

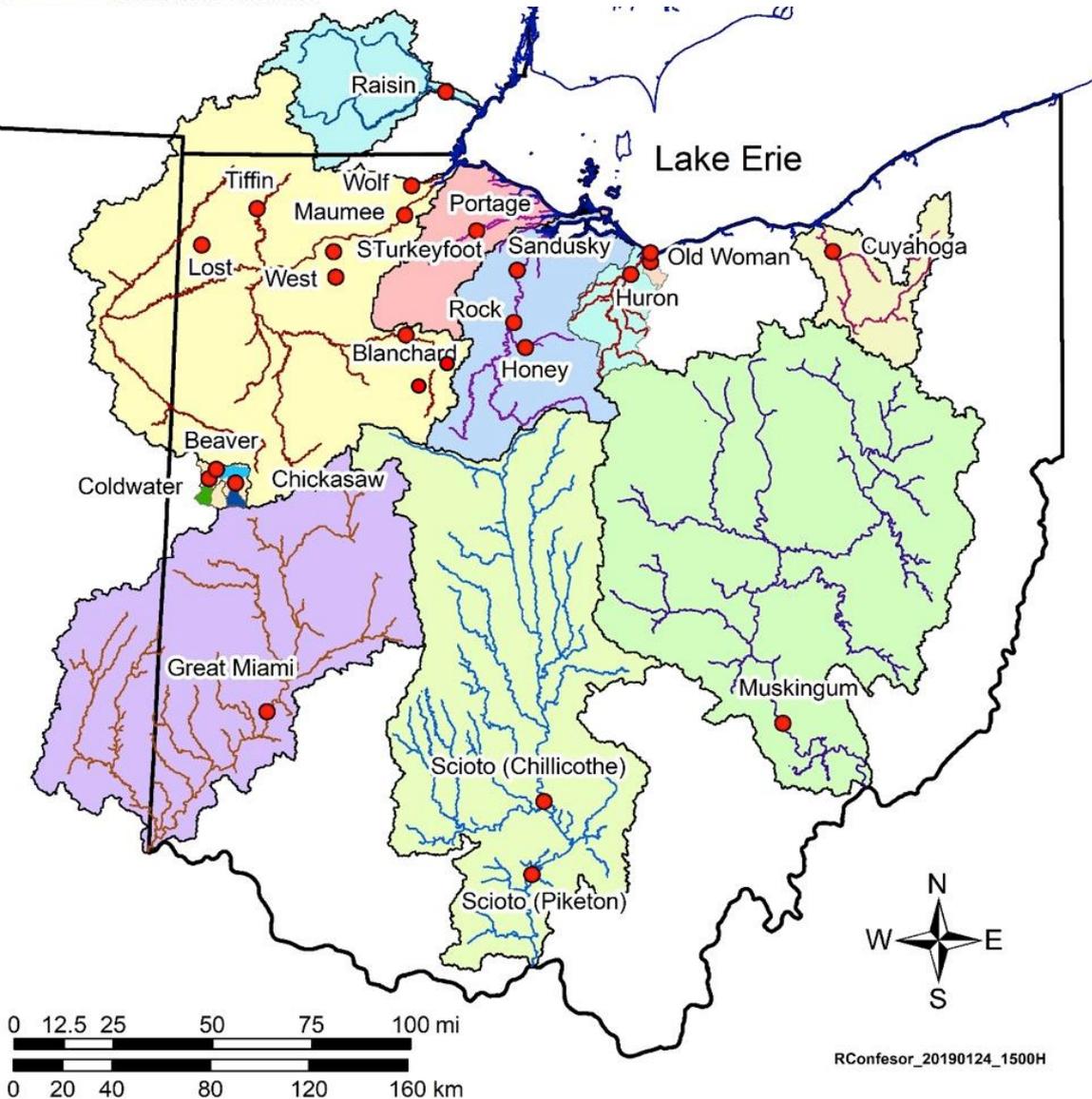


National Center for
Water Quality Research



Laura Johnson
Director

The Heidelberg Tributary Loading Program



- 25 monitoring locations
- Program is covered by 11 different funds
 - Line item in the state budget
 - ODHE HABRI
- No secure long-term funding

Ohio EPA Nutrient Mass Balance Report

Lake Erie Harmful Algal Bloom Early Season
07 May 2018, Projection 01

The severity of the western Lake Erie cyanobacterial harmful algal bloom (HAB) is projected to be moderate to severe. The product gives an estimate of potential bloom severity based on model predictions into July. The final seasonal forecast will be a comprehensive set of models.

A wet early April combined with heavy rainfall on May 2, 2018, has increased phosphorus loads for the Maumee River this season. The phosphorus load to date is sufficient for some runoff. The phosphorus load to date is sufficient for some runoff. The phosphorus load to date is sufficient for some runoff. The phosphorus load to date is sufficient for some runoff.

Total bioavailable phosphorus (TBP) is the sum of dissolved phosphorus (DP) and particulate phosphorus (PP). The TBP is projected to July 31st using river forecasts from the National Center for Water Quality Research (NCWR) and the end of the loading season using past data.

Stumpf, Noel (NOAA), Johnson (Heidelberg University)

Figure 1. Projected bloom severity compared to previous years. The wide bar is the likely range of severity based on data from the last 15 years. The narrow bar is the potential range of severity. Because the forecast uses modeled discharge for two months, there is a large uncertainty in bloom severity.

Figure 3. Total bioavailable phosphorus (TBP) load from the Maumee River to Lake Erie. The red portion of the bar represents the TBP load from May 1 to May 6, 2018.

Nutrient Mass Balance Study for Ohio's Major Rivers

Division of Surface Water
Modeling and Assessment Section
APRIL 16, 2018

SEARCH

Western Lake Erie Tributary Water Monitoring Summary

March 1, 2017 - July 31, 2017

lakeerie.ohio.gov

Why this summary?
This summary provides a simplified overview of nutrient loads and concentrations that have been shown to be highly correlated with harmful algal blooms in Lake Erie.

Where is the water monitored?
Ohio EPA, ODNR, USGS, and Heidelberg University have established many sampling stations in the Lake Erie watershed. Some of these stations are in the same locations to take advantage of USGS streamflow gauging stations.

Why this summary?
Summarizing the results of these water monitoring efforts provides critical information for agencies and the public. This summary is a tool for annual changes and trends in water quality. The stations in Figure 1 were chosen from a larger set to include upstream of the lake influenced sections of the rivers. Due to its large size, several tributaries to the Maumee River were also included.

Spring Discharge (cubic meters)

1500

0

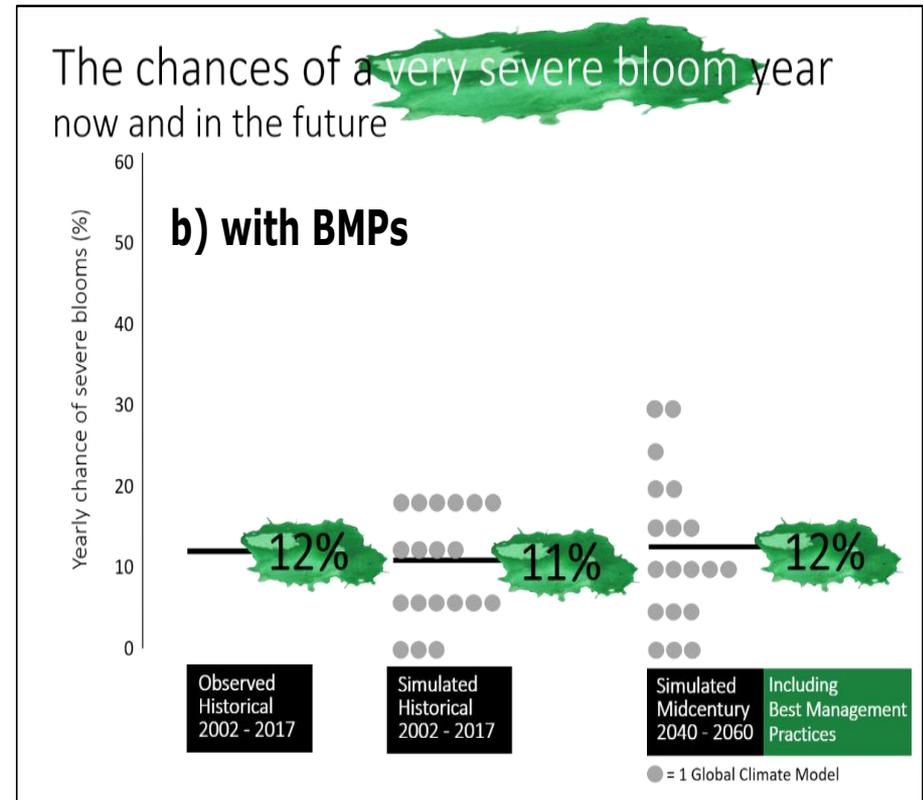
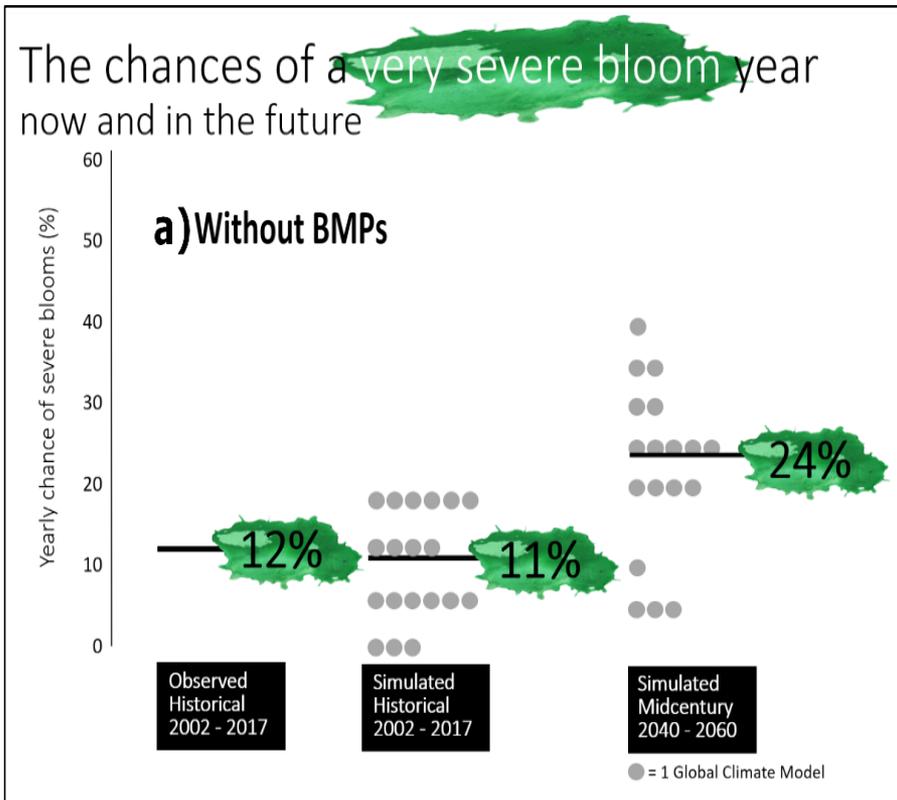
2016

Loading Target

Solutions: Dr. Remegio Confesor



The devil is in the details: need a field by field basis of BMP implementation → can achieve reductions with field-scale models



In collaboration with the Swedish Meteorological and Hydrological Institute

Thanks!

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<https://www.blueaccounting.org/issue/eriestat>