## Harmful Algal Bloom Monitoring in the Tennessee State University Wetland

The wetland at Tennessee State University (TSU) research farm provides a significant amount of ecological services, such as removing sediments and nutrients from the stormwater before it enters the Cumberland River. The result of sequestering nutrients has led to eutrophication of the wetland. The water can change from clear to covered in phytoplankton and duckweed in 24 hours. Sometimes the phytoplankton community is dominated by cyanobacteria (blue-green algae) that can produce toxins, such as microcystin and anatoxin. These are liver and neurotoxins, respectively. A monitoring program collecting water samples every 2 weeks has been in place from 2022 through 2024. Microcystin concentrations ranged from below detection (0.15 ug/L) to above 5 ug/L. Additional water chemistry data is being monitored to determine what precedes the production and release of microcystin in this wetland system. A better understanding will protect the livestock and wildlife that use this habitat.