

Intern: Wil Lage

Major: Chemical Engineering

School: University of Nebraska-Lincoln

### Company Background

UNL Extension provides reliable knowledge in areas such as agriculture, nutrition, health care, and technology to the different communities of Nebraska. Extension educators provide education gained from University based research through direct teaching, experiential learning opportunities and publications. The goal of extension is to provide knowledge to Nebraskans to improve every aspect of their lives. Eighty-three different extension offices exist in Nebraska serving all ninety-three counties.



### Project Description

This summer three P3 interns were stationed at different UNL Extension sites across the state. The interns each partnered with an extension educator in working with agriculture producers to reduce water use, energy use, and pollution. Wil Lage, a P3 intern, was partnered with Chuck Burr, a water and cropping systems expert and extension educator, at the West Central Research Center in North Platte, NE. The strategies implemented utilized watermark moisture sensors, pumping efficiency checks, and overall irrigation assessments. The interns composed management reports that were presented to the producers showing current practices and possible opportunities for improvement. The interns, also, assisted extension educators in general extension office activities in the local communities.

### Pollution Prevention Benefits

Benefits presented by this project include a reduction in energy, water use, and greenhouse gas emissions while, also, saving producers money. Indirect benefits include decreased runoff, nitrogen leaching, soil erosion, and increasing crop yield. With the irrigation assessments, producers will become more knowledgeable in their irrigation systems to continue to use fewer resources, produce less pollution, and gain more profit.

### Assessment Results

Table 1. Summary of P2 Recommendation Savings

Cooperator	Water Savings per Year	Cost Savings per Year	Energy Savings per Year	GHG Reduction per Year
Joe Anderjaska	7 million gallons	\$2,000	25,000 kWh	24 MT-CO <sub>2</sub> Equivalent
Tom Hansen	6.8 million gallons	\$1,200	15,000 kWh	14.3 MT-CO <sub>2</sub> Equivalent
Shane Rippen	6.7 million gallons	\$330	4,000 kWh	3.8 MT-CO <sub>2</sub> Equivalent
Jon Walz	NA	\$77	960 kWh	.7 MT-CO <sub>2</sub> Equivalent
Tracy Zink	6.7 million gallons	\$2,070	27,000	6.7 MT-CO <sub>2</sub> Equivalent