

Lake Erie Harmful Algal Bloom Forecast

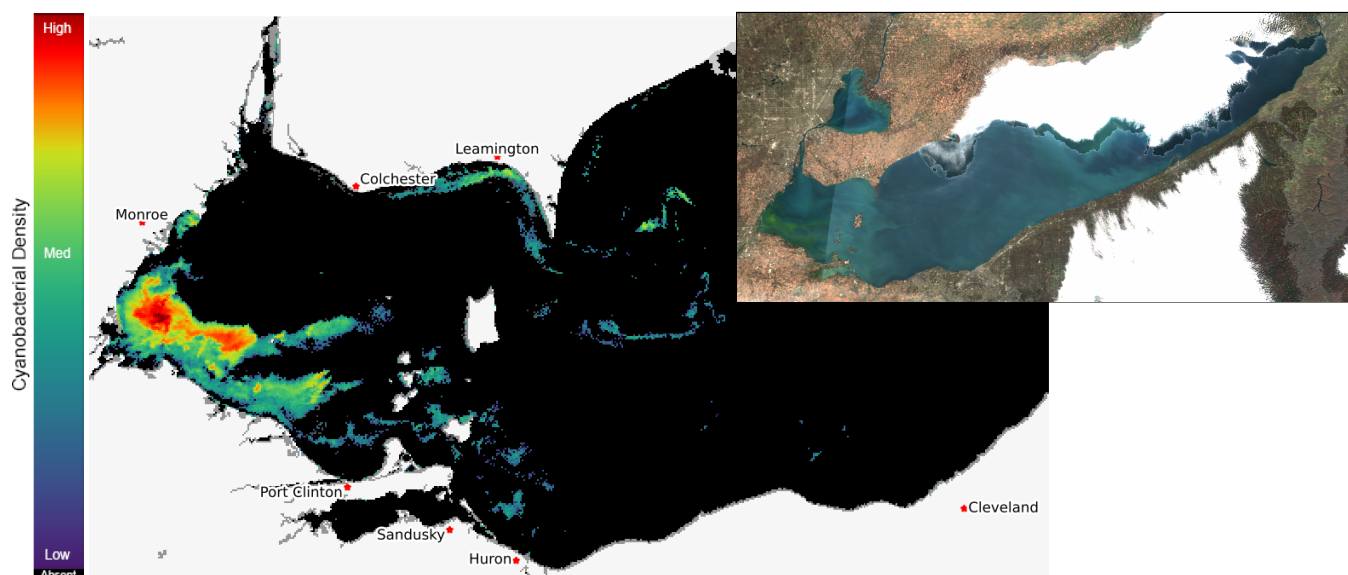


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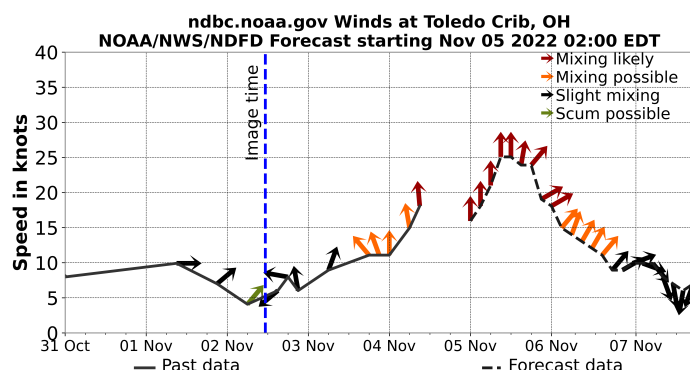
Imagery Analysis & Forecast - 2022-11-04

The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 260 square miles, which is an increase in area since Oct 29. The bloom continues and has switched from *Microcystis* to *Dolichospermum*, as confirmed by GLERL's weekly monitoring program. High biomass concentrations are observed from Stony Point, MI to Maumee Bay, with the bloom extending from Maumee Bay westward towards Port Clinton, OH, both along and offshore. Densest bloom is offshore, and scum is present during calm winds. Some patches are found along the Ontario coast west of Point Pelee. No recent toxin data currently available. --R. Stumpf 11/04

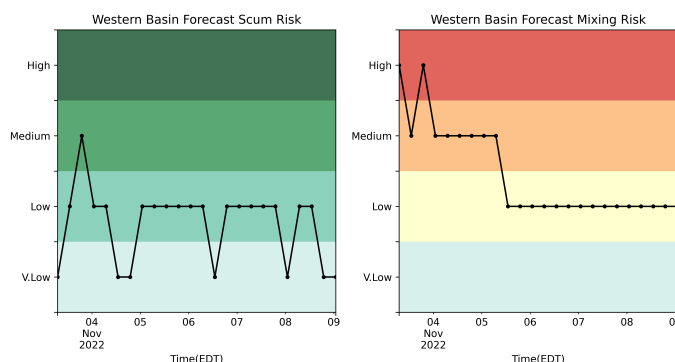
The past few days of imagery can be seen at [the HAB monitoring site](#). The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2022-11-04 11 PM EDT



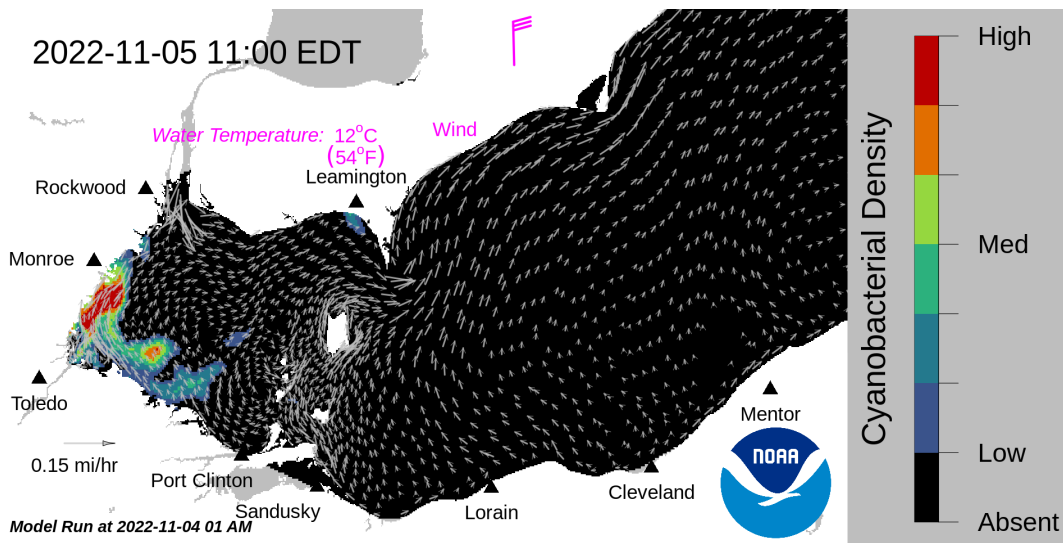
Current Lake Erie Sentinel-3 satellite imagery from the Ocean and Land Color Imager (OLCI) on Nov 02, 2022, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor image of the entire lake. Data derived from Copernicus Sentinel-3.



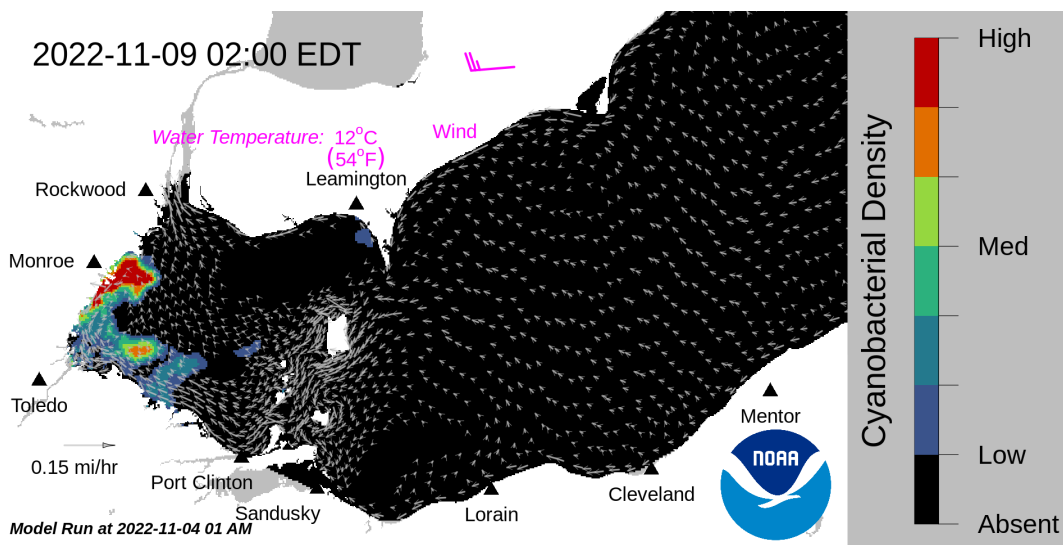
Wind speed and direction from ToledoCrib, OH. Blooms mix through water column at wind speeds > 15 knots.



Where the bloom is present in western Lake Erie, the potential risk of scum (left), and risk of mixing of the bloom down into the water column every 6 hours over the next 5 days.



Forecast surface bloom position for Nov 05, modeled from the last satellite image with water currents estimated from the Lake Erie Operational Forecast System (LEOFS). Potential for bloom movement is forecast in 3-dimensions with a hydrodynamic model using satellite imagery and currents. The modeled output does not contain clouds. Black indicates the absence of chlorophyll and gray indicates area with no data. The arrows show forecasted currents. Water temperature and winds (in magenta) are the averages for the western basin from the model.



Forecast surface bloom position for Nov 09. Black indicates the absence of chlorophyll and gray indicates area with no data. The arrows show forecasted currents. Water temperature and winds (in magenta) are the averages for the western basin from the model.

Additional resource:

- [Archived Lake Erie Forecasts](#)
- [More information about our bloom monitoring imagery](#)
- [FAQs - Frequently Asked Questions about cyanobacteria and the forecasts NOAA issues](#)
- [Contributors and Data Providers](#)
- [Lake Erie HAB Forecast Guide - User guide to help navigate the forecast products](#)



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