Lake Erie Harmful Algal Bloom Early Season Projection

9 May, 2017  Projection 01

The severity of the western Lake Erie cyanobacterial harmful algal bloom (HAB) is dependent on input of bioavailable phosphorus, particularly from the Maumee River during the loading season (March 1-July 31). This product provides an estimate 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.

In March and April, the Maumee River had discharge and phosphorus loads below average. High rains the beginning of May produced a substantial load so far in May. There is some uncertainty in discharge over the next six weeks. The forecast favors precipitation remaining close to normal, which would result in a milder bloom, only slightly more severe than last year. However, the possibility of several rainfall events increase the range of uncertainty to more severe blooms. The projection will be updated approximately weekly with new data and weather models through the end of June.

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 June 20th using river forecasts from the National Weather Service Ohio River Forecast Center, and to the end of the loading season using past data.

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