



Lake Erie Harmful Algal Bloom Bulletin

02 July, 2018, Bulletin 04

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin, extending north just offshore the Michigan coast to south of Brest Bay, and east offshore the Ohio coast, past the Bass Islands to Pelee Island. Observed winds over the weekend (6/29-7/1) reduced mixing and increased surface *Microcystis* concentrations. Scum has been observed alongshore South Bass Island. Measured toxin concentrations are below recreational thresholds throughout most of the bloom extent, but concentrations can exceed the threshold in the western extent of the bloom where it is most dense (appearing green from a boat). *Keep pets and yourself out of the water in areas where scum is forming.* The persistent cyanobacteria bloom in Sandusky Bay continues, spilling out of the bay and east along the Ohio coast. A cyanobacteria bloom has been newly identified in the central basin, 8 km offshore from the Mouth of Vermillion River, extending east to Euclid Beach Park and along the coast past Erie Bluffs State Park.

Forecasts

Forecast winds (7-12 kn) today and tomorrow (7/2-3) may cause mixing, reducing surface *Microcystis* concentrations, while promoting the northeasterly transport of surface *Microcystis* concentrations towards the Michigan and Ontario coasts today through Thursday (7/2-5).

—Ludema, Keeney

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: <http://publicapps.odh.ohio.gov/beachguardpublic/>

Ohio EPA's site on harmful algal blooms: <http://epa.ohio.gov/HAB-Algae>

NOAA's GLERL provides additional HAB data here: http://www.glerl.noaa.gov/res/HABs_and_Hypoxia

The images below are "GeoPDF". Please visit <https://go.usa.gov/xReTC> for instructions on viewing longitude and latitude.

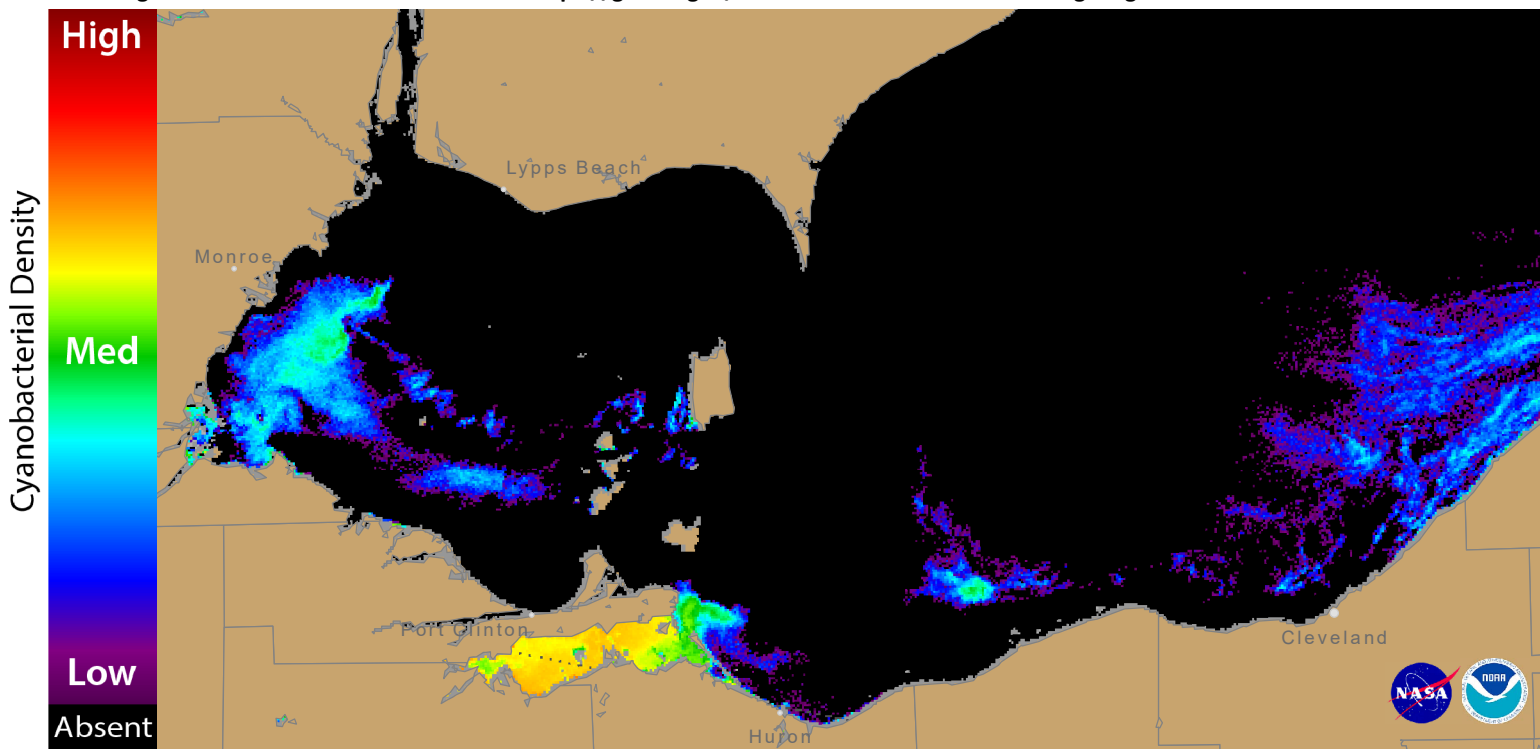


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 01 July, 2018 at 11:46 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/ml

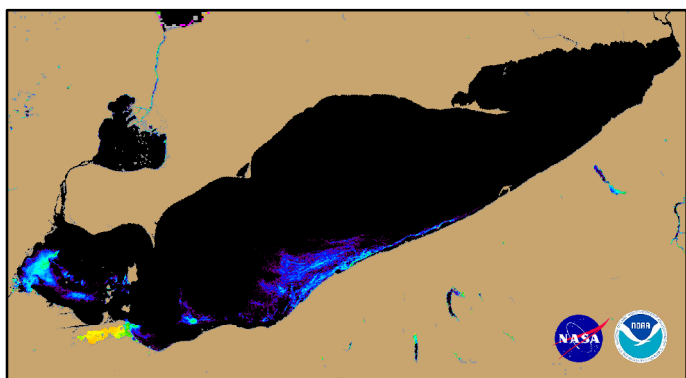
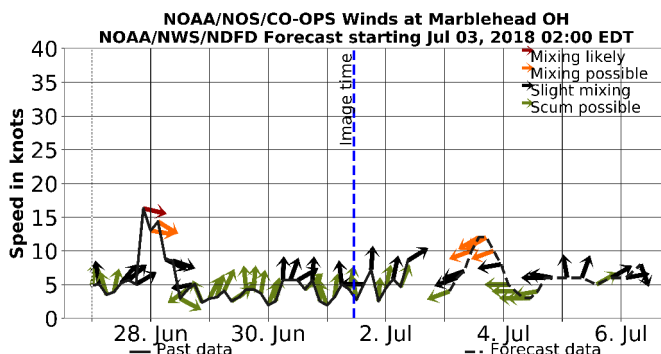


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 01 July, 2018 at 11:46.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: <https://tidesandcurrents.noaa.gov/hab/lakeerie.html>

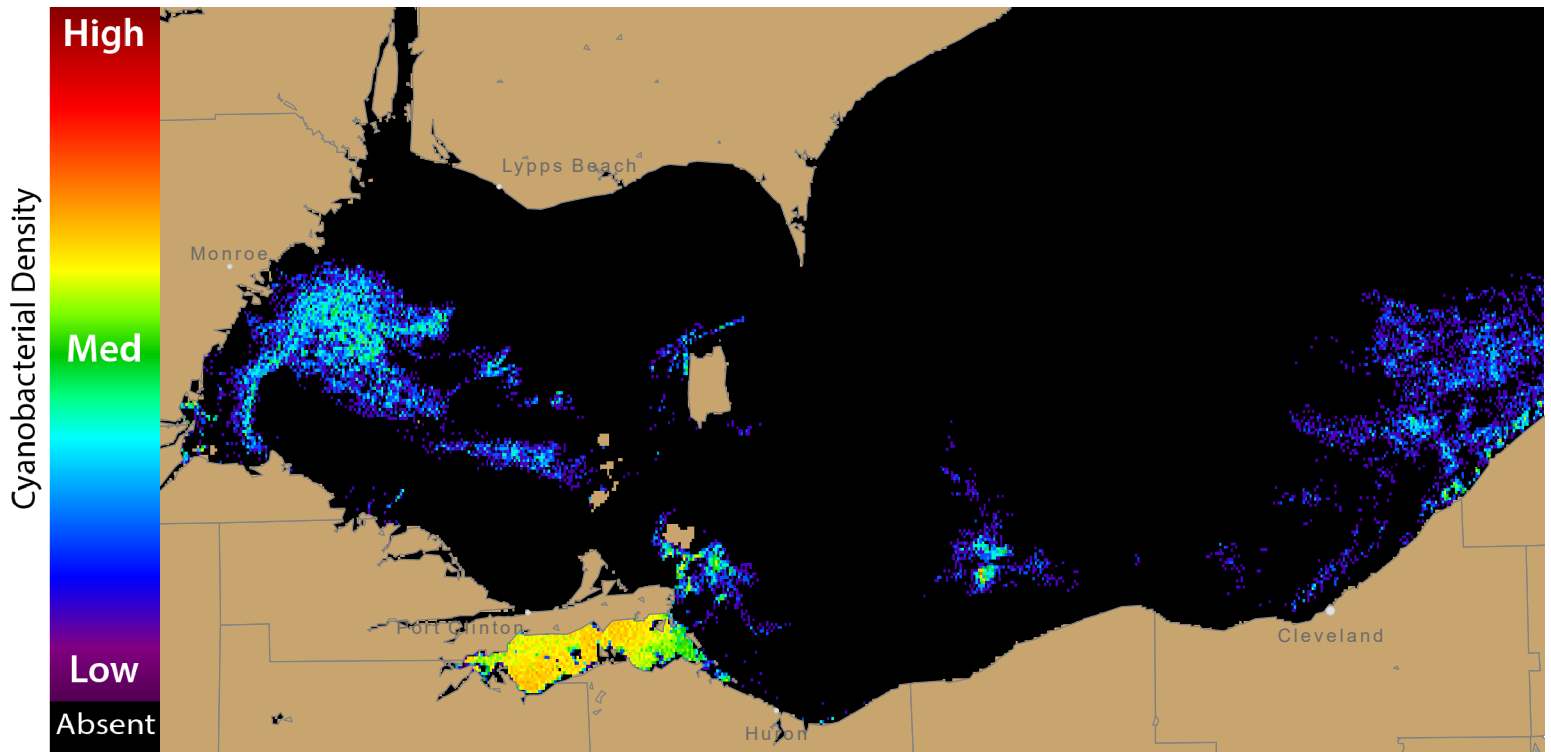


Figure 3. Nowcast position of bloom for 02 July, 2018 using GLFS modelled currents to move the bloom from the 01 July, 2018 image.

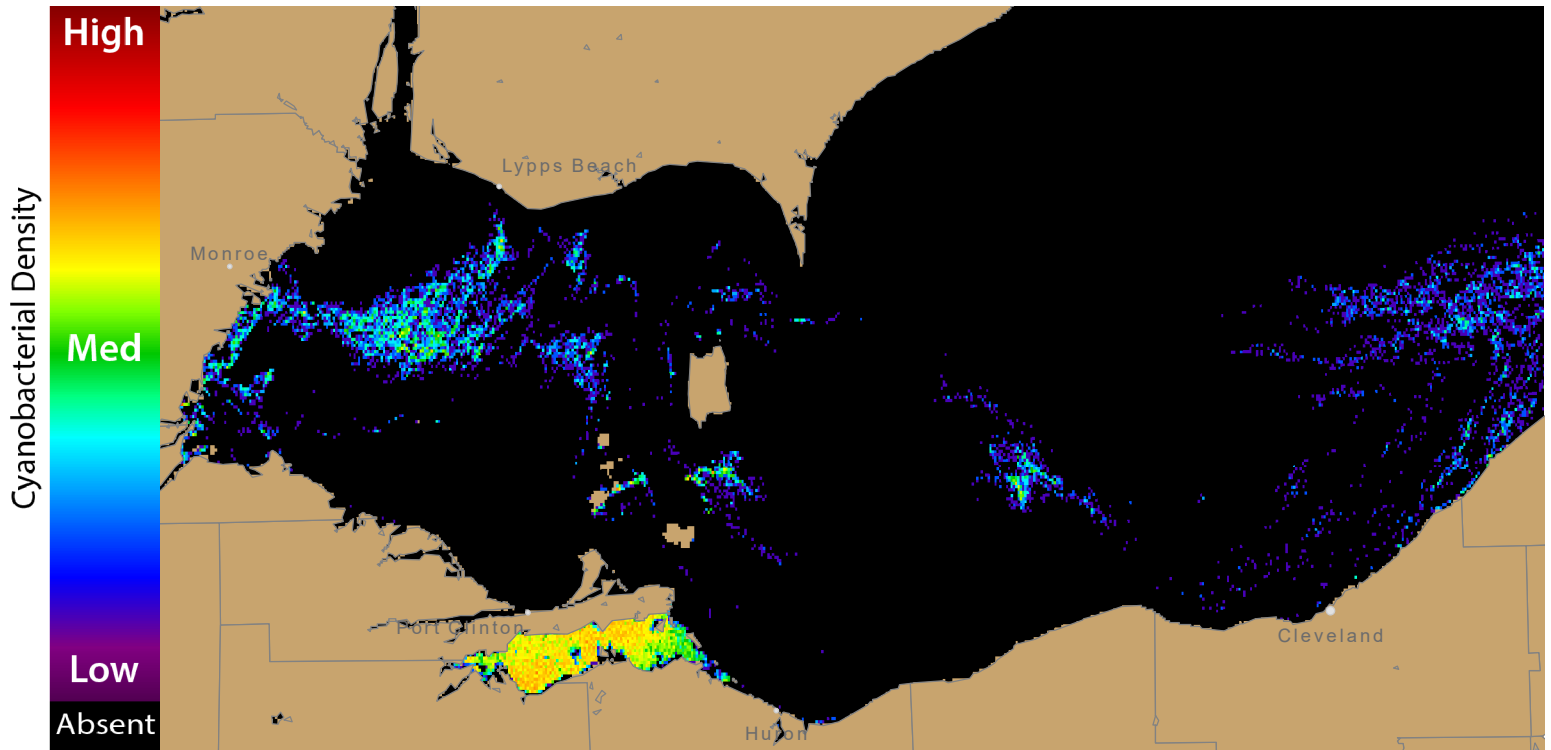
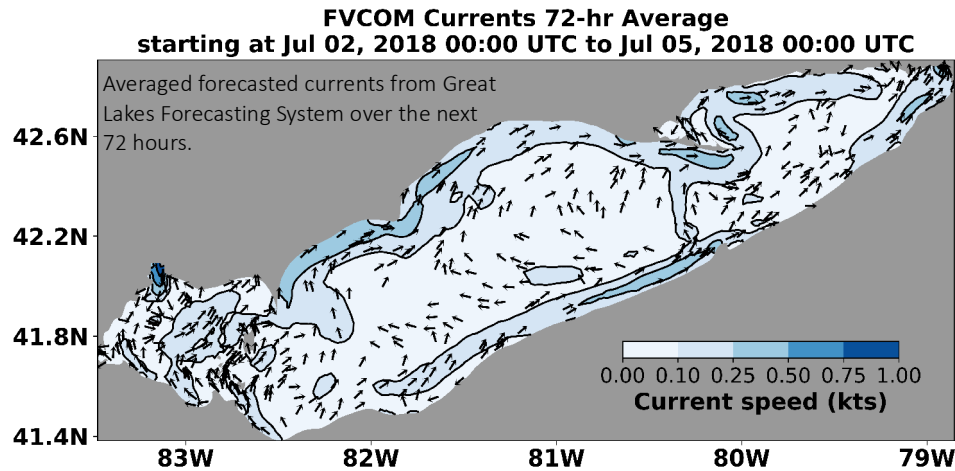


Figure 4. Forecast position of bloom for 05 July, 2018 using GLFS modelled currents to move the bloom from the 01 July, 2018 image.



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