

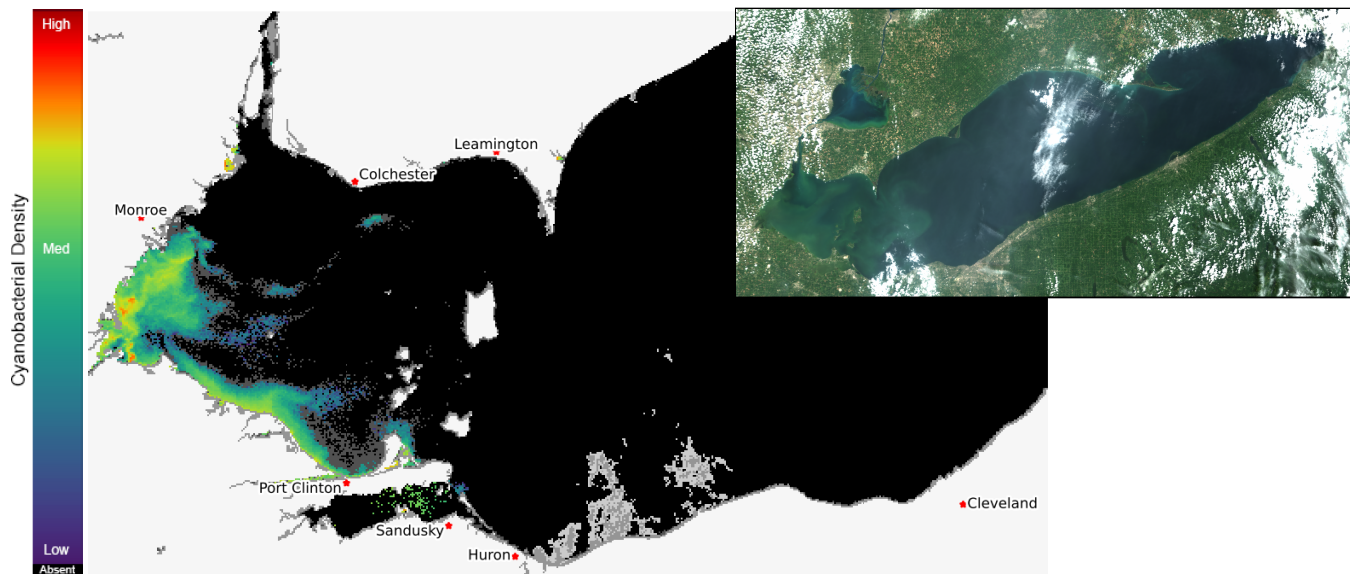
Lake Erie Harmful Algal Bloom Forecast

Imagery Analysis & Forecast - 2021-08-23

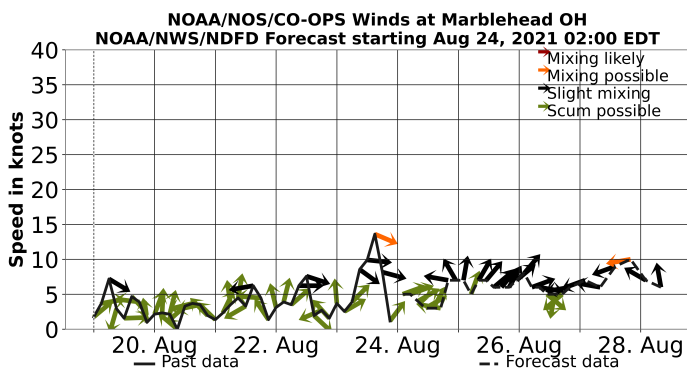


The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 200 square miles, which is a decrease in area since Aug 20. The bloom extends from Monroe, MI to vicinity of Marblehead, OH, although quite variable in intensity. Near Monroe the bloom has extended offshore in a band into the middle of the lake and into Canadian waters. In areas with orange or red color, or in sheltered areas, scum is likely during calm winds. No recent toxin data currently available. --Stumpf 08/22

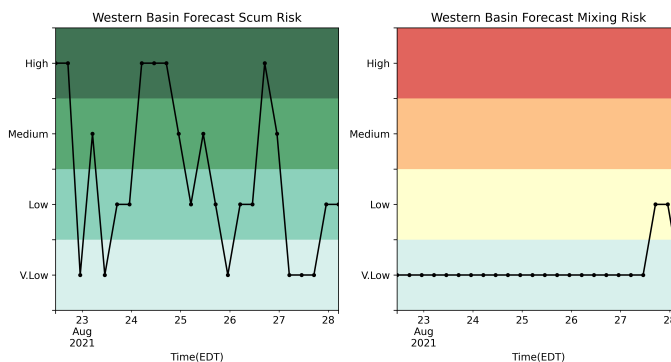
The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2021-08-23 11 PM EDT



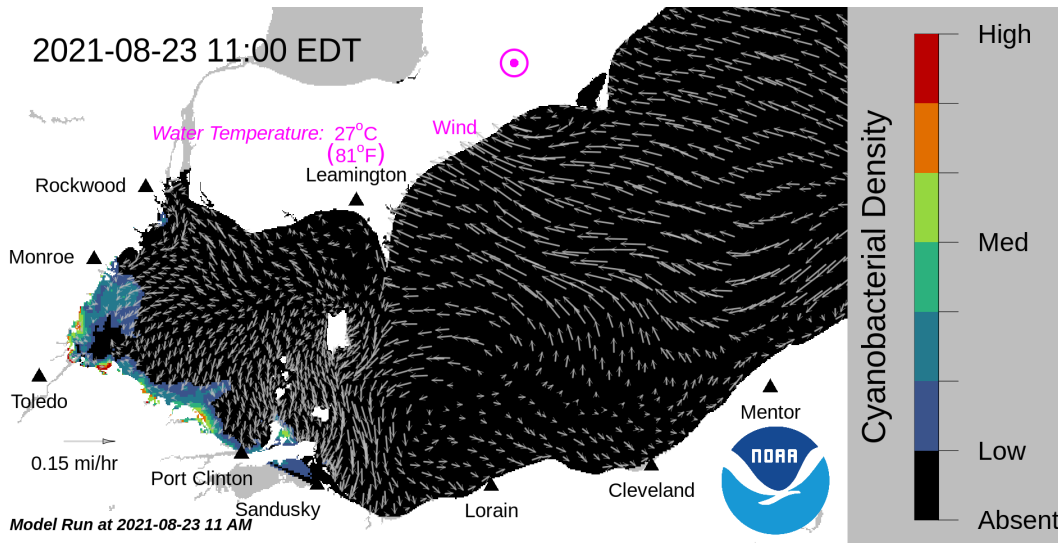
Current Lake Erie Sentinel-3B satellite imagery from the Ocean and Land Color Imager (OLCI) on Aug 22, 2021, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor image of the entire lake. Data derived from Copernicus Sentinel-3.



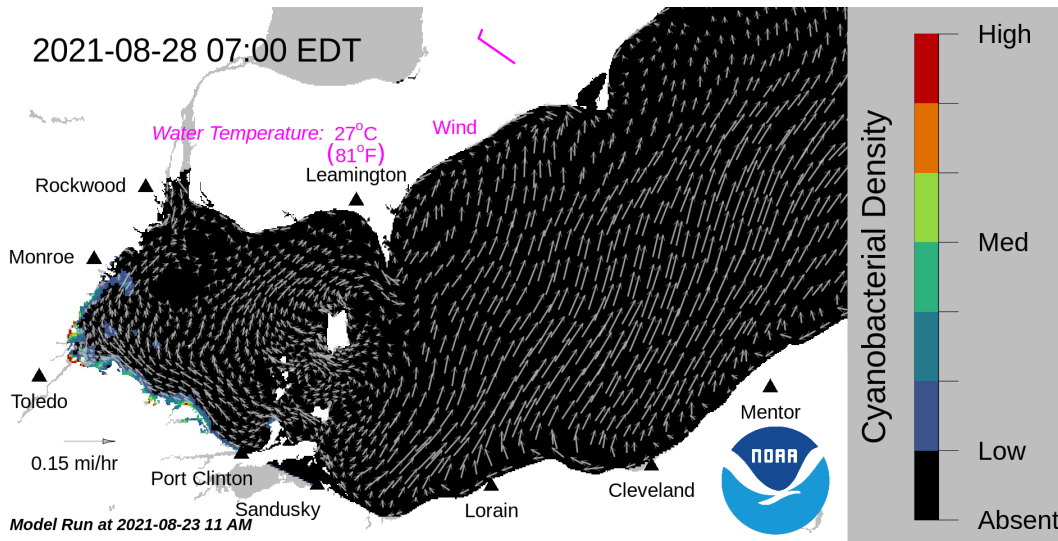
Wind speed and direction from Marblehead, OH. Blooms mix through water column at wind speeds > 15 knots.



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. Mixing is weakest during mild winds.



Forecast surface bloom position for Aug 23, 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 Aug 28. 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](#)