

# Lake Erie Harmful Algal Bloom Forecast

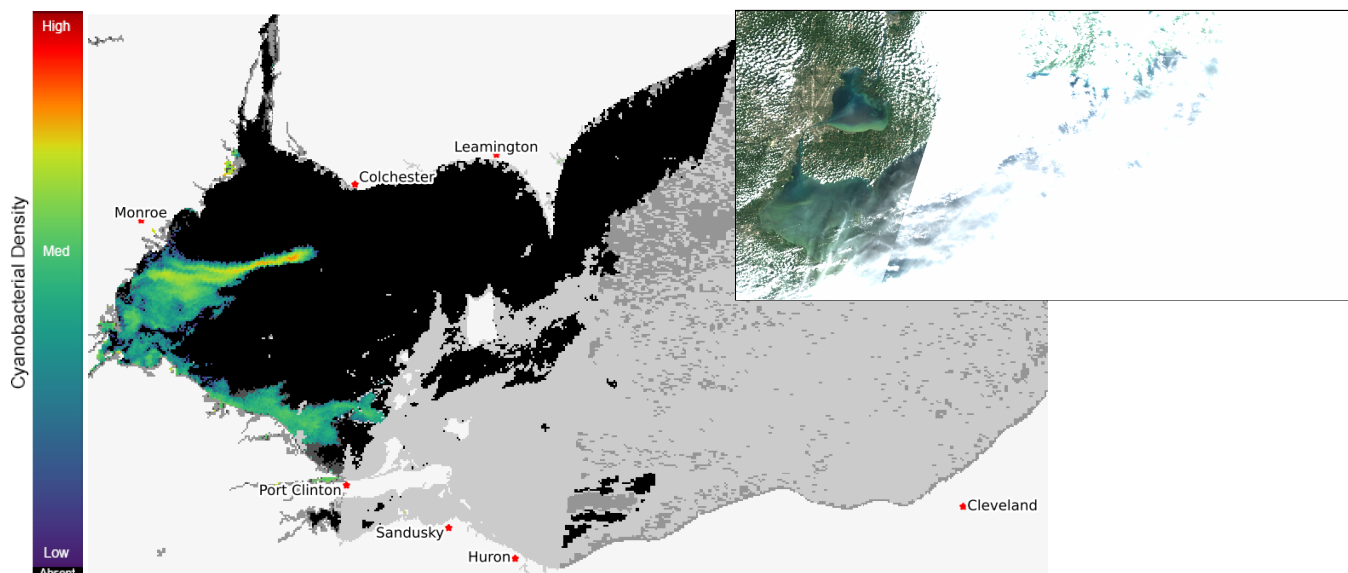
## Imagery Analysis & Forecast - 2021-08-19



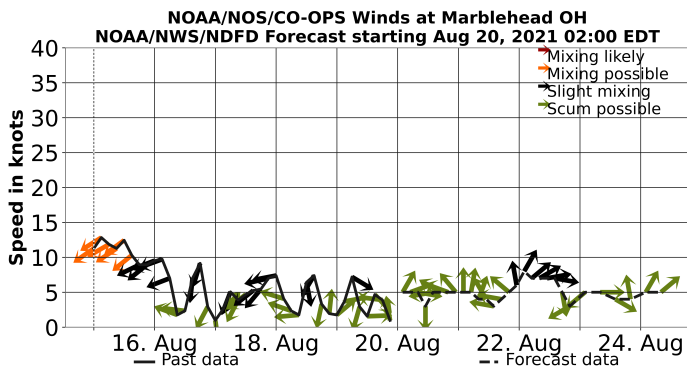
The *Microcystis* cyanobacteria bloom is present in western Lake Erie but cloud cover and winds prevent determining the area. Clouds obscure imagery. As of 8/17, the bloom extends from Monroe to Port Clinton and probably extends at least to Sandusky. The area extending offshore near Monroe has intensified. The forecast model projects that low concentrations of surface bloom may approach the Bass Islands by the weekend. 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 08/19

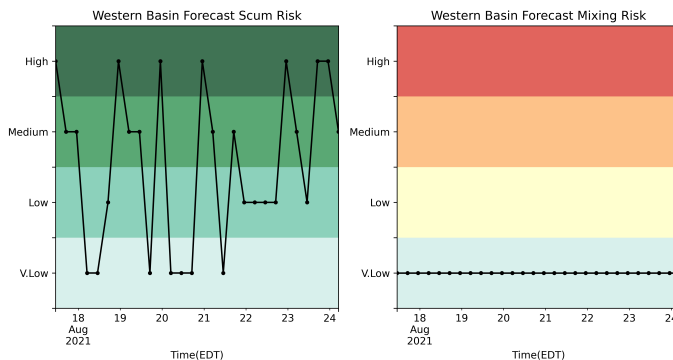
The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact [hab@noaa.gov](mailto:hab@noaa.gov) for technical Questions. Last Updated: 2021-08-19 11 PM EDT



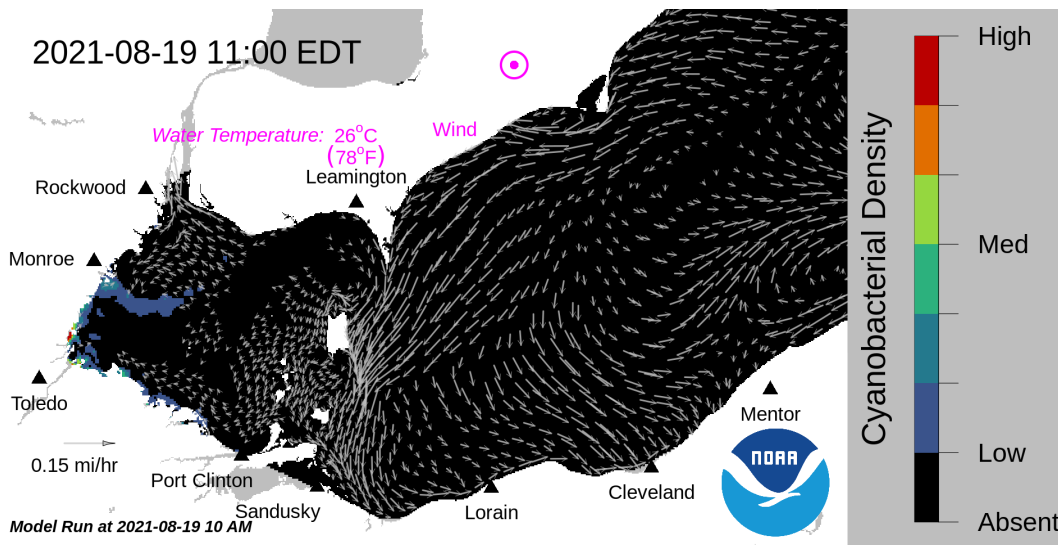
Current Lake Erie Sentinel-3 A and B composited satellite imagery from the Ocean and Land Color Imager (OLCI) on Aug 17, 2021, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor composite image of the entire lake. Data derived from Copernicus Sentinel-3.



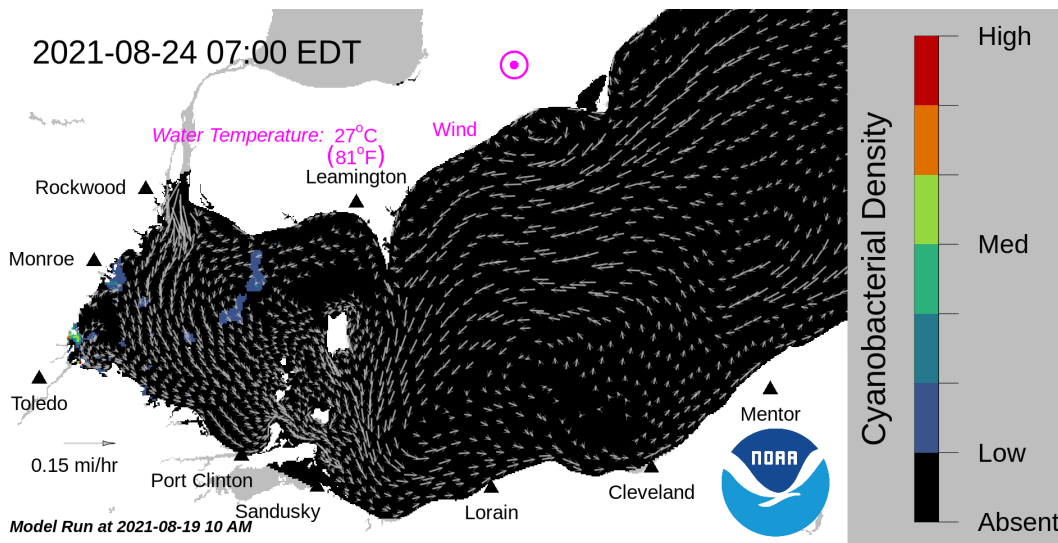
Wind speed and direction from Marblehead, OH. Blooms mix through water column at wind speeds > 15 knots.



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 19, 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 24. 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](#)