

Western Lake Erie HAB Early Season Projection

Bulletin 1 2026-05-07

Summary: The Western Lake Erie HAB Early Season Projection provides an estimate of potential *Microcystis* harmful algal bloom (HAB) severity. The projected severity depends on input of total bioavailable phosphorus (TBP) from the Maumee River during the loading season (March 1-July 31), and uses a combination of measurements and forecasts of Maumee River discharge from the U.S. Geological Society (USGS) and the National Weather Service - Ohio River Forecast Center (through July) combined with TBP concentrations measured by the Heidelberg University National Center for Water Quality Research. With observations through May 4, we predict a potential bloom severity range of 2-5.5 (likely moderate bloom conditions), similar to the 2022 or 2024 blooms. Through the spring, conditions have been relatively wet, with a particularly high load event in early April. The range in forecasted severity reflects the uncertainty in forecasting precipitation from now through July. If high precipitation and associated loads continue, there is a small chance of a bloom up to 5.5, similar to 2010; if precipitation stops and is less than normal through the rest of the spring and early summer, the bloom could be more mild, similar to 2020. We will issue a comprehensive seasonal forecast on June 25. Any bloom that does develop will move throughout the summer due to wind and currents. We will provide information on the presence and location of the bloom via satellite remote sensing monitoring and forecasts that are posted daily on the web, and emailed to subscribers weekly, in collaboration with NOAA's Great Lakes Environmental Research Laboratory (GLERL).

Predicted Bloom Severity

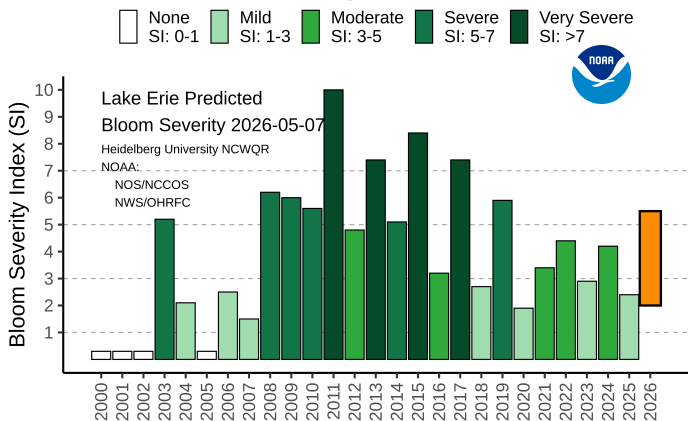


Fig. 1. Predicted bloom severity as compared to previous years. The wide orange bar is the likely range of severity based on current forecast uncertainty (2-5.5; Moderate bloom). The uncertainty in the bloom severity forecast is due to uncertainty in both the bloom severity models and the forecast river flow and TBP loads through the end of July.

Total Bioavailable Phosphorus

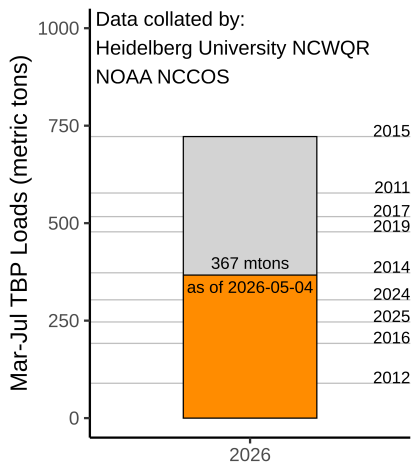


Fig. 3. Total bioavailable phosphorus (TBP) load accumulated from the Maumee River near Waterville, OH to date. The right axis denotes the TBP load from selected previous years.

For more information visit: coastalscience.noaa.gov/science-areas/habs/hab-forecasts/lake-erie or ncwqr.gov

Cumulative Total Bioavailable Phosphorus

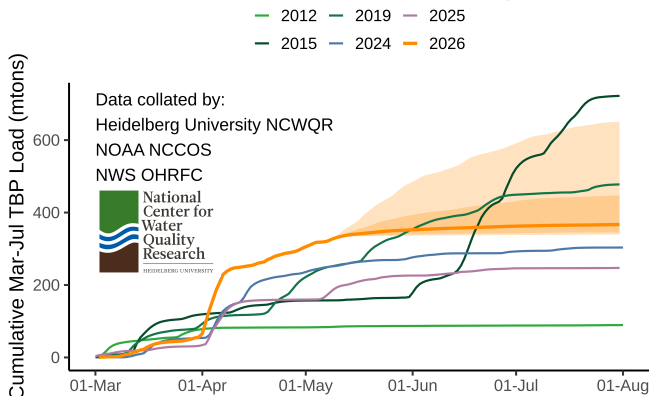


Fig. 2. Cumulative TBP loads for the Maumee River (Waterville, OH). Each line denotes cumulative load for different years. 2026 is in orange: the solid line is the measured load to April 27 and predicted load for the rest of the loading season (thru July); the darker and lighter orange shading show, respectively, the likely and possible load ranges for the remainder of the season.

Satellite Image - True Color



Fig. 4. True color image for 04 May 2026 derived from the Copernicus Sentinel-3a/b satellite. The western basin has substantial suspended sediment (brown color) along the coast due to the high flow event in early April.

Questions? Contact: hab@noaa.gov

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