

Comparing Nutrient Losses Via Runoff from a New Golf Course and the Golf Course Site's Previous Native Condition.

Kansas State University

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Start Date: 1998

Number of Years: 5

Total Funding: \$118,155

Objectives:

1. *Compare the nutrient loading, by way of surface water runoff, from a new golf course, and the site's previous native prairie condition.*
2. *Investigate the new golf course's impact on surface water quality during construction and during golf course operation.*

The main objective of this research is to compare the nutrient loading, by way of surface water runoff from a new golf course, and the site's previous native prairie condition. The nutrient loading from the golf course site into the main surface water stream will be determined during construction and during operation. Surface water samples are collected during runoff events from at least two locations on Little Kitten Creek (major stream). Water samples will be tested for nutrients, and sediment concentrations. Surface water runoff amounts will be determined so that mass amounts of nutrients contained in the runoff can be calculated.

Progress on our project has been made over the last year. It was a very wet spring and early summer which produced numerous runoff events. We have collected more than 750 water samples to date, 276 during 1999. Rainfall and stream flow data continues to be measured.

Our immediate plans are to continue to collect water samples, determine stream depth vs. flow rate relationships, and determine nutrient loading on a mass per area basis for the pre-construction and during construction conditions. We continue to write proposals to expand this work that the USGA has helped us start. Three proposals will likely be submitted over the next year to USDA NRI Program, EPA Water and Watersheds Program, and NSF Urban Research Initiative Program.