

# Lake Erie Harmful Algal Bloom Forecast

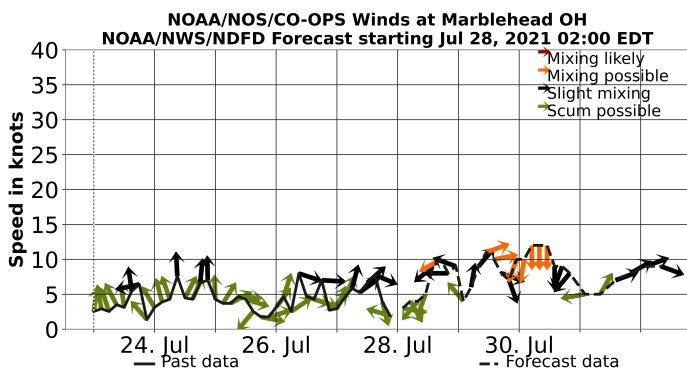
## Imagery Analysis & Forecast - 2021-07-27



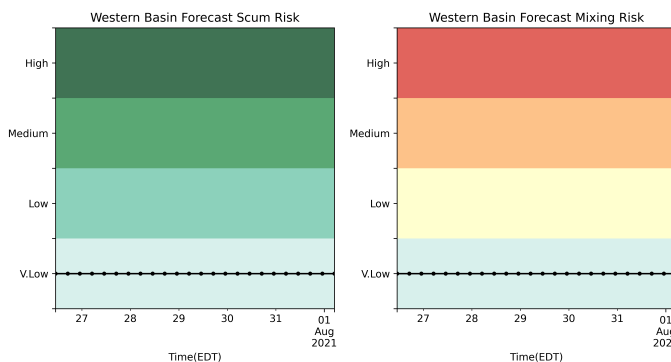
The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 40 square miles, which is an increase in area since Jun 16. The cyanobacteria is patchy along and near the Ohio coast, mostly west of the Portage River, except a small patch near Sandusky Bay. Some sediment from recent rainfall is in Maumee Bay. Sandusky Bay has some traces of cyanobacteria. This is unrelated to western Lake Erie blooms. The seasonal forecast was issued June 30. No recent toxin data currently available. --Stumpf 07/27



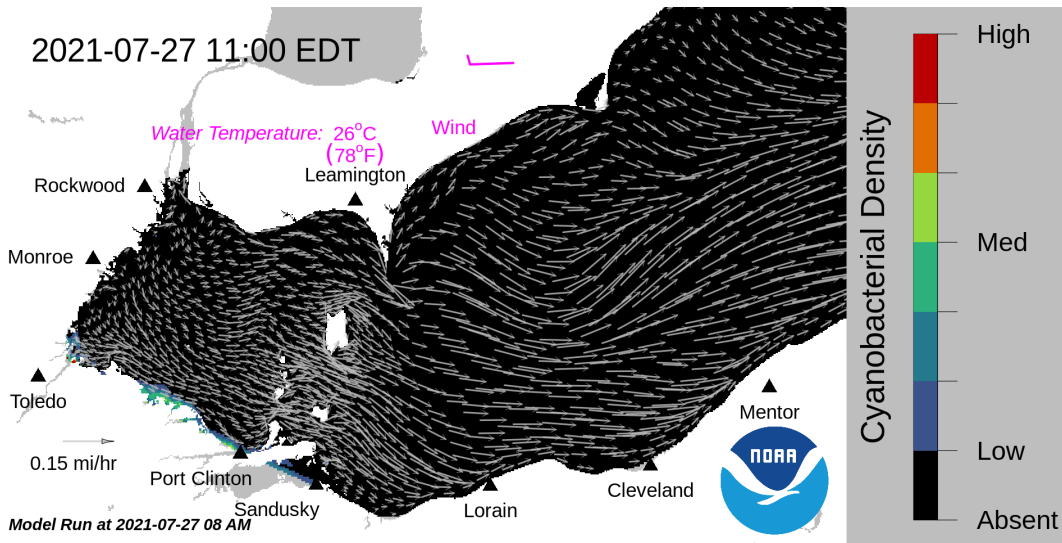
Lake Erie current Sentinel-3B satellite imagery from the Ocean and Land Color Imager (OLCI) on Jul 26, 2021, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows truecolor image of the entire lake. Data derived from Copernicus Sentinel-3.



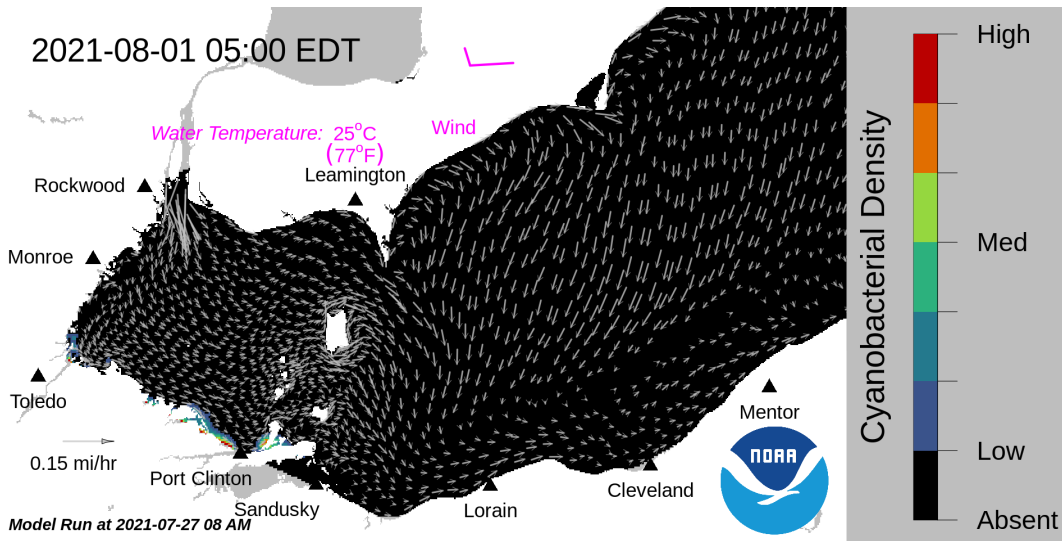
Wind speed and direction from Marblehead, OH. Blooms mix through water column at wind speeds > 15 knots.



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 Jul 27, 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 01. 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](#)