

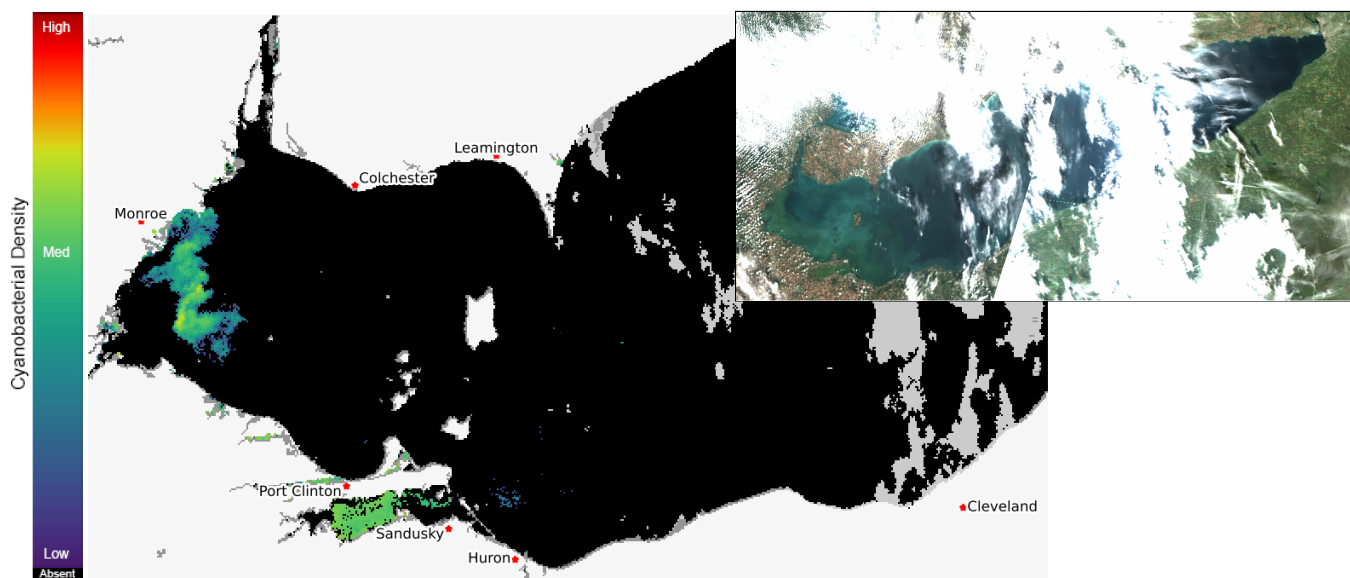
# Lake Erie Harmful Algal Bloom Forecast



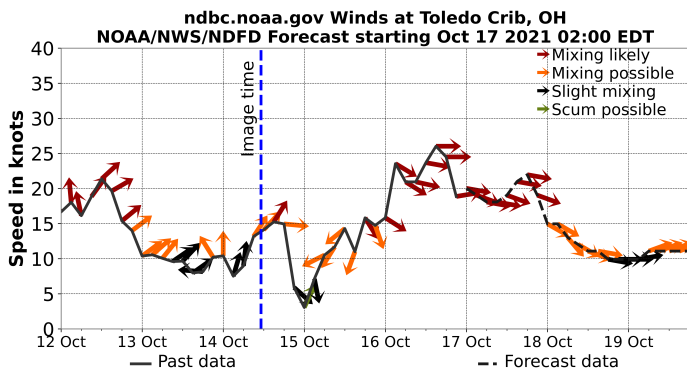
## Imagery Analysis & Forecast - 2021-10-16

The *Microcystis* cyanobacteria bloom in western Lake Erie has an approximate area of 80 square miles, which is unchanged from Oct 14. The bloom continues to be present offshore of Monroe, MI, and east and south toward Maumee Bay. We expect more disruption this weekend with the shift to fall weather (cold fronts and cooler). Cyanobacteria (unrelated to western Lake Erie) is detectable in parts of Sandusky Bay, but in combination with other algae. 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. --Stumpf 10/15

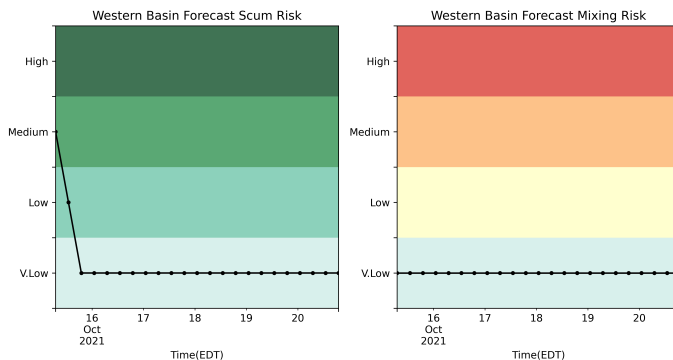
The past few days of imagery can be seen at [the HAB monitoring site](#). The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact [hab@noaa.gov](mailto:hab@noaa.gov) for technical Questions. Last Updated: 2021-10-16 11 PM EDT



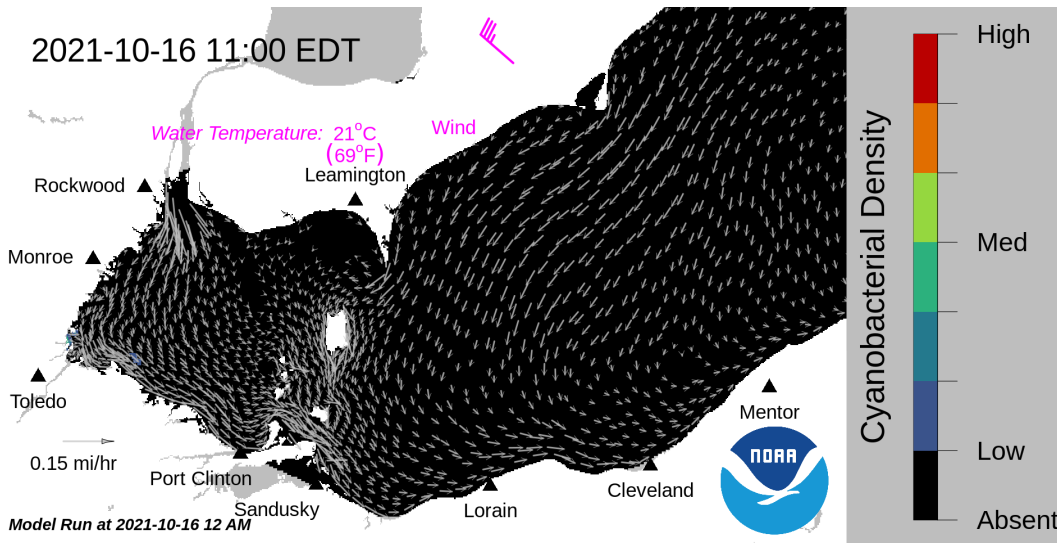
Current Lake Erie Sentinel-3 A and B composited satellite imagery from the Ocean and Land Color Imager (OLCI) on Oct 14, 2021, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor composite image of the entire lake. Data derived from Copernicus Sentinel-3.



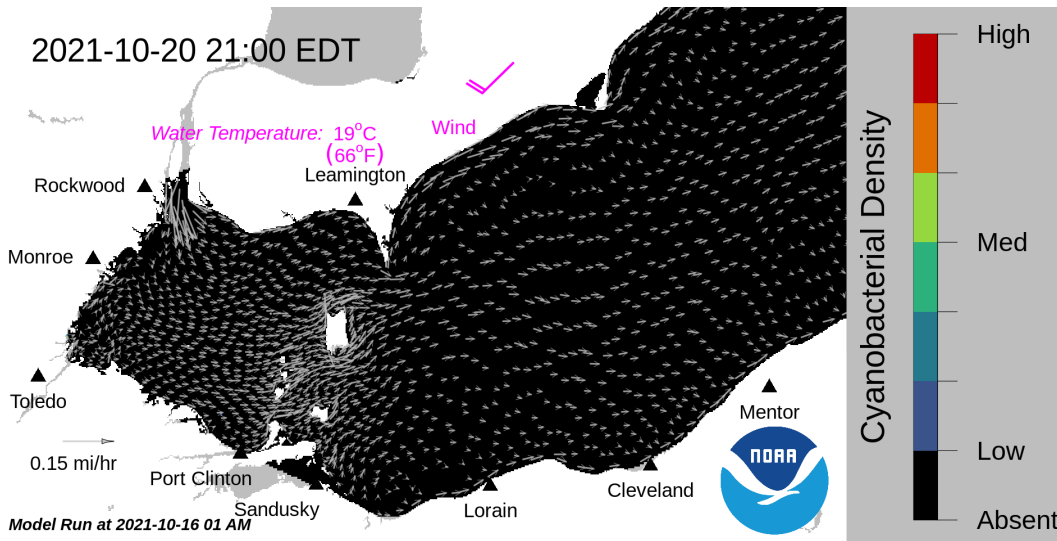
Wind speed and direction from ToledoCrib, OH. Blooms mix through water column at wind speeds > 15 knots.



Where the bloom is present in western Lake Erie, the potential risk of scum (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 Oct 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 Oct 20. 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](#)