



Lake Erie Harmful Algal Bloom Bulletin

24 August, 2018, Bulletin 19

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin of Lake Erie. In recent satellite imagery (8/23), the bloom extends from Maumee Bay north along the Michigan coast to Brest Bay, and extends along the Ohio coast to 3 miles past the Vermillion River. Low concentrations are present surrounding the Bass Islands to Kelleys Island and extending north to 6 miles northeast of Pelee Island. Winds observed Wednesday and Thursday (8/22-23) promoted mixing of surface *Microcystis* concentrations. Toxin concentrations were detected at all sampling sites and most are below the recreational threshold. Toxin levels exceed the recreational threshold 3 miles north of Magee Marsh Wildlife Refuge. *Keep pets and yourself out of the water in areas where scum is forming.* The persistent cyanobacteria bloom in Sandusky Bay continues.

Forecasts

Winds (6-19 kn) forecast over the weekend (8/25-26) will lead to further mixing of surface *Microcystis* concentrations. Winds will promote the northeastward transport of *Microcystis* today through Monday (8/24-27) towards the central basin. Clouds will likely obscure the lake through Sunday. --Ludema, 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.

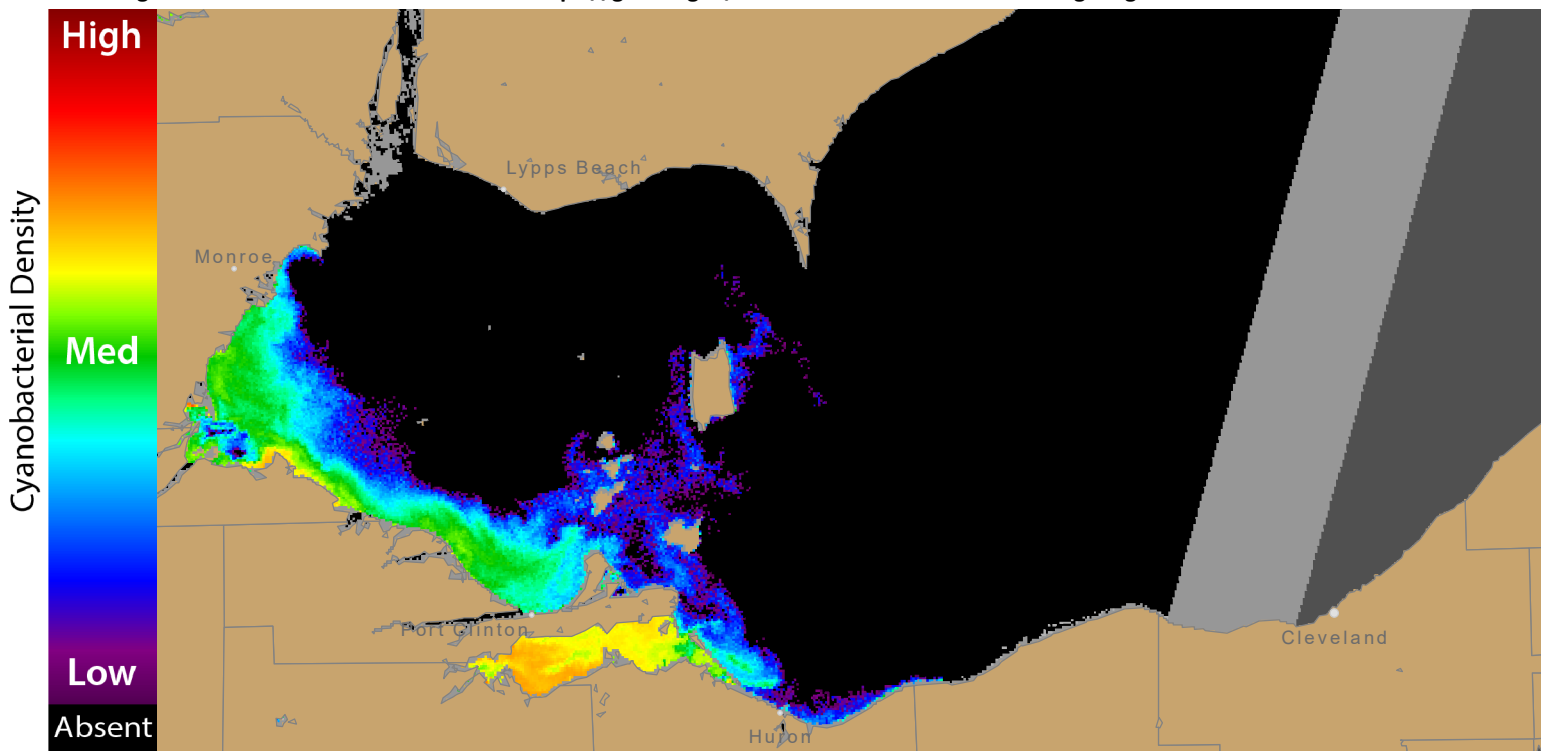
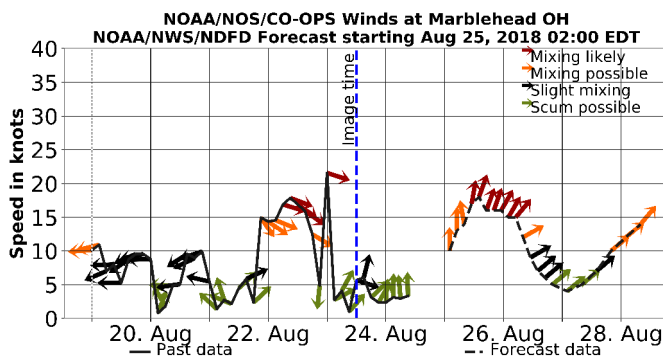


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 23 August, 2018 at 12:12 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/l



Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 23 August, 2018 at 12:12.



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>

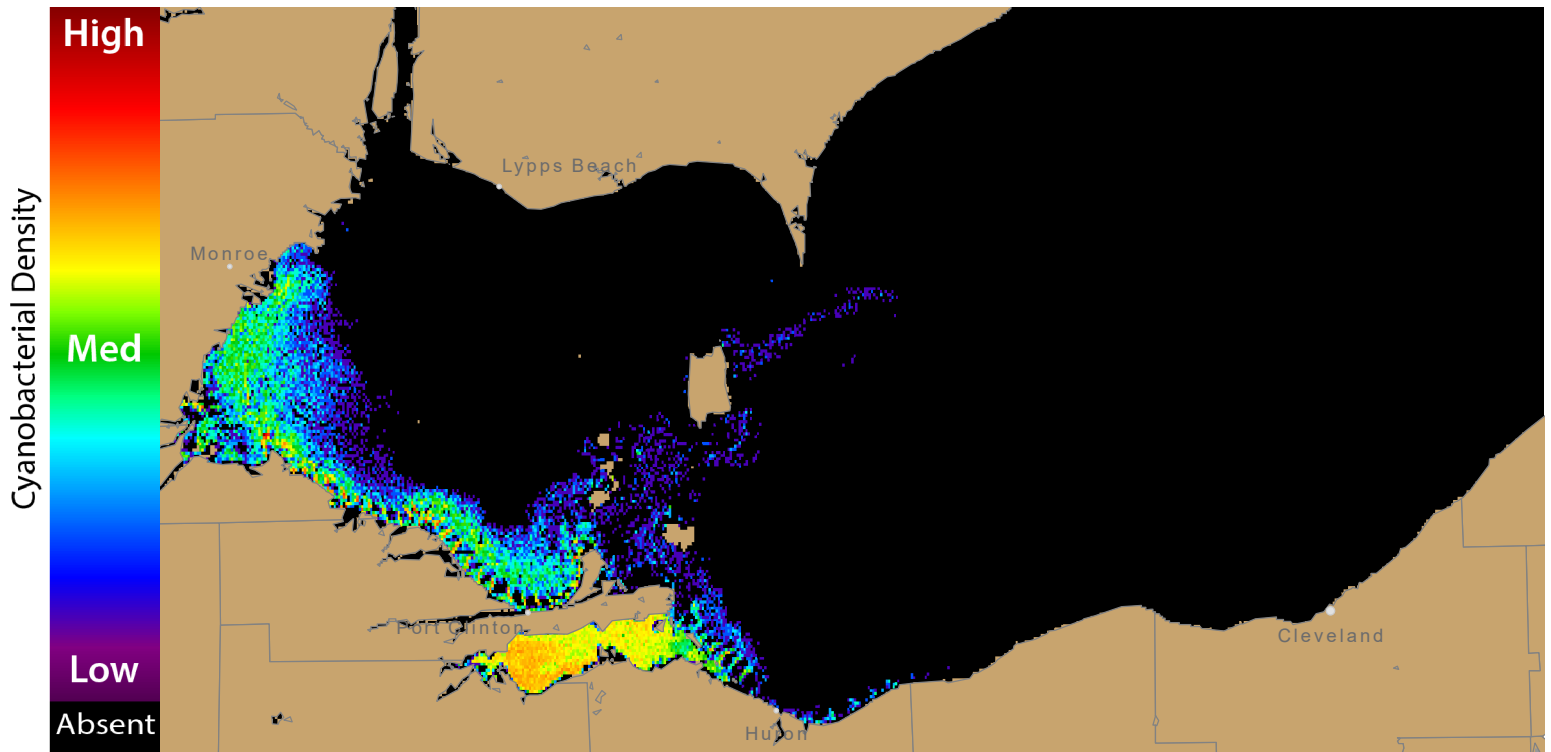


Figure 3. Nowcast position of bloom for 24 August, 2018 using LEOFS modelled currents to move the bloom from the 23 August, 2018

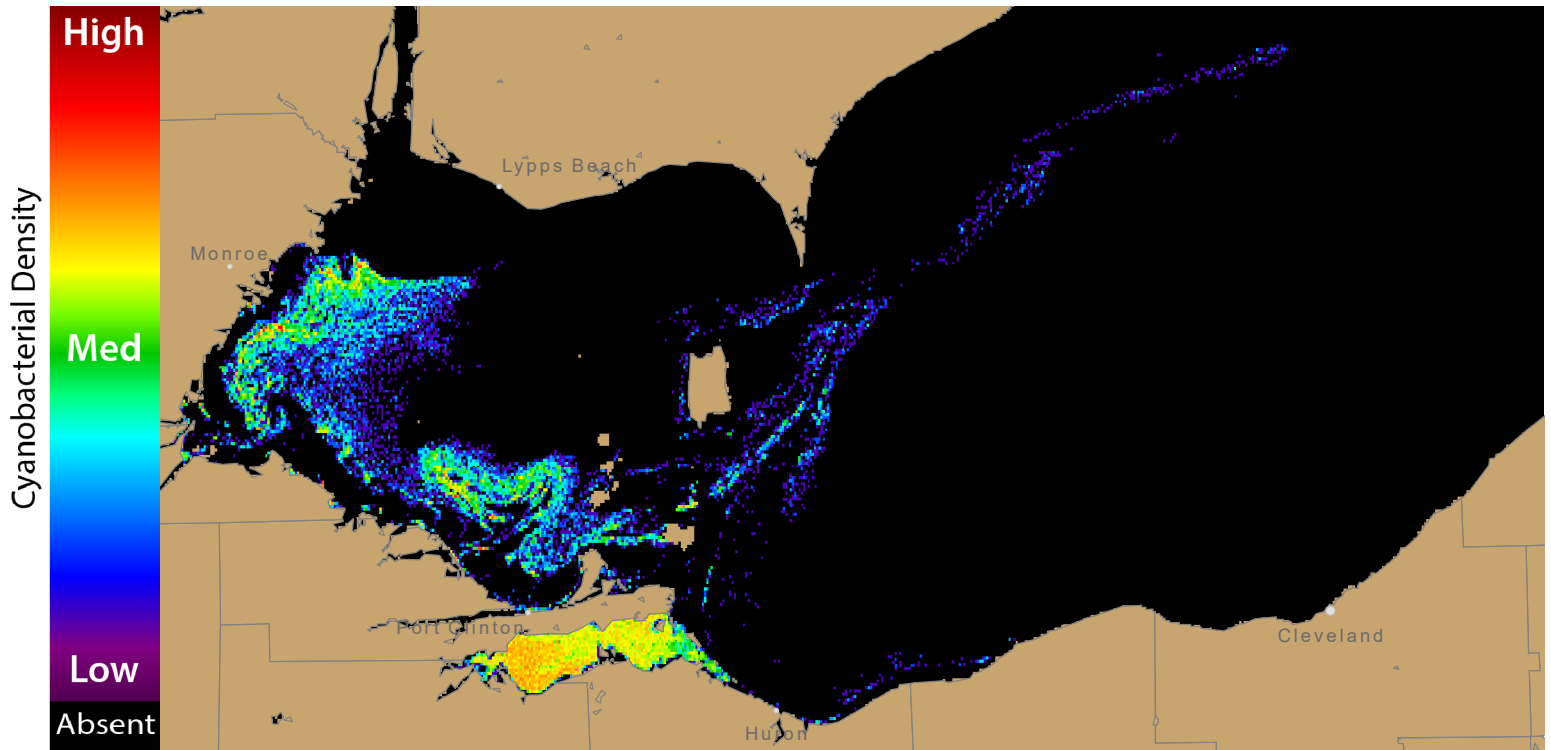
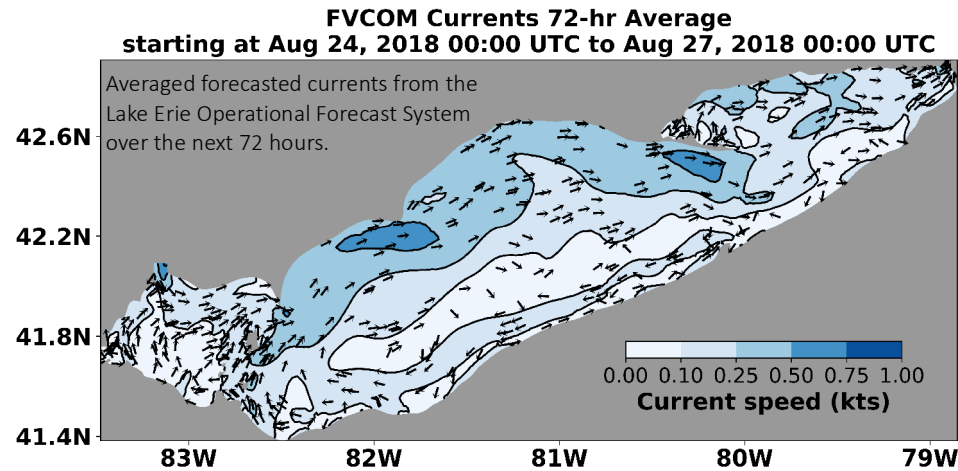


Figure 4. Forecast position of bloom for 27 August, 2018 using LEOFS modelled currents to move the bloom from the 23 August, 2018



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<https://tidesandcurrents.noaa.gov/hab/lakeerie.html>