

Report for 2003DE29B: Undergraduate Internship: Field Measurements of Non-Point Source Pollutant Removal Efficiencies of Stormwater BMPs at the UD Experimental Watershed

- Water Resources Research Institute Reports:
 - Cormier, Kathleen, Gerald Kauffman, Martin Wollaston, 2004, Field Measurements of Non-Point Source Pollutant Removal Efficiencies of Stormwater Best Management Practices in the University of Delaware Experimental Watershed, Delaware Water Resources Center, University of Delaware, Newark, Delaware, 36 pages.

Report Follows

Undergraduate Internship Project #10 of 10 for FY03

The project is co-sponsored by the *Delaware Department of Natural Resources and Environmental Control (DNREC) and DWRC*. Ms. Cormier proposes to monitor the quality of stormwater inflow to and outflow from several stormwater ponds and wetlands installed on the University of Delaware campus.

“I’m very interested to see just how efficiently these Best Management Practice, or BMP, strategies are working removing pollutants, as compared to my estimates. There is very little field data currently available on the use of stormwater ponds and installed wetlands to improve water quality; this research should help us to better apply the strategy in future projects. “

--Kathleen Cormier, University of Delaware undergraduate senior, Natural Resource Management major.

Abstract:

On the University of Delaware campus, student researchers sought to examine the pollutant removal efficiency of several installed stormwater Best Management Practices (BMPs). Stormwater BMPs are a candidate restoration strategy for the Christina Basin of northeastern Delaware and Southeastern Pennsylvania. This report seeks to obtain efficiency data for those stormwater BMPs already installed on the University of Delaware campus. Stormwater runoff was collected for three separate rainfall events at designated inflow and outflow stations in two stormwater BMPs – a bioretention site and a combination wetland swale. Results were mixed but promising. The conclusions drawn were that with continued maintenance and planting of native vegetation, stormwater wetlands can be effective in protecting receiving waters.