

Lake Erie Harmful Algal Bloom Forecast

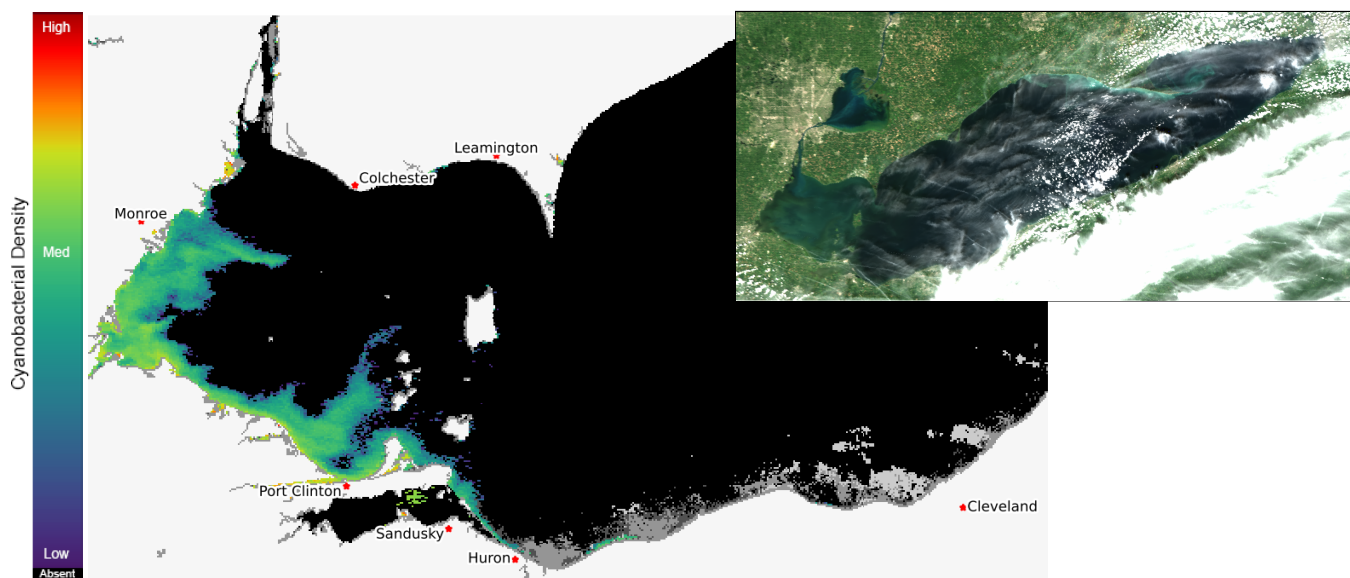


Imagery Analysis & Forecast - 2021-08-16

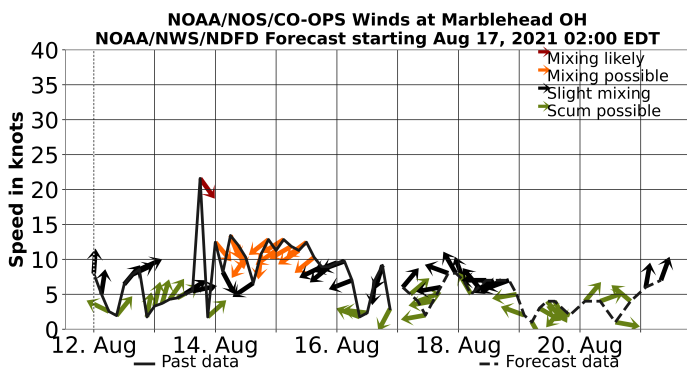
The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 300 square miles, which is an increase in area since Aug 05. The bloom has shifted west and northward along the Michigan coast extending from north of Monroe to Sandusky. There may be a small patch hugging the coast to Lorain, but it is obscured by clouds. The bloom extends further into the lake approaching the Bass Islands. The forecast model projects an intensification of the surface bloom and movement towards the Bass Islands late Thursday into Friday. Traces of cyanobacteria are detectable in Sandusky Bay. This is unrelated to western Lake Erie blooms. The seasonal forecast was issued June 30. Toxins have been detected below the recreational limit. They can be highly concentrated in scums! If you see scum, keep your pets and yourself out of the water. In the satellite imagery or bloom forecast position products, any areas that are orange or red are likely to have scum, especially during calm winds, see Mixing Forecast product.

--Tomlinson 08/16

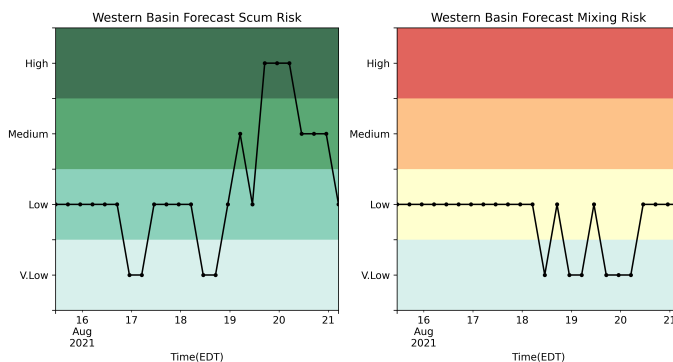
The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2021-08-16 11 PM EDT



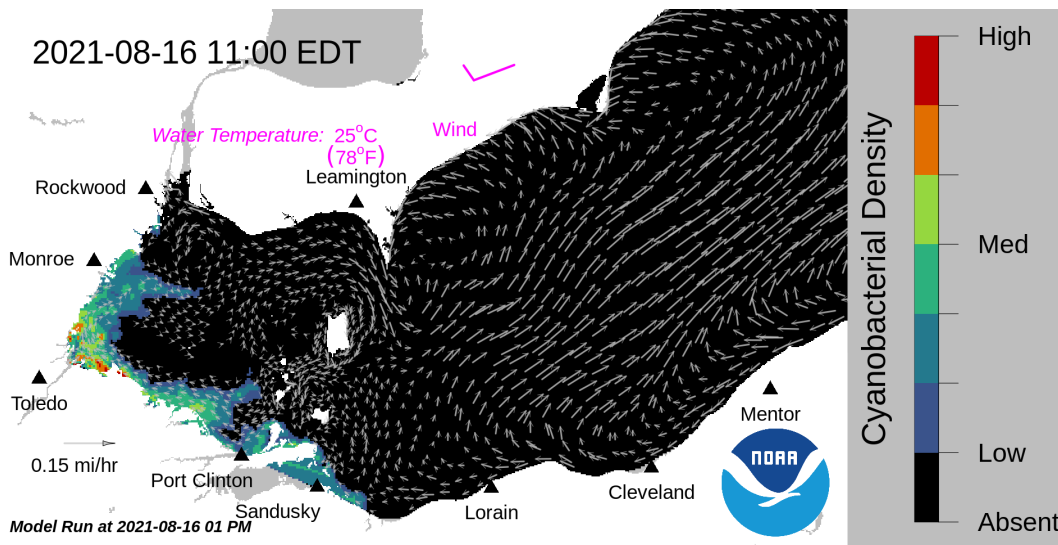
Current Lake Erie Sentinel-3 A and B composited satellite imagery from the Ocean and Land Color Imager (OLCI) on Aug 15, 2021, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor composite image of the entire lake. Data derived from Copernicus Sentinel-3.



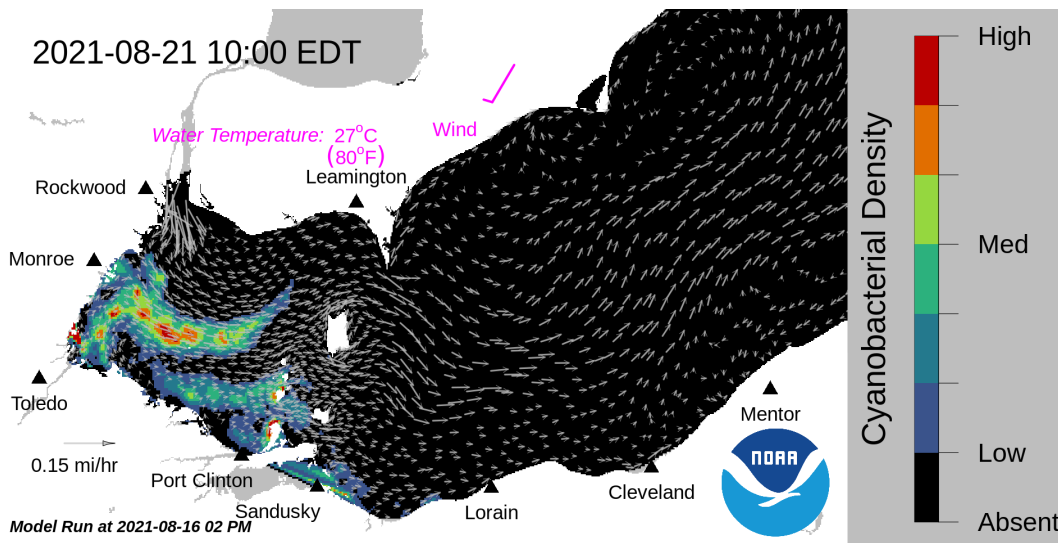
Wind speed and direction from Marblehead, OH. Blooms mix through water column at wind speeds > 15 knots.



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 16, 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 21. 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](#)