

Project Overview

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Major: Biological Systems Engineering

School: University of Nebraska-Lincoln



Project Description

The 2008 summer project included conducting three new waste assessments, compiling the class assessment, and three reassessments of small businesses in Lincoln, Nebraska. A public education presentation was given to youth and a pollution prevention article was written for public education. A portion of the summer was spent working at events for the Extension Office such as Clover College 4-H Camp and the County Fair. A part of the summer, not sponsored by the P3 program, included assisting with an annual dry weather storm water monitoring project for the City of Lincoln.

Waste Assessments

Waste assessments were conducted with two small businesses in Lincoln: Pechous Upholstery and a financial office. These assessments focused largely on reducing trash volumes through source reduction, reuse of materials, or recycling. A third assessment was conducted for a local agency to determine the benefits, cost savings and CO₂ emission reductions of buying recycled paper.

The P3 class conducted a waste assessment at a Transportation Services Department as a hands-on exercise as part of their training. Each of the 14 students was assigned a process at the facility and conducted a waste assessment with pollution prevention suggestions. These individual reports were compiled into a single report which was given to the Transportation Services Department. Compiling this class assessment project was a major portion of the summer's activity.

Education

Approximately 30,000 people were educated on pollution prevention (P2) through an article written for the Lancaster County Extension NebLine newspaper. A presentation was also given at the Bright Lights youth camp to middle school-aged children introducing the concepts of Environmental Engineering and P2. Approximately 30 people learned about P2 through this presentation.

Results

The opportunities offered had the potential to save the client money, reduce energy consumption, reduce trash pickup volume, and divert waste from the landfill. Table 1 below shows the results of the compiled class report and the small business assessments.

Table 1. –Summary of Potential Pollution Prevention Benefits

	Cost savings	Electricity Saved (kWh)	Water Conserved (gal)	Solid Waste Diverted from Landfill (lbs)	CO ₂ Emission Reduction (lbs)
Compiled waste assessment	\$67,500	344,000	47,500	280	680,000
Small business waste assessments	\$13,450	-	-	30	200,000