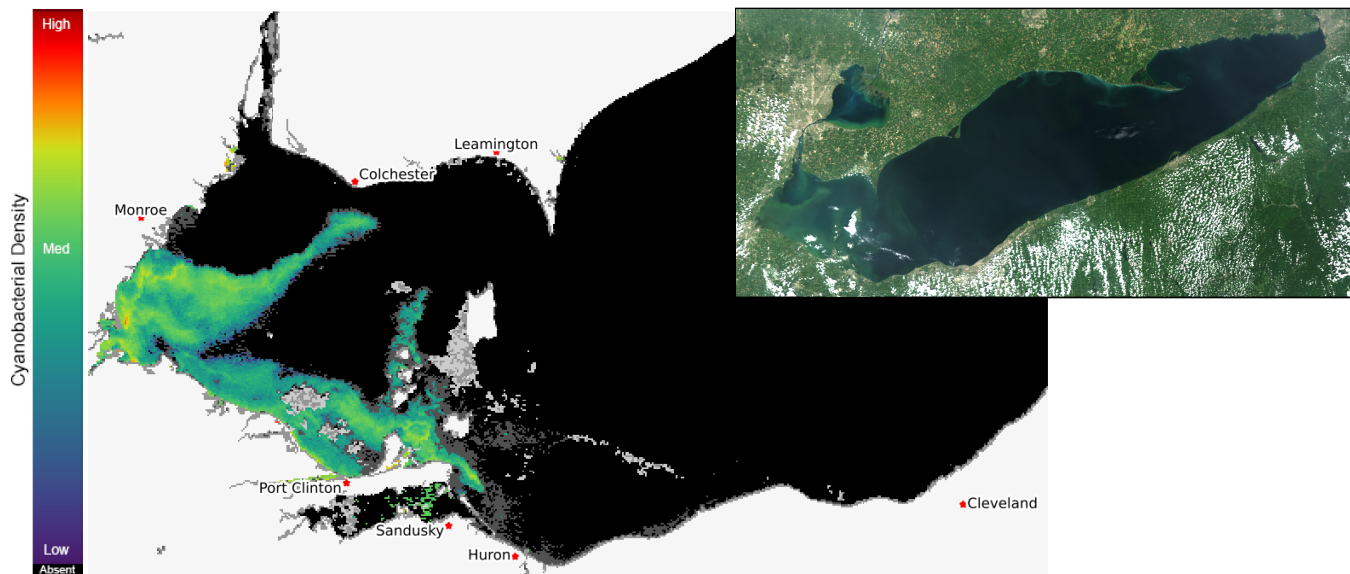


Lake Erie Harmful Algal Bloom Forecast

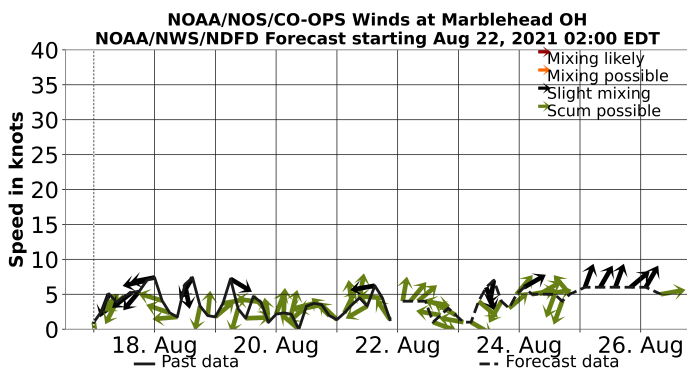


Imagery Analysis & Forecast - 2021-08-21

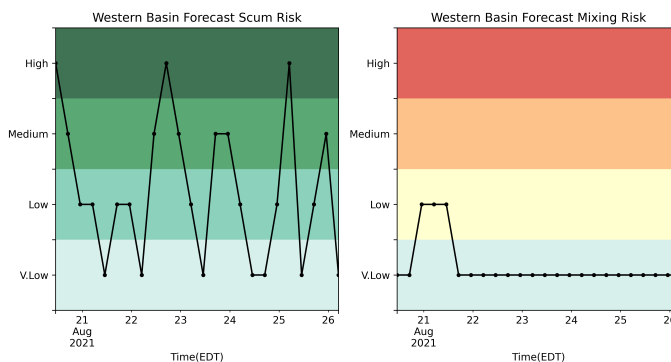
The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 360 square miles, which is an increase in area since Aug 19. The bloom extends from Monroe, MI to Marblehead, OH and out to the islands. Near Monroe the bloom has extended offshore into the middle of the lake. In areas with orange or red color, scum is likely during calm winds. The seasonal forecast was issued June 30. No recent toxin data currently available. --Stumpf 08/21
 The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2021-08-21 11 PM EDT



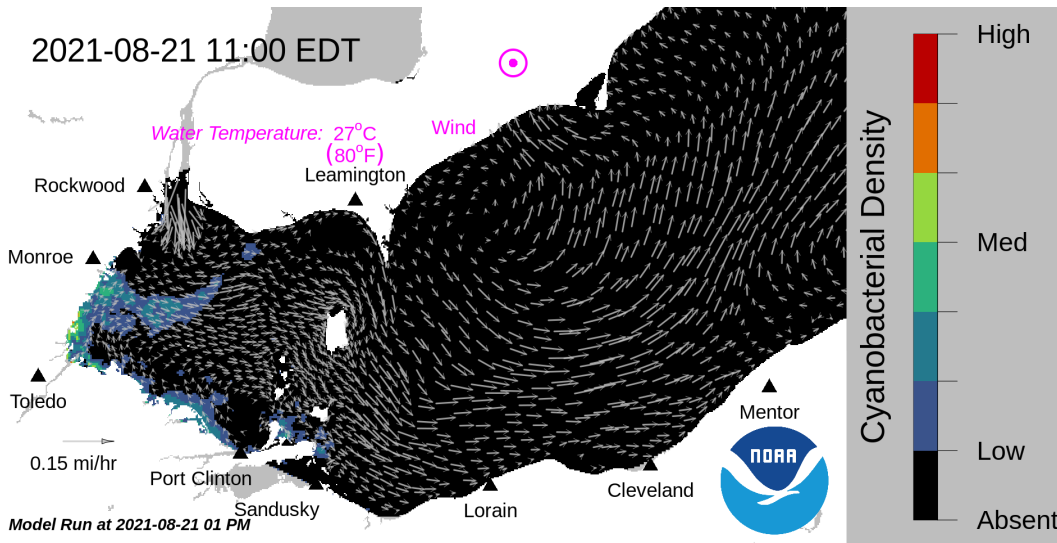
Current Lake Erie Sentinel-3A satellite imagery from the Ocean and Land Color Imager (OLCI) on Aug 20, 2021, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor image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



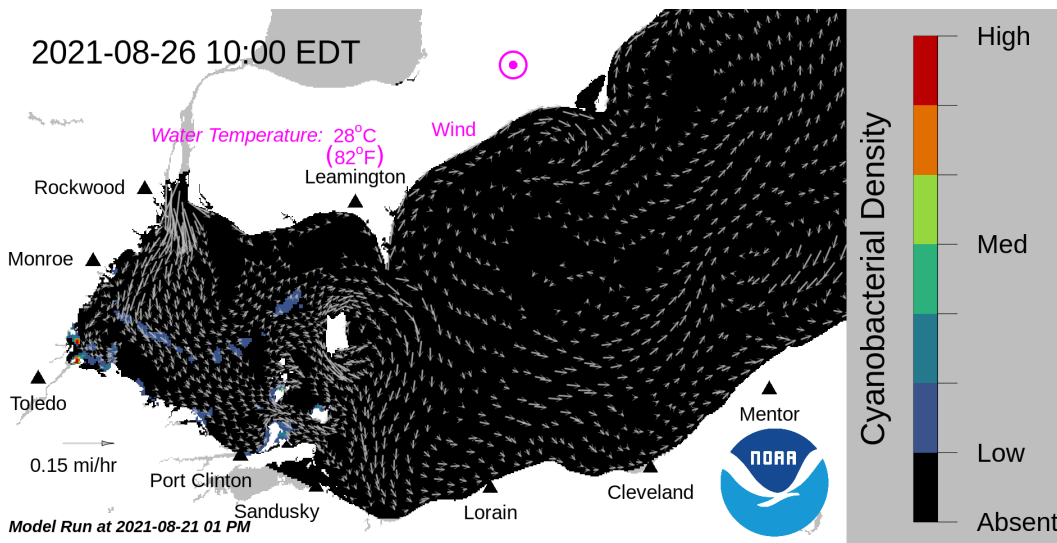
Wind speed and direction from Marblehead, OH. Blooms mix through water column at wind speeds > 15 knots.



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 21, 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 26. 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](#)