that is picked up and used for animal food.

The small local stores have similar markdown procedures, separate bargain bins for price-reduced produce, and half-price donuts from the bakery after 3 p.m. The stores currently work with local farmers to collect excess or unsellable produce so it can be reused for animal food. Excess deli items are packaged and sold as part of the Supplemental Nutrition Assistance Program.

To quantify, identify, and improve processes of source reduction and food diversion, all four stores collaborated with the PPI at Kansas State University.

Incentives to change

Nationally, retail grocery stores want to reduce food loss simply to improve their bottom line and serve their communities. Most chains know that the EPA and USDA are calling for a 50 percent reduction in food waste by 2030. The large chain store has a goal of 90 percent diversion from landfills by 2020. It has food-loss prevention and diversion programs in place, but knows the programs are under-utilized, sending usable food to the landfills. The smaller local grocery chain does not necessarily have food-loss prevention programs in place, but wants to understand how it could reduce food loss and improve processes.

Projects reviewed for P2 potential

Large retail grocery chain

Observations from two large grocery chains in the Wichita area revealed that some employees were not familiar with the company's markdown process, or its food donation and diversion initiatives. The intern found that employees at one of the stores put most of the unsold food in the bins for animal food, not realizing some of the food was eligible for diversion to the Kansas Food Bank, or KFB. The other store landfilled most of its unsold food.

1 https://www.epa.gov/sustainable-management-food/sustainable-management-food-basics
2 https://www.usda.gov/oce/foodwaste/faqs.htm

Produce

Although the larger stores have strict donation quality standards, the produce department generates nutrition-rich food items that could be donated to the KFB, rather than used for animal food or put in the landfill. A one-day waste audit at one store indicated, on average, 50 pounds of food per day is landfilled, a daily retail loss of $110. Despite using computer-assisted ordering, one large store tracked a loss of $65,000 in retail costs during a four-week period due to over-ordering.

Bakery

The intern's findings documented the biggest opportunity for source reduction was in the bakery, through optimizing and use of its computer-assisted ordering (CAO) software. After working with the intern to reorganize the KFB food donation program, both stores' bakery departments significantly increased their donations to the KFB. Based on six weeks of data from the KFB, one store increased donations by 366 percent and another store's donations increased by 55 percent. The intern recommended both stores continue evaluating their CAO programs so food produced will better match food needed

Across both stores and both departments studied by the intern, recommendations for top management support and supplemental employee training regarding existing food-loss prevention programs is a priority. At one store alone, these recommendations could save 9.1 tons of produce ($40,000 retail value) and 11 tons of bakery items ($66,000 retail value) annually(?).

Local retail grocery chain

Produce

As a smaller, local chain, these stores have less waste than the larger chain per amounts sold. The stores utilize a produce markdown process and what isn't sold through that process is picked up by a local farmer to use as animal food. An average of 30 pounds of produce each day ($30 retail value) is donated to local farmers.

Bakery

Opportunities exist to work with the KFB on some of the produce and bakery items. A study of a four-month billing cycle from one of the stores documented 100 pounds per week ($54 retail), on average, was going to the landfill. Some of this was due to challenges with manual inventory management.

The intern recommended making a clearer distinction between regular items and quick-sale items. This included separating out items to be donated, improving product flow through the freezers, and updating logging procedures for the bakery. The combined store recommendations could reduce or redirect 9.1 tons of produce at a retail value of $18,000 annually. Bakery items could be reduced by 2.4 tons at a retail value of $19,700 annually.

Summary of 2017 food-recovery intern recommendations for each facility

Project description	Annual estimated environmental impact	Annual estimated cost savings	Status
Large grocer produce (Store 1)	9.1 tons	$40,000	Recommended
Large grocer bakery (Store 1)	11 tons	$66,000	Implemented
Local grocer produce (Store A)	5.5 tons	$11,000	Recommended
Local grocer produce (Store B)	3.6 tons	$7,200	Recommended
Local grocer bakery (Store A)	2.6 tons	$19,700	Recommended
Total savings[1]	**31.6 tons**	**$143,900**	
GHG Reductions[1]	**17 metric tons CO_2e[2]**		

[1]Does not include projects "not recommended" or where "further research is needed."
[2]EPA WARM Tool, v. 14 (GHG reductions based on 50 percent source reduction.)