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Examining the Levels of Microcystin and Nutrient Inputs and Their Effects on Lake Quality in Cuyahoga County, Ohio

Tom Bienvenu

Cleveland State University

Julie Wolin

Cleveland State University, j.wolin@csuohio.edu

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**Examining the Levels of Microcystin and Nutrient Inputs and Their
Effects on Lake Quality in Cuyahoga County, Ohio.**

College of Sciences and Health Professions

Department of Biological, Geological & Environmental Sciences

Student Researcher: Tom Bienvenu

Faculty Advisor: Julie Wolin, Ph.D.

Abstract

The purpose of this project is to acquire baseline understanding of the urban lakes in Cuyahoga County, Ohio. The researchers used canoes, a Van Dorn water sampler, 63µm Wisconsin net, and a modified Livingstone corer in the lakes to collect water, plankton, and sediment samples from the lakes that were visited. The Northeast Regional Ohio Sewer District (NEORSD) will analyze the water samples for quantitative and qualitative levels of microcystin. The remaining samples including diatoms in the sediment and the plankton in the water will be analyzed by the researchers in the labs at Cleveland State University. The data collected can be combined with the National Lake Assessment (NLA) to better understand and utilize the natural services provided by lakes in urban ecosystems. The project is in the data collection stages and has not yielded any results yet, although it is hypothesized that the lakes with less artificial inputs and a larger buffer area should have lower risk of harmful algae and higher levels of water quality.