



Lake Erie Harmful Algal Bloom Bulletin

22 August, 2019, Bulletin 16

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin of Lake Erie. Recent satellite imagery (8/21) shows the bloom extends from Maumee Bay north along the Michigan coast, past Brest Bay, and alongshore Pointe Mouillee State Game Reserve. The bloom spreads east along the Ohio coast to the Marblehead Peninsula; and offshore through the Bass Islands, northeast to Point Pelee. Observed conditions (8/19-21) promoted scum formation near Maumee Bay and bloom transport to the Ontario Coast. Measured toxin concentrations have increased since last week, exceeding the recreational threshold where the bloom is most dense (appearing green from a boat), corresponding with areas of orange and red pixels. *Keep pets and yourself out of the water in areas where scum is forming.* The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are present in Lake Erie.

Forecasts

Winds (8-18 kn) forecast today through Monday (8/22-26) will promote mixing of surface *Microcystis* concentrations, and western transport of the dense bloom concentrations near Maumee Bay. -Keeney, Davis

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.

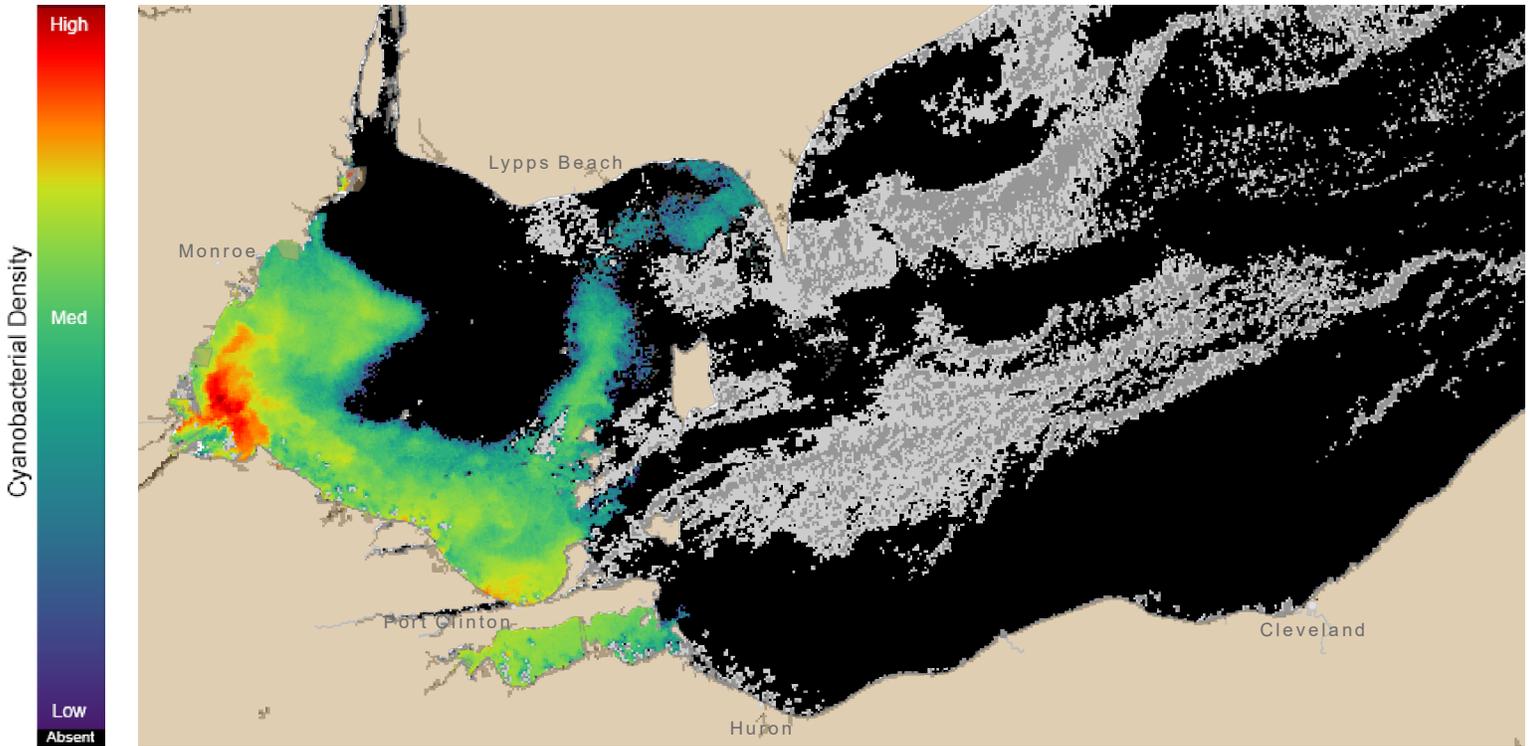


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 21 August, 2019 at 12:01 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

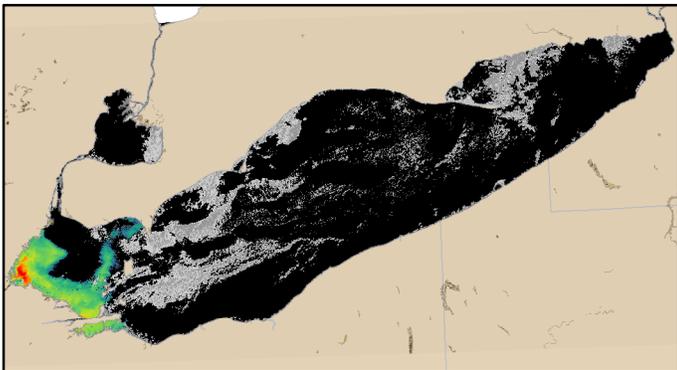
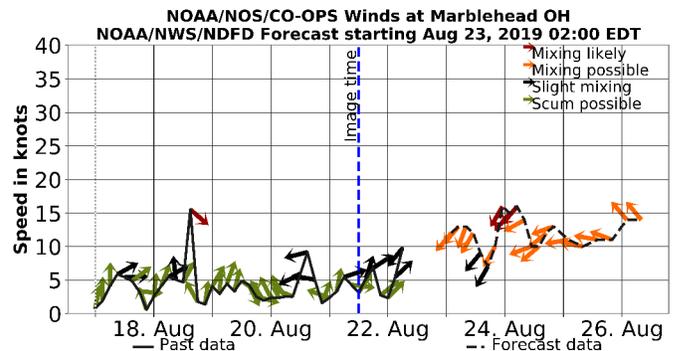


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 21 August, 2019 at 12:01.



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>

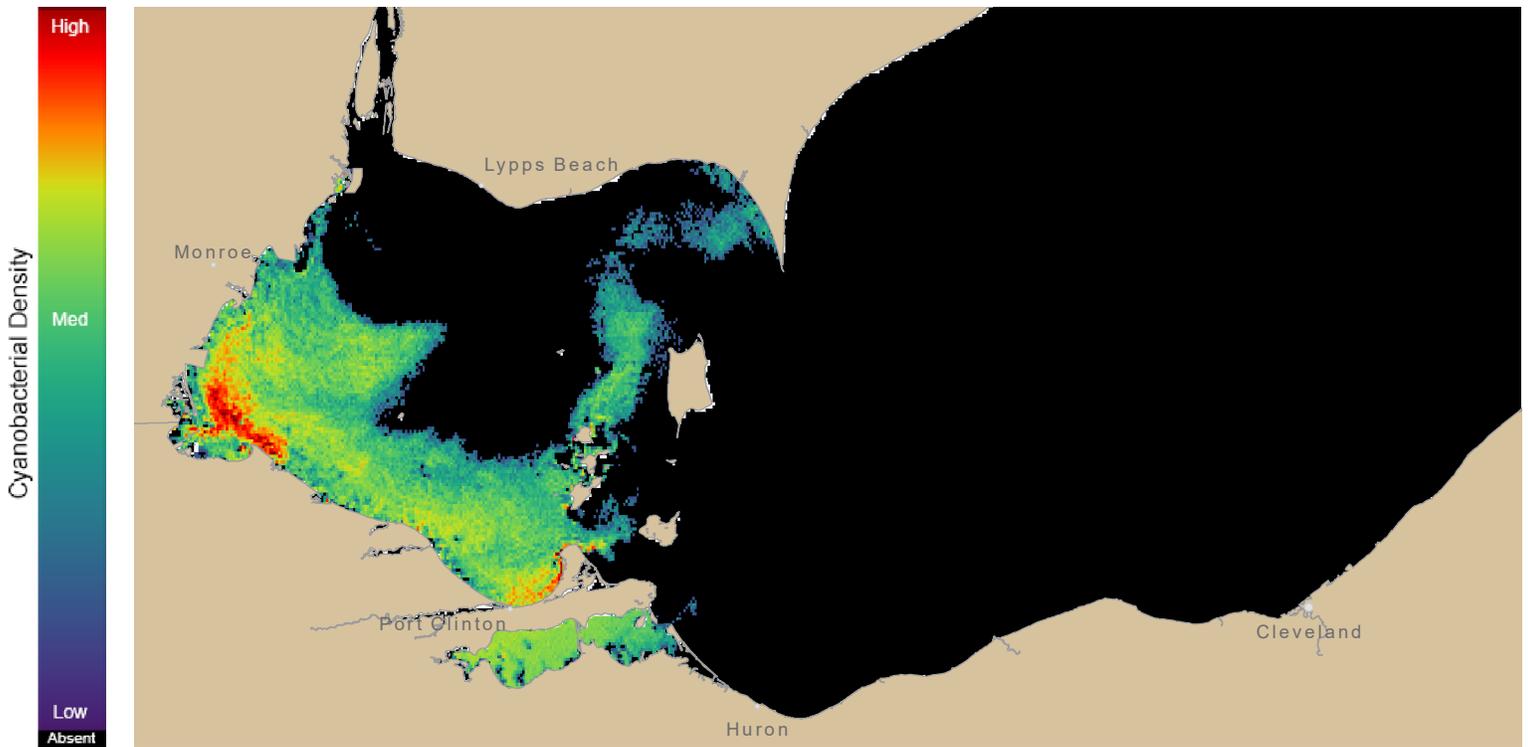


Figure 3. Nowcast position of bloom for 22 August, 2019 using LEOFS modelled currents to move the bloom from the 21 August, 2019

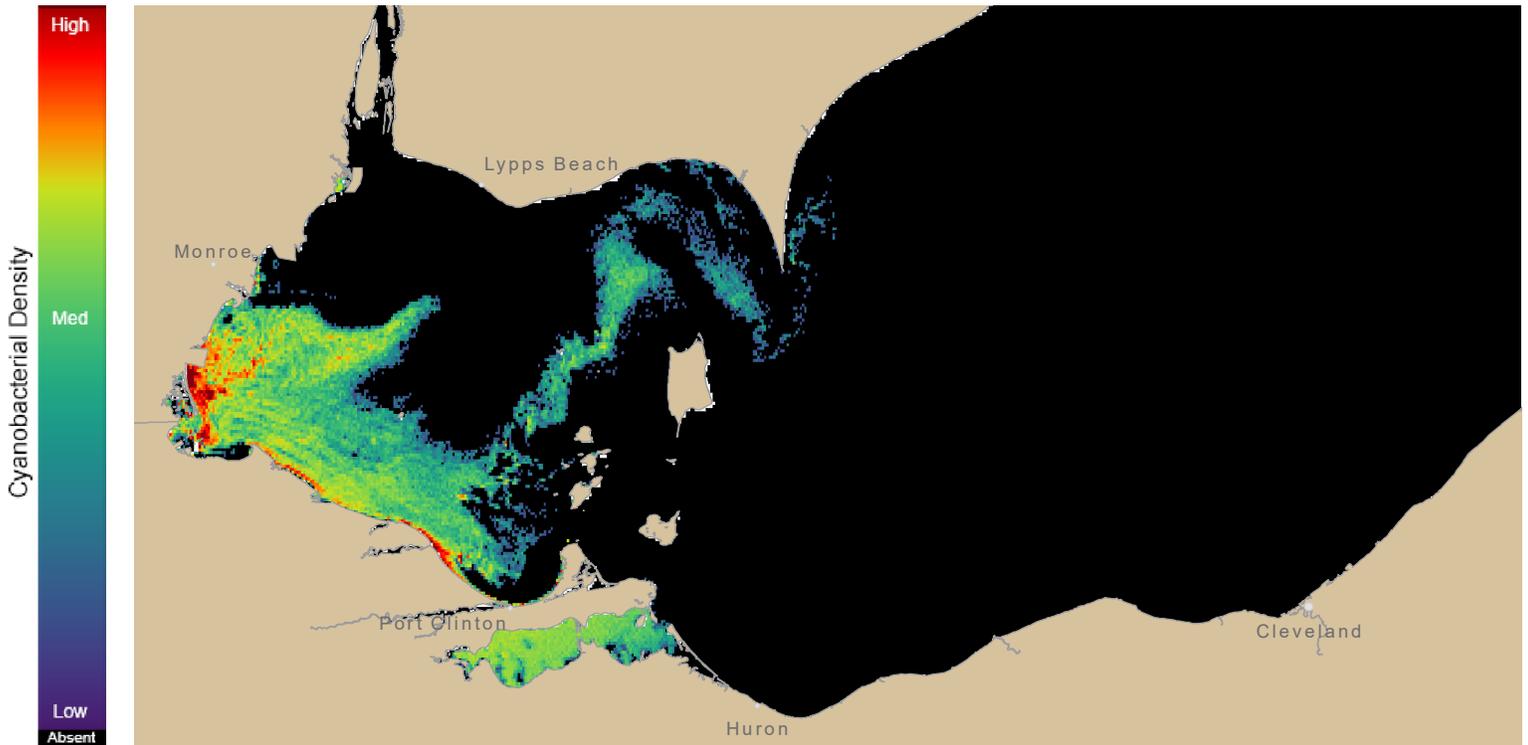
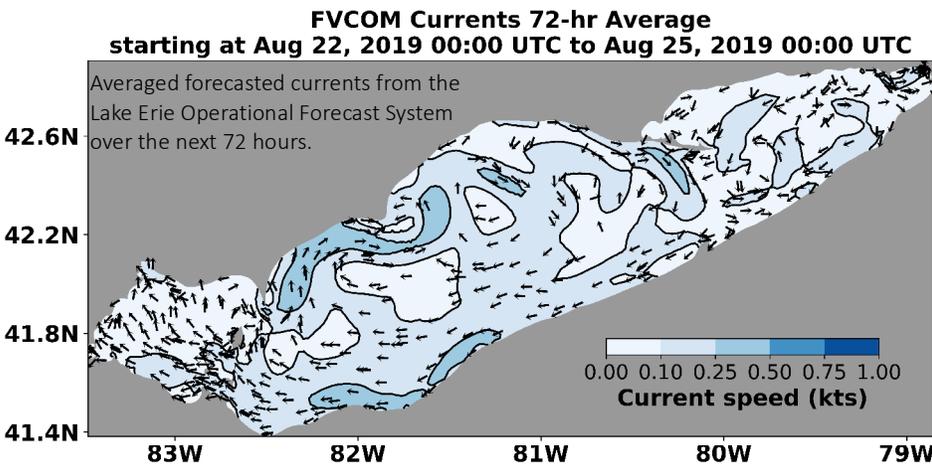


Figure 4. Forecast position of bloom for 25 August, 2019 using LEOFS modelled currents to move the bloom from the 21 August, 2019



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