

Characterization of Leaching at the Coeur d'Alene Golf Course Floating Green

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Goals:

- *Quantify water flow and movement of NO_3 and NH_4 through a large-scale sand-based putting green under actual golf course conditions.*
- *Demonstrate the effect of nitrogen application regimes on sand-based putting greens to promote environmental safety and support the highest level of turfgrass quality.*
- *Determine nitrogen fate in an enclosed turfgrass environment utilizing irrigation and meteorological data.*

Cooperators:

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A knowledge base detailing nitrogen fate in sand-based golf greens is currently being developed through research conducted at the floating 14th green at the Coeur d'Alene Resort golf course, Coeur d'Alene, Idaho. This "signature hole" green is constructed on a concrete barge and floats on Lake Coeur d'Alene. All the irrigation water applied to the green is monitored, as well as the amount of water leaching through the green. The leachate is stored in large tanks under the green and is periodically pumped back to shore. This project is unique in that we are attempting to determine the location and form of nitrogen on an entire sand-based green under actual course playing conditions. The project aims to further open lines of communication between the golf course industry and the public by conducting research at a highly visible site.

The project to date has focused on gathering the putting green background information, equipment evaluation, and equipment purchase and setup. The design and layout of the floating green has led to a research methodology specific to this project. Site visits to the golf course have provided valuable information in regard to the experimental design.

The goal for winter 1997-1998 and spring 1998 is to complete installation of equipment and begin testing to insure accuracy and reduce possible experimental error. The majority of experimental data will be taken during 1998 and 1999.