



# Reservoir Observer Student Scientists

## Background

There has been a global increase in potentially toxic cyanobacterial harmful algal blooms (CyanoHABs) over the last several decades. Accurate estimates of the timing and impact of potentially toxic CyanoHABs to lakes and reservoirs is important for public health protection, a stable economy, and sound resource management. It is assumed that CyanoHABs “like it hot” and only occur during the summer months. However, observations of high winter algal biomass are becoming more common, making it necessary to ask the question: is our ‘summer only’ approach to monitoring and mitigating CyanoHABS sufficient, or do we need to monitor CyanoHABS in the winter, fall, and spring?

In order to answer this question, this project will engage high school students in conducting temporally resolved assessments of CyanoHABs in a variety of north-central lakes and reservoirs represented in the five states of Missouri, Kansas, Iowa, Nebraska, and South Dakota.

This project leverages the knowledge, system, and infrastructure established through the Lakes of Missouri Volunteer Program (LMVP) which engages citizen scientists to monitor water quality in Missouri reservoirs. Building on the success of the LMVP, this project will work to expand citizen science work throughout the region while engaging our youth and their teachers in actively serving as the stewards of water quality in their respective water bodies.

## Goals/Action

The project will work to establish the Reservoir Observer Student Scientists (ROSS) program in five north central states by:

- Establishing a multi-state mentorship group to help identify, train, and enable high school students and their teachers to quantify the occurrence of CyanoHABs and cyanotoxins in their local water body
- Developing consistent protocols and curricula for high school students and their teachers for the ROSS program
- Collecting feedback on the ROSS protocols and curricula and begin the process of training teachers to conduct the ROSS program in the classroom

## CONTACTS

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The North Central Region Water Network comprises 12 Land-grant colleges and universities:

