Western Lake Erie Harmful Algal Bloom Early Season Projection
2 June 2021, Projection 04

The severity of the western Lake Erie cyanobacterial harmful algal bloom (HAB) depends on input of bioavailable phosphorus from the Maumee River during the loading season (March 1-July 31). This product gives an estimate of potential bloom severity based on a combination of measurements and forecasts of river discharge and phosphorus loads from now into July. These projections will be updated with new data and weather models each week until the NOAA seasonal Lake Erie HAB Forecast is issued on June 30th, using measured spring phosphorus loads, and a more complete set of bloom models.

With data through May 31, the bloom is likely to be smaller than average, with severity expected to be < 5, no change from last week. Discharge of water from the Maumee River was below average in March and April, due to lower than average rainfall, which led to low phosphorus loads in early spring. While weather systems in early June are bringing rain to the region, there is still uncertainty in the weather models on exact amounts, placement and intensity of rainfall which leads to uncertainty in the discharge and the phosphorous load. Later in June, we expect a return to normal rainfall with less uncertainty in the discharge.

Total bioavailable phosphorus (TBP) is the sum of dissolved phosphorus and the portion of particulate phosphorus available for HAB development. The TBP loads are projected based on Heidelberg University data, river forecasts from the National Weather Service Ohio River Forecast Center (through early July), and previous years to the end of July.

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