

Lake Erie Harmful Algal Bloom Forecast

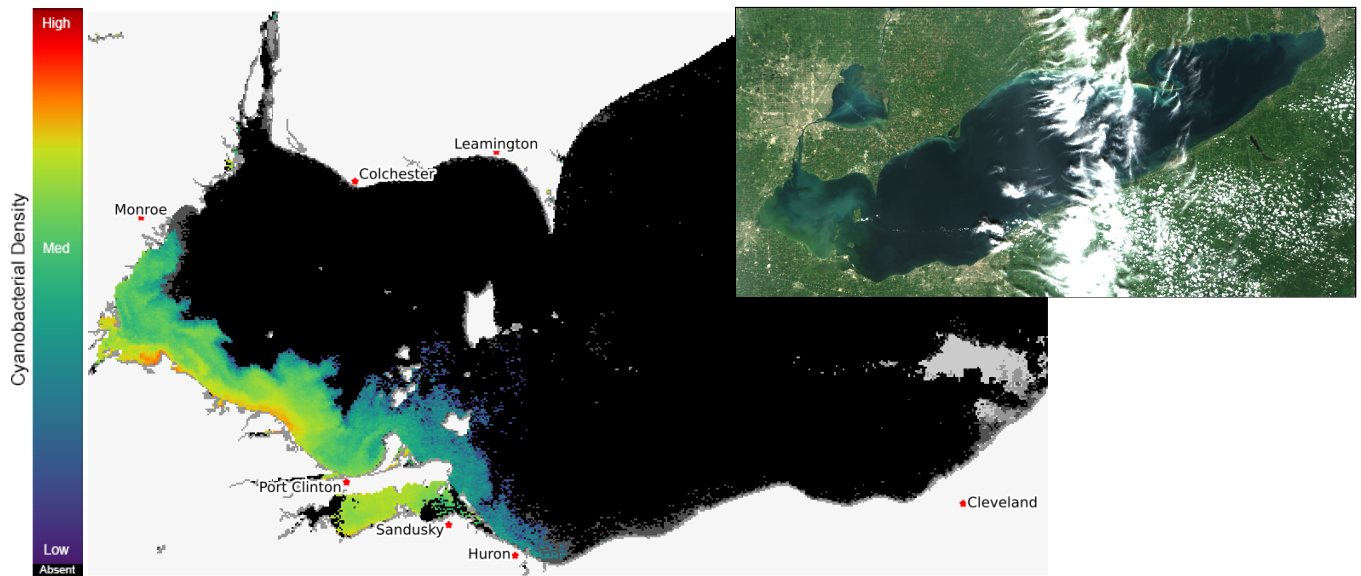


NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE

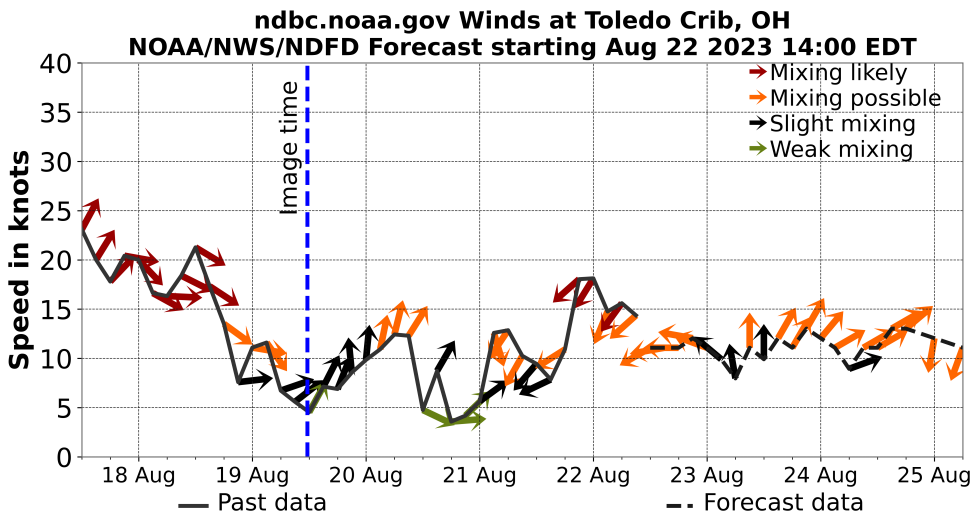
Imagery Analysis & Forecast - 2023-08-22

The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 360 square miles, which is unchanged from Aug 16. Elevated winds and cloud cover have prevented clear satellite imagery in recent days. As of 8/19, the bloom extends from Monroe, MI to Huron, OH and into the western basin towards Kelleys Island, OH. Highest concentrations are observed in the nearshore waters from Maumee Bay to east of Magee Marsh Wildlife Area. Sandusky Bay has a local bloom of mixed cyanobacteria. 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. --A. Hounshell 8/22/2023.

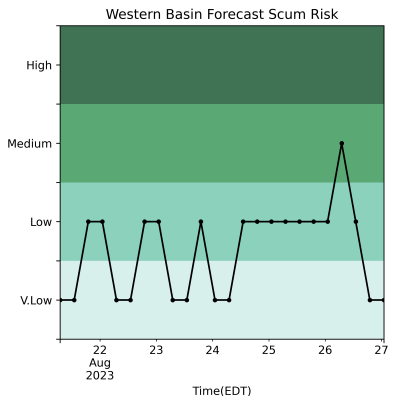
The past few days of imagery can be seen at [the HAB monitoring site](#). The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2023-08-22 11 AM EST



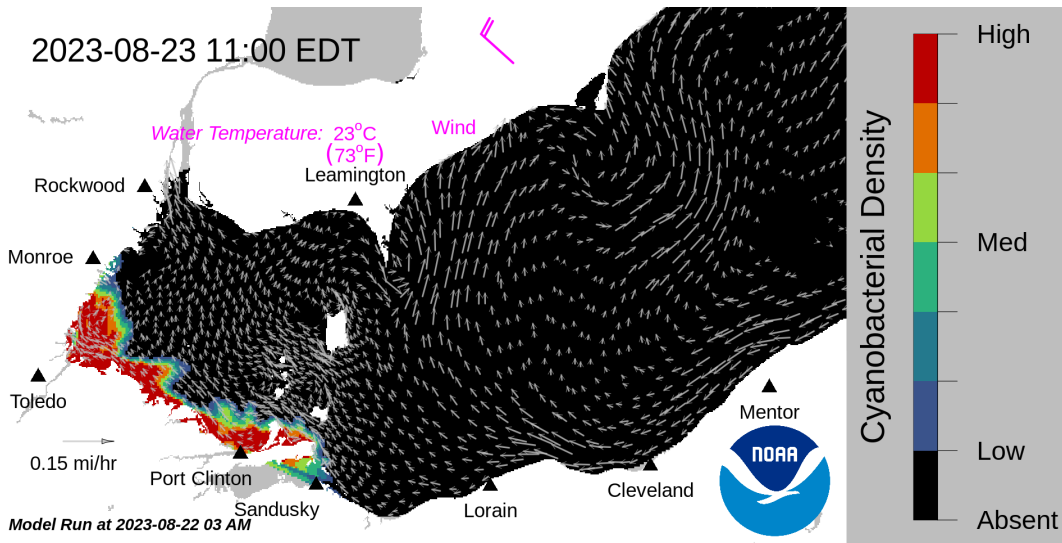
Current Lake Erie Sentinel-3 satellite imagery from the Ocean and Land Color Imager (OLCI) on Aug 19, 2023, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor image of the entire lake. Data derived from Copernicus Sentinel-3.



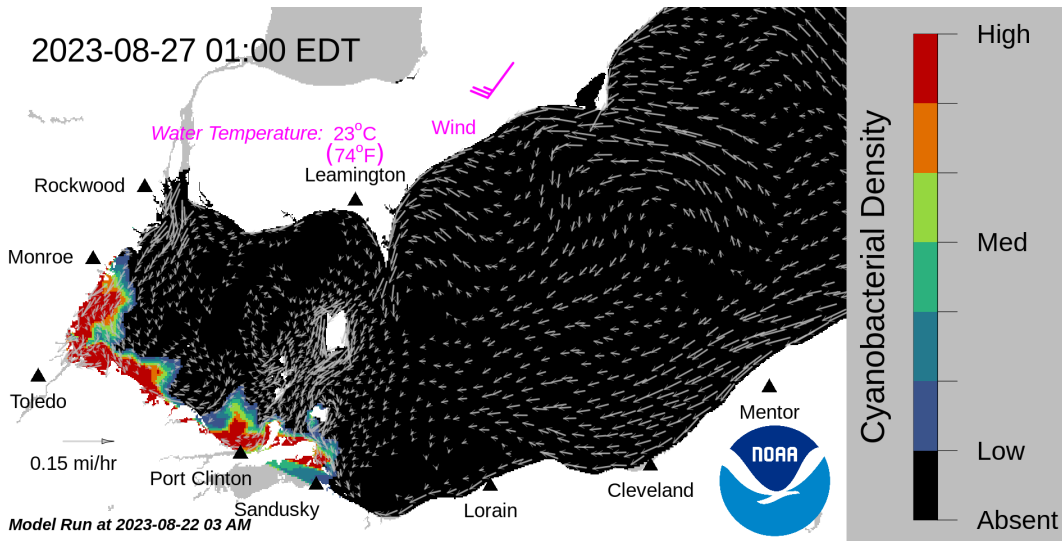
Wind speed and direction from ToledoCrib, OH. Blooms mix through water column at wind speeds > 15 knots.



Where the bloom is present in western Lake Erie, the potential risk of scum.



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 27. 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](#)