



Intern: Paul Barnes
Major: Chemical Engineering
School: University of Nebraska-Lincoln



Background

Hormel Foods facility in Fremont, NE is a meat packing plant that handles just over 10,000 hogs per day. Hormel is best known for SPAM which is produced in the Fremont facility among other Hormel products including Little Sizzlers pork sausages, Always Tender pork tenderloins, hot dogs, and ham. Hormel takes pride in their high-quality product and high safety ratings for both their food and employees.

Project Description:

Hormel Foods is the second largest employer in Fremont and strives to give back to the community. Hormel uses water to wash, clean, and sanitize throughout their production process. Efforts were made to reduce water usage by installing low flow nozzles and changing the way some processes are done. Sources of waste water and the waste water pretreatment systems were analyzed to improve the quality of waste water that is produced by Hormel in order to reduce the load on Fremont’s Waste Water Treatment Plant. Lighting was looked at to see if electricity usage could be lowered. Paper towel usage was also studied to determine if hand dryers are an environmental and economic option.

Pollution Prevention Benefits:

Recommendations were provided to help Hormel Foods reduce utility costs and emissions. It is estimated that each year Hormel could save 265,000 kilowatt-hours, 16.6 million gallons of water, 110,000 therms, and 27,000 pounds of solid waste if all recommendations are implemented.

Table 1. Pollution Prevention Benefits

Assessment Recommendation	Annual Cost Savings	Implementation Cost	Payback Period	GHG Reduction (MTCO2e/yr)
LED Office Lights	\$1,700	\$7,000	4	57
Utility Sinks	\$12,000	\$2,650	0.3	20
Stick Water	\$17,500	\$3,000	0.2	22
Skim Tank Analysis	\$330,000	\$350,000	1.1	200
Tunnels Water Use	\$6,800	\$1,000	0.2	3
Hand Dryers	\$60,000	\$188,000	3.1	50
110°F Overflow	\$54,500	\$200,000	3.7	1000
Total	\$482,500	\$751,650	1.6	1350