



Lake Erie Harmful Algal Bloom Bulletin

03 September, 2019, Bulletin 19

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin of Lake Erie. Recent satellite imagery (9/2) shows the bloom extending from Maumee Bay north along the Michigan coast, to Brest Bay; east along the Ohio coast to the Marblehead Peninsula, offshore through the Bass Islands, and up to 10 miles east of Pelee Island. Observed conditions (8/27-9/2) promoted mixing and eastern transport of surface bloom concentration, now present in the central basin. Measured toxin concentrations still exceed 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 (9-26 kn) forecast today through Thursday (9/2-5) will promote mixing and eastern transport of surface *Microcystis* concentrations along the Michigan coast. -Keeney, Jima

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.

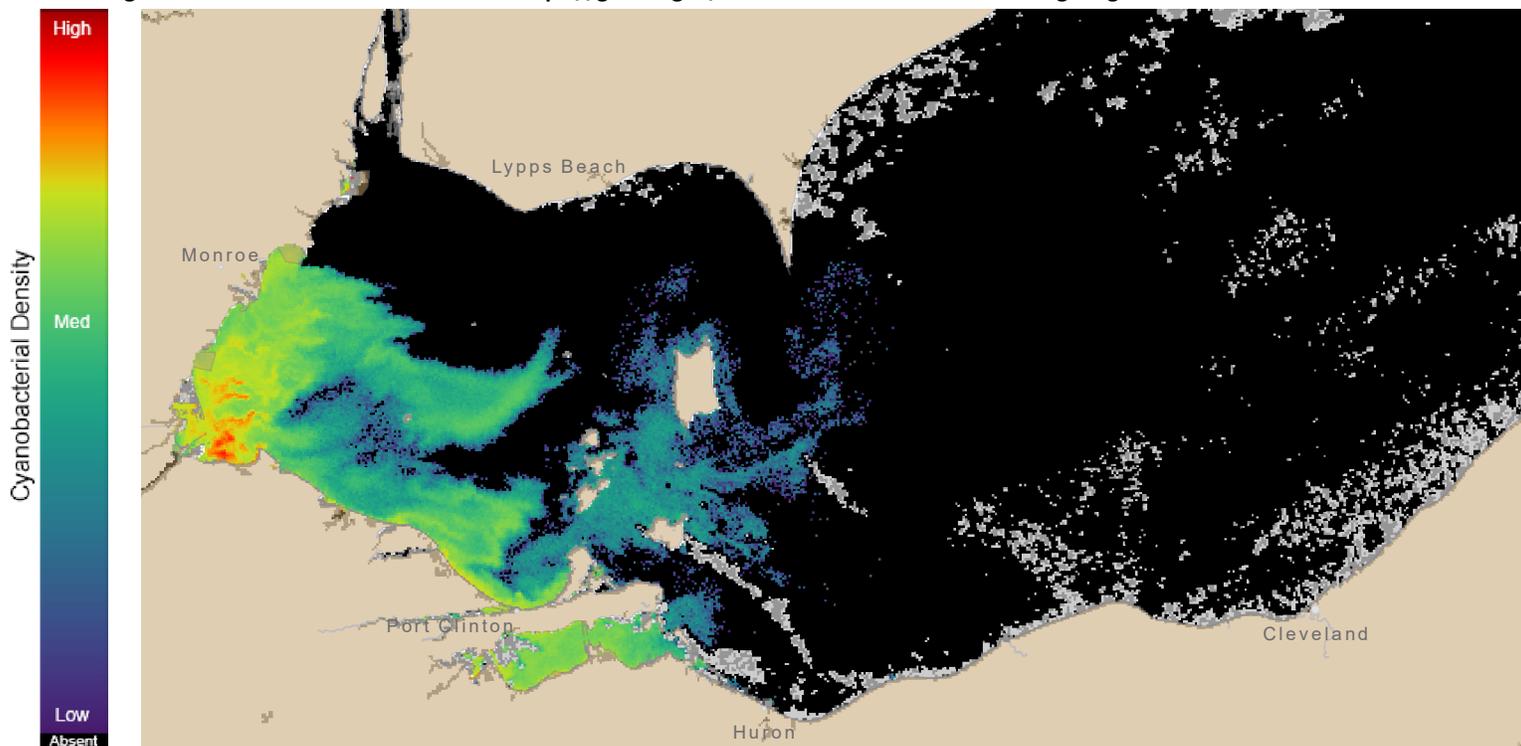


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 02 September, 2019 at 11:49 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

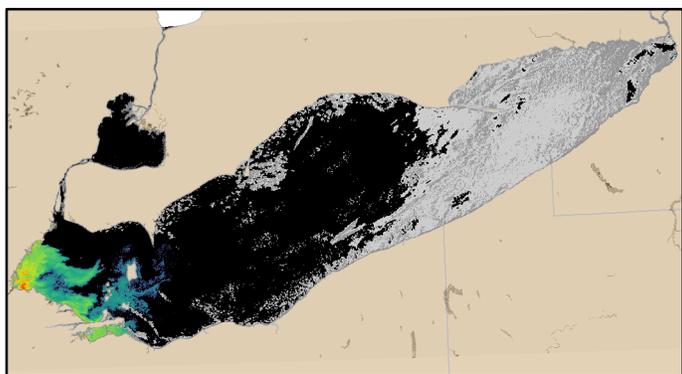
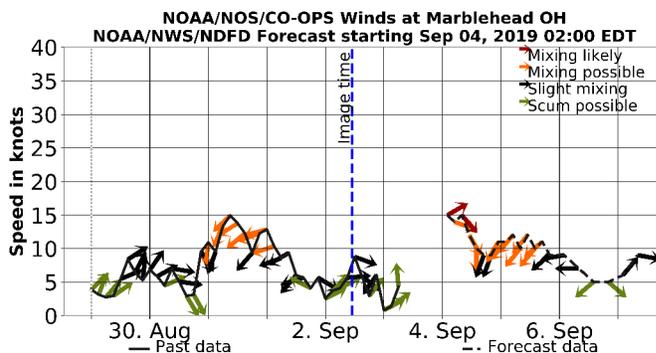


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 02 September, 2019 at 11:49.



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>

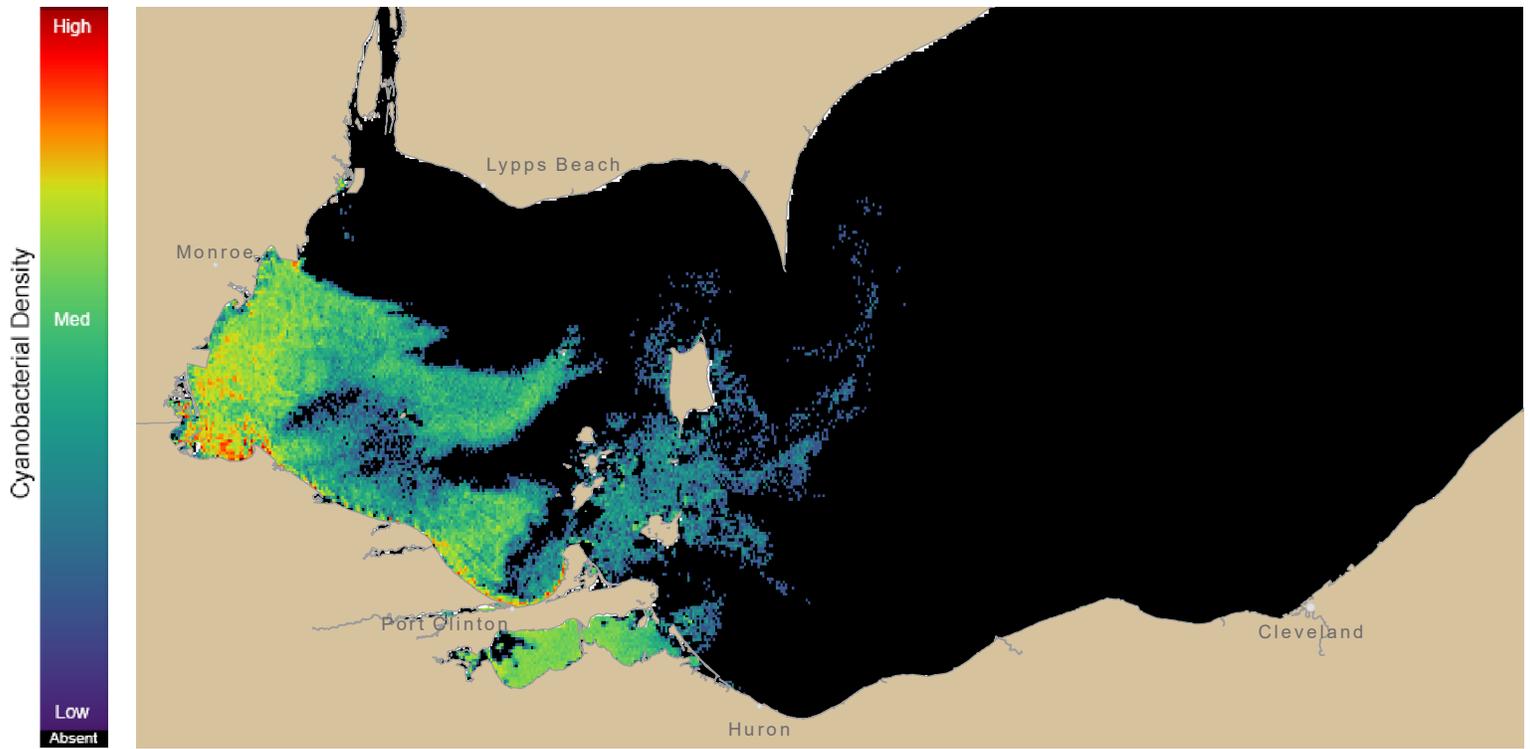


Figure 3. Nowcast position of bloom for 03 September, 2019 using LEOFS modelled currents to move the bloom from the 02 September,

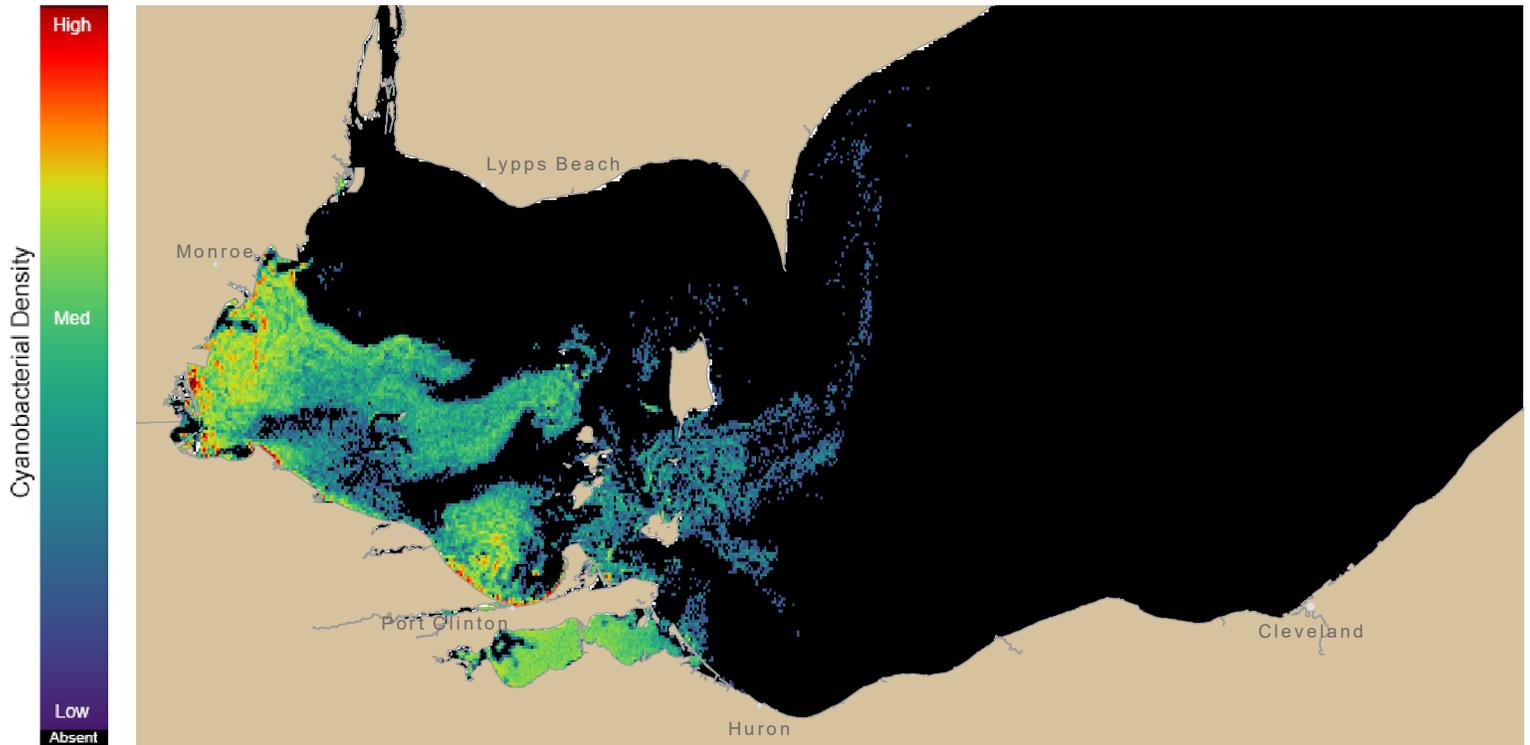
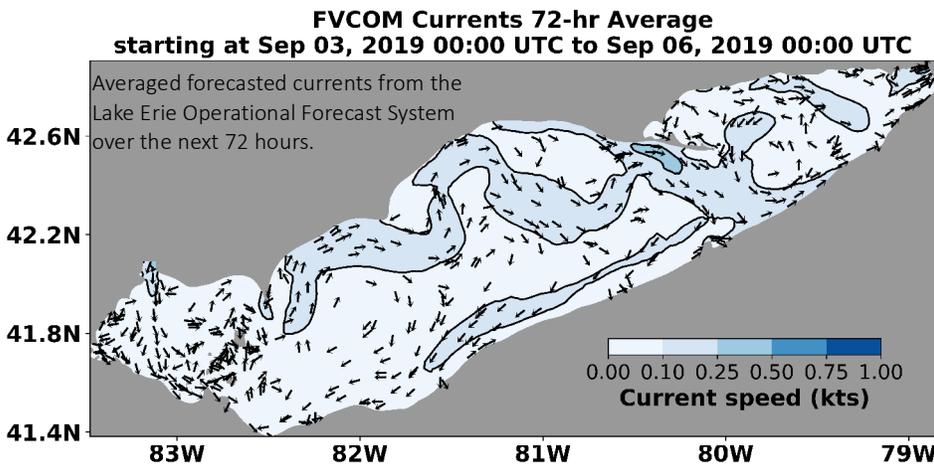


Figure 4. Forecast position of bloom for 06 September, 2019 using LEOFS modelled currents to move the bloom from the 02 September,



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