

Lake Erie Harmful Algal Bloom Forecast



NATIONAL CENTERS FOR
COASTAL OCEAN SCIENCE

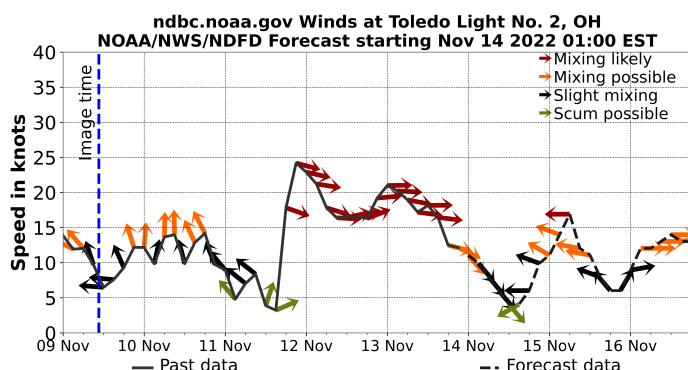
Imagery Analysis & Forecast - 2022-11-13

The *Microcystis* cyanobacteria bloom is present in western Lake Erie but cloud cover and winds prevent determining the area. Elevated winds (> 9 mph) have persisted over the past week, leading to water column mixing and reduced surface concentrations of *Dolichospermum*, as observed with satellite imagery. We will continue to monitor conditions. No recent toxin data currently available. --A. Hounshell 11/10

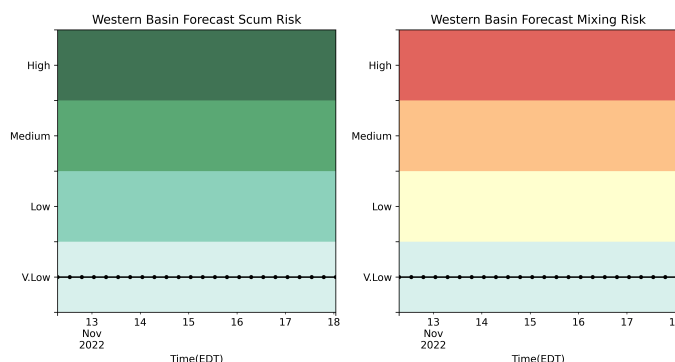
The past few days of imagery can be seen at [the HAB monitoring site](#). The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2022-11-13 11 PM EST



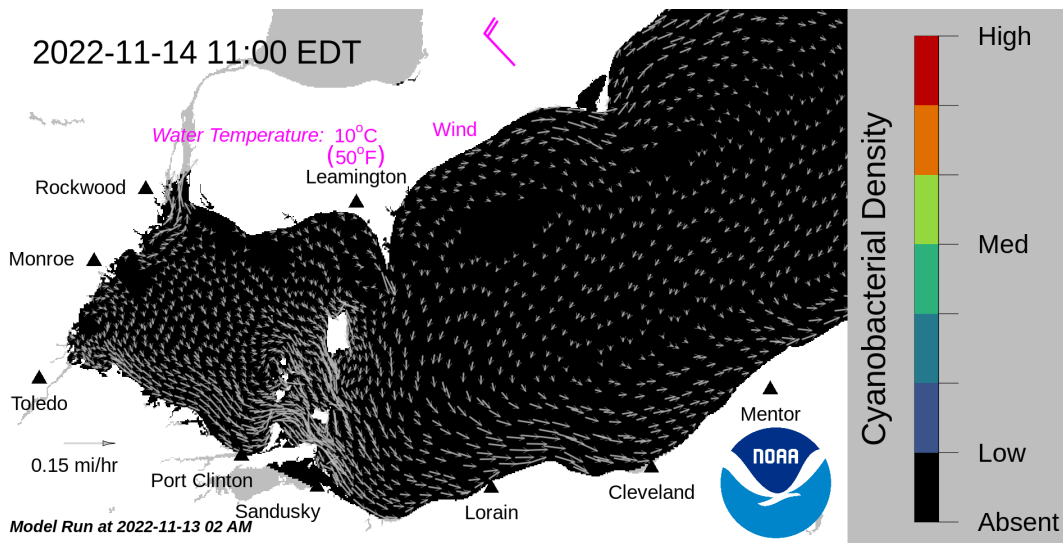
Current Lake Erie Sentinel-3 satellite imagery from the Ocean and Land Color Imager (OLCI) on Nov 09, 2022, showing bloom location and extent in the western basin. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Inset shows a truecolor image of the entire lake. Data derived from Copernicus Sentinel-3.



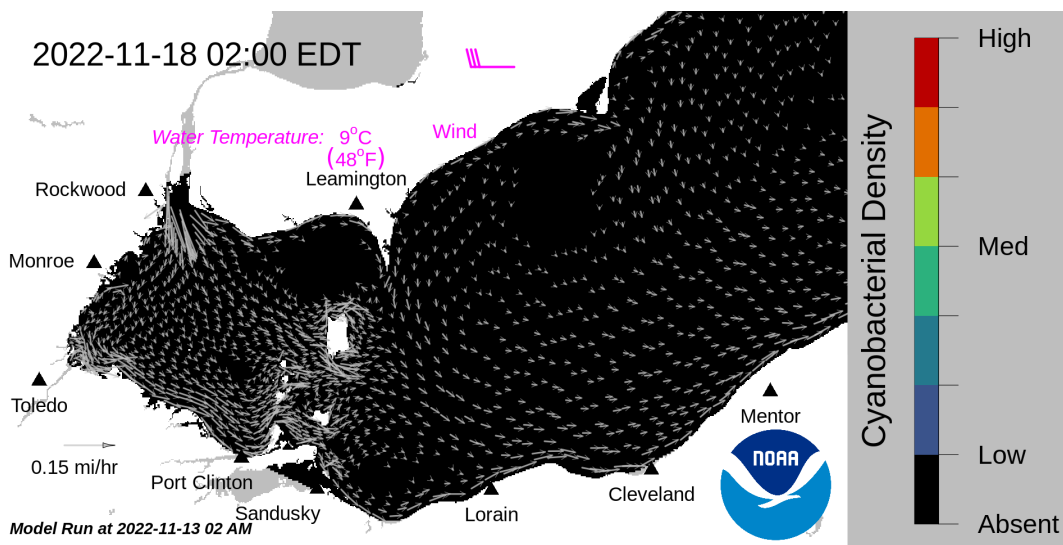
Wind speed and direction from ToledoLightNo.2, OH. Blooms mix through water column at wind speeds > 15 knots.



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.



Forecast surface bloom position for Nov 14, 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 Nov 18. 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](#)