UT Lake Erie Center & Water Task Force

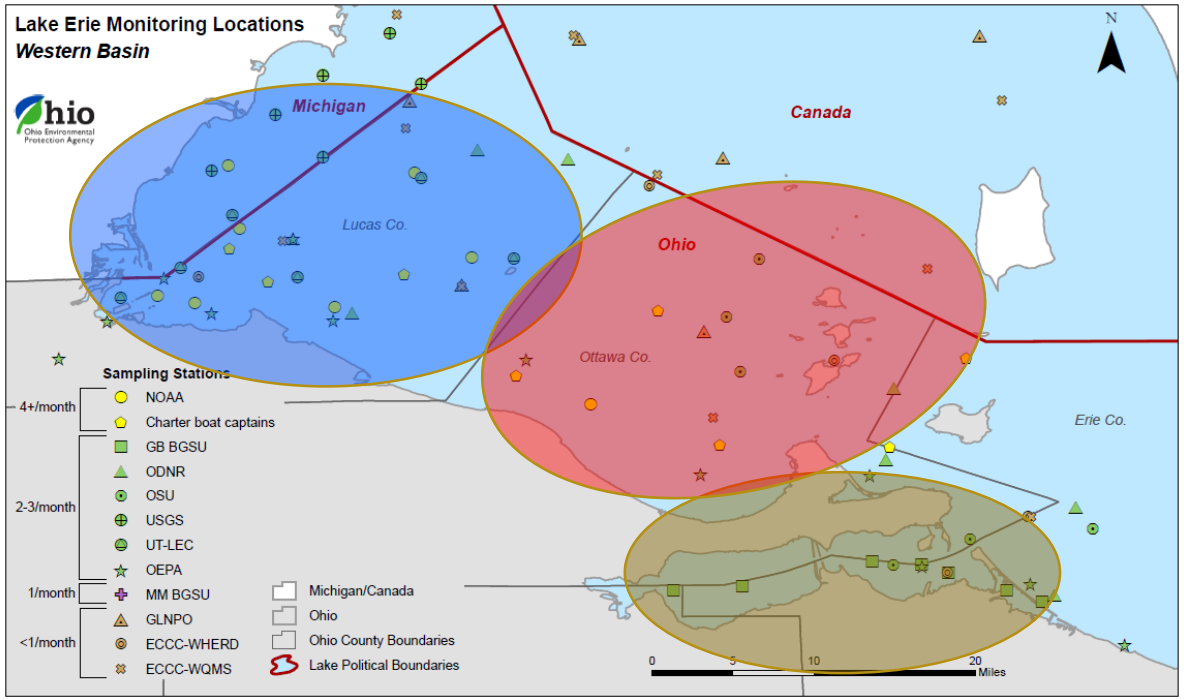
Research Highlights and Lessons Learned

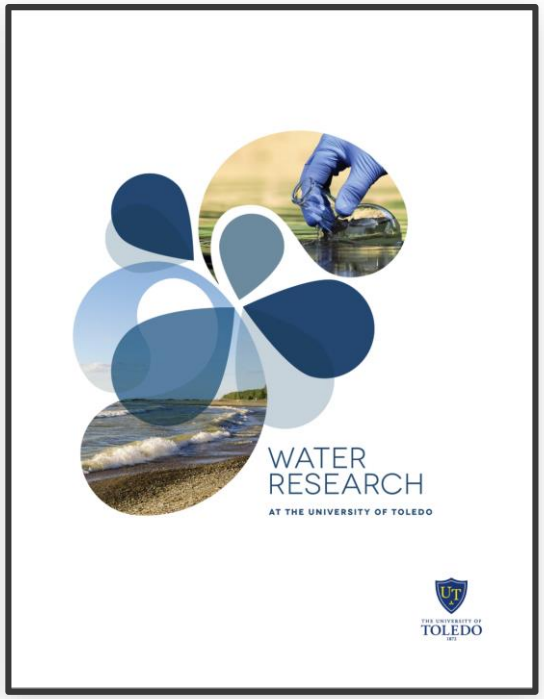
Thomas Bridgeman **April 9, 2019**

THE UNIVERSITY OF TOLEDO 1872

Frequent Collaborations

23 UT Faculty Investigators
86 Water Research Projects





University of Toledo

The Ohio State University

Bowling Green State University

State and Federal Agencies

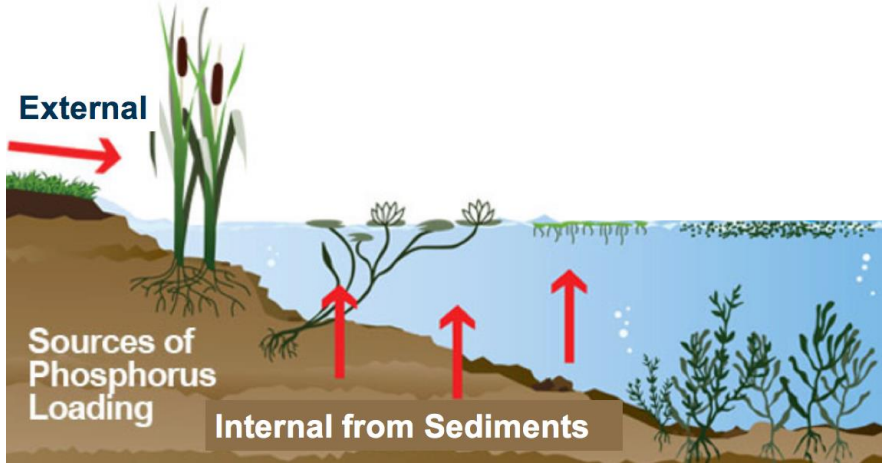
A Few Research Highlights and Lessons Learned

HABS in the Lake

- Will Phosphorus in Lake Erie sediments delay the lake's recovery?

  ANSWER: No, sediments contribute only about 5% of P at present

  NEED: Better understanding of effect of warming temperatures and weather on HABs (Lab and Lake studies)



- Can we avoid HABs in our lake water intakes?

  ANSWER: No, (or not yet). Too many factors affect the vertical movement of cyanobacteria.

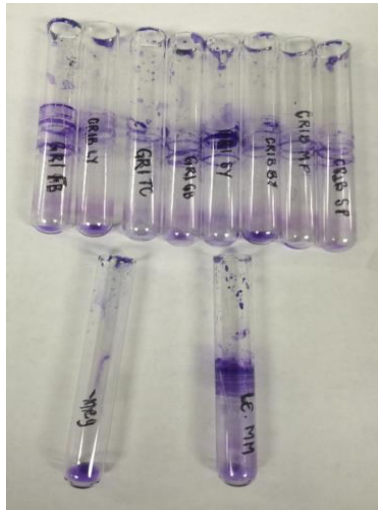
  NEED: Better understanding of cyanobacterial physiology

Research Highlights and Lessons Learned

HABS in our Water

- Can we reduce the need for chemical treatment of drinking water? (J. Huntley)
- ANSWER: YES, natural, safe bacterial can destroy microcystin in drinking water.

NEED: How to scale up and remove other toxins



HABS in our Bodies

- Can we detect when a person has been exposed to microcystin toxin? (D. Kennedy)
- ANSWER: YES, urine test can detect microcystin exposure (in mice). NEED: Detect other toxins