4-23-1999

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Stefanie Buriff

Indiana University - Purdue University Fort Wayne

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THE IMPACT OF SEPTIC TANKS ON WINONA LAKE
Stefanie Buriff
(Solomon Isiorho, Associate Professor of Geosciences)
Department of Geosciences, School of Arts and Sciences

Winona Lake is located in Kosciusko County, northern Indiana. The lake is used primarily as a year-round recreational area. The density of houses has steadily increased with time, and all of the residents depend on their own septic tank systems for sewage disposal. The problem facing Winona Lake is similar to other parts of Indiana where water quality problems result from septic tank systems. This study investigates the impact of septic systems on the lake water quality.

Water samples will be taken along the shore areas, as well as in the open lake to test for chemicals and biological parameters. As a preliminary approach, the pH, temperature, and conductivity of the water will be measured. Twenty water samples will be taken and analyzed for water chemistry, and *E. coli* tests will be performed as well. Sediment samples will be taken for heavy metal analysis.

Preliminary results show that the pH of water is slightly acidic (pH-6). The conductivity measures indicate high ions. The temperature of the water was 8.38 degrees Celsius. Water samples will be tested for *E. coli* and cations within the next three weeks. The sediments will be sent to a lab for heavy metal analysis. The conductivity implies that some pollution may be present in the lake. It is expected that the result of the heavy metal analysis will confirm the probability of contamination resulting from the septic systems. There is a need to protect this valuable resource in Kosciusko County through the use of a central system, through monitoring water quality, and through education of the citizens.