Project Overview

Industrial Placement Intern: Cameron Cunning

Major: Biological Systems Engineering

School: University of Nebraska-Lincoln

City Background

Scottsbluff, with a population of 15,000 people, is the 13th largest city in the state of Nebraska and the largest city in the Nebraska panhandle. The city lies along the old Oregon Trail, nearby Chimney Rock and Scottsbluff National Monument. The storm water drainage system manages runoff flows that eventually discharge directly to the North Platte River or to a pond adjacent to the river.

Project Description

P3 intern Cameron Cunning assisted the City of Scottsbluff during the summer of 2011 assess facilities and activities for storm water pollution, as well as research ways that the city could reduce storm water pollution. Assessments were made of six city operations including the Wastewater Treatment Plant (WWTP), Water, Transportation, Parks and Recreation, and Environmental Services Departments and Fairview Cemetery. Assessments involved identifying high priority facilities, and determining the criteria for making such a judgment as well as making individual recommendations for improvement. During this process, the intern collected information for initial drafts of Storm Water Pollution Prevention Plans (SWPPP's) for those facilities assessed.

Results and Benefits

Several opportunities for reducing storm water pollution were identified while assessing city facilities. These include:

- establishing best management practices (BMP) with good housekeeping and inspection procedures,
- installing rain sensors for landscape irrigation systems in parks,
- covering, replacing or providing secondary containment for fueling stations, used oil collection areas and scrap metal containers,
- storing street sweepings to prevent storm water contact, and
- repaving damaged areas to correct issues with single conveyance discharge.

The cumulative results of these opportunities are presented in Table 1.

Table 1-Cumulative Summary of Potential Benefits

Cost Savings	Water Saved	Energy Saved	Potentially Contaminated Runoff Avoided
$10,800	4,200,000 gallons	600 kWh	~960,000 gallons