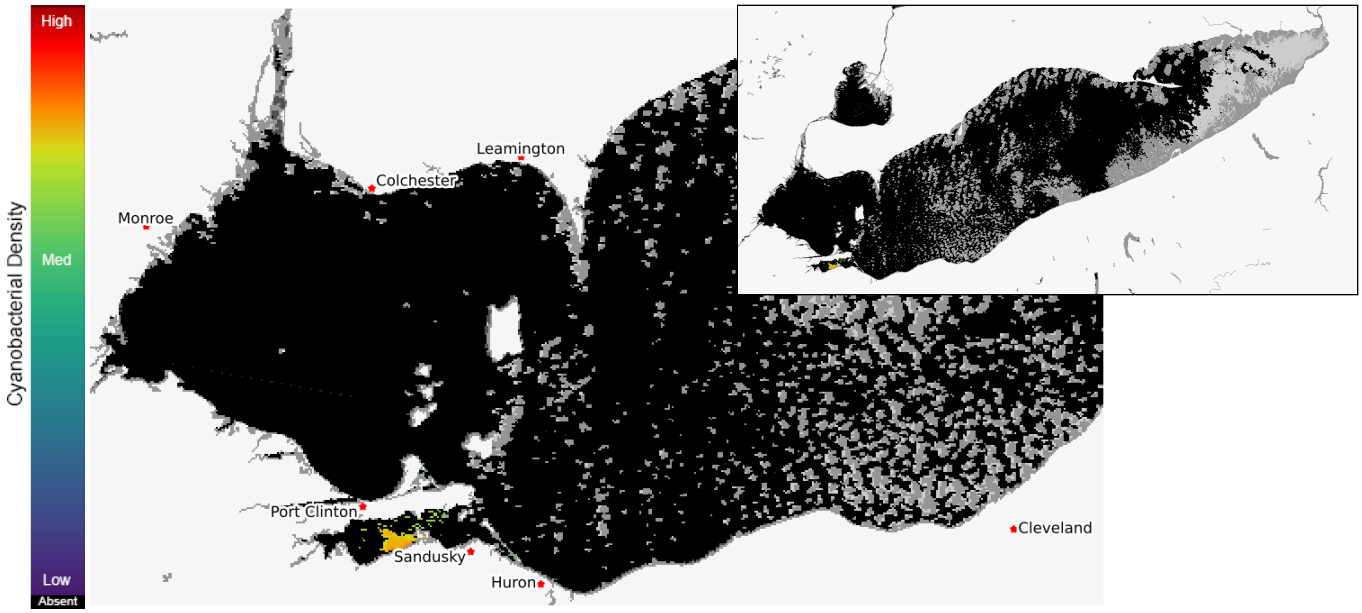
Lake Erie Harmful Algal Bloom Forecast

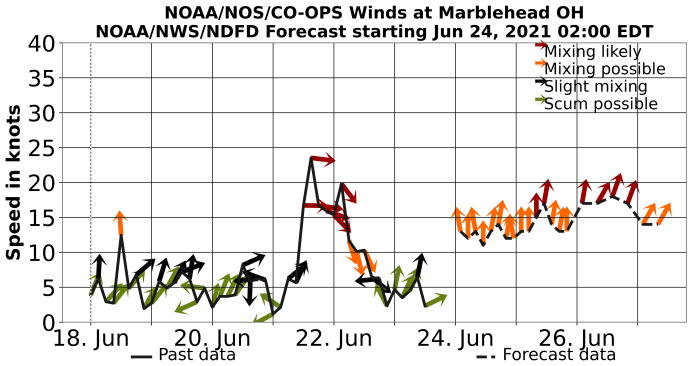
Imagery Analysis & Forecast - 2021-06-23

Cyanobacteria is not currently detectable by satellite in western Lake Erie. So far, only traces of cyanobacteria are present in western Lake Erie. The seasonal forecast will be issued on June 30, check Ohio Sea Grant for information. Cyanobacteria are now detectable in parts of Sandusky Bay. This is unrelated to western Lake Erie blooms. No recent toxin data currently available.

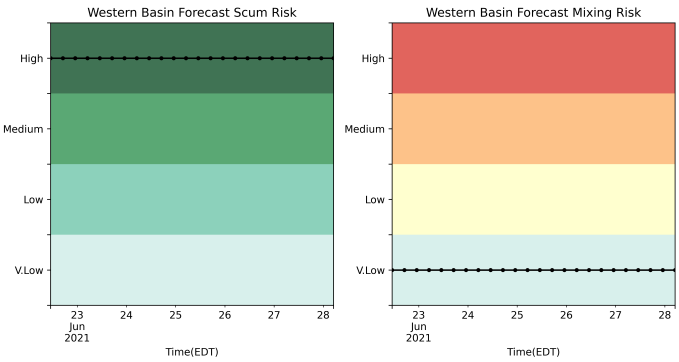
The Lake Erie Forecast is operated by the National Centers for Coastal Ocean Science. Contact hab@noaa.gov for technical Questions. Last Updated: 2021-06-23 02 PM EDT --Tomlinson



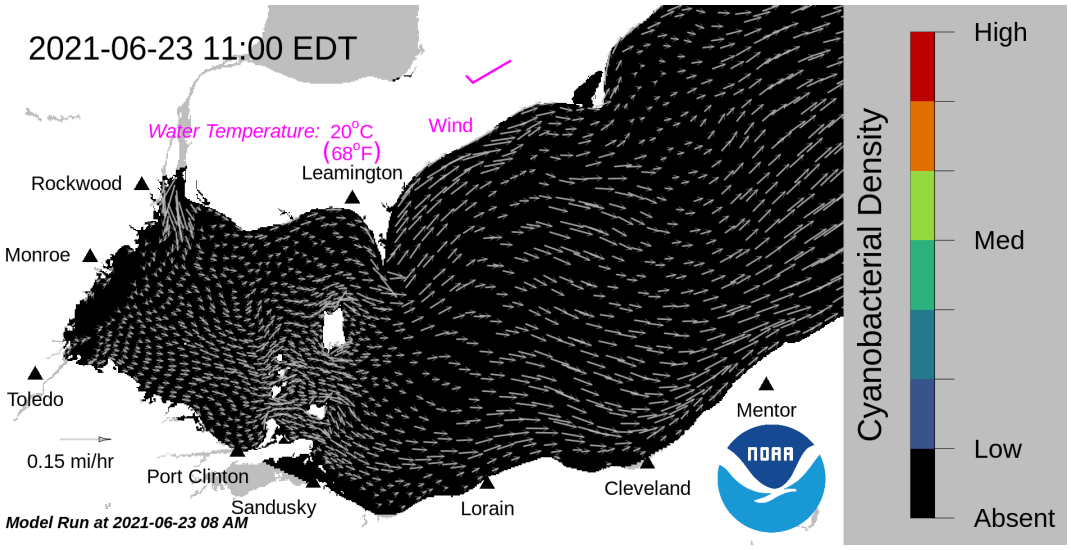
Lake Erie current satellite imagery from the Ocean and Land Color Imager (OLCI) on Jun 22, 2021, showing bloom location and extent. Grey indicates clouds or missing data. The estimated threshold of cyanobacteria detection is 20,000 cells/mL. Data derived from Copernicus Sentinel-3.



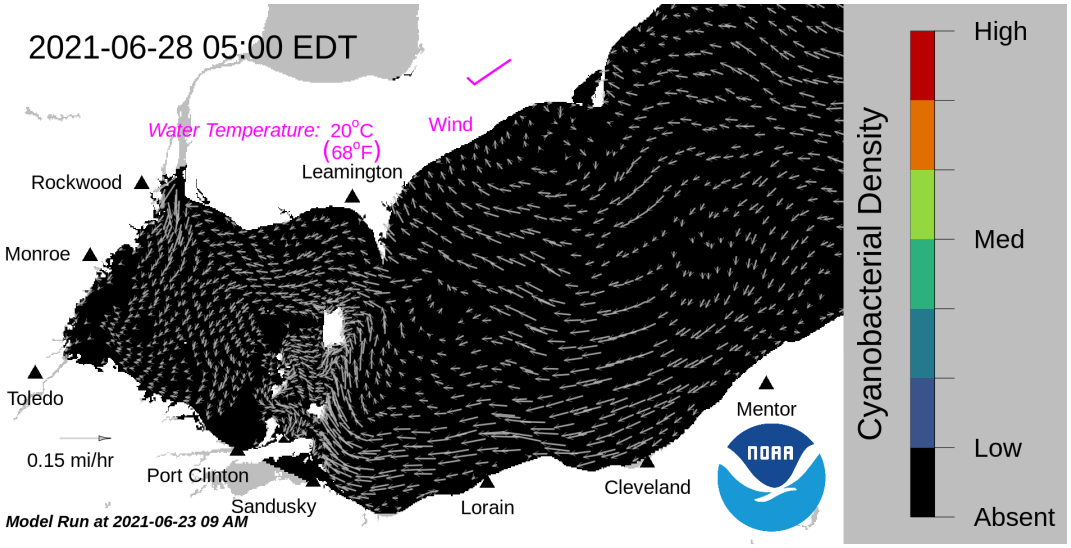
Wind speed and direction from Marblehead, OH. Blooms mix through water column at wind speeds > 15 knots.



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 Jun 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 Jun 28. 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