Lake Erie Harmful Algal Bloom Early Season Projection
14 May 2018, Projection 02

The severity of the western Lake Erie cyanobacterial harmful algal bloom (HAB) depends on the input of bioavailable phosphorus, particularly from the Maumee River during the loading season (March 1-July 31). This bulletin gives an estimate of potential bloom severity based on a combination of measurements to date, and model predictions into July. The final seasonal forecast will be made in early July with more data and a comprehensive set of models.

March had average precipitation, April was wetter than average, and May is expected to be somewhat wetter than average. Another rainfall event this week contributes to this outlook: it is expected to product moderately high (but not severe) flow in the Maumee River. The current outlook for June suggests drier conditions. The phosphorus load to date is sufficient for some bloom to occur, however, the uncertainty is quite large (2016 load, shown for reference, was a relatively mild bloom). As we replace modeled phosphorus loads with measured loads, the uncertainty will decrease.

Total bioavailable phosphorus (TBP) is the sum of dissolved phosphorus (which is ≈100% available for HAB development), and the portion of particulate phosphorus that is available for HAB development. The TBP loads are projected to July 13th using river forecasts from the National Weather Service Ohio River Forecast Center, and to the end of the loading season using past data. The projection will be updated approximately weekly with new data and weather models through the end of June.

For more information visit: http://www.ncwqr.org/ or http://coastalscience.noaa.gov/research/habs/forecasting/