



Lake Erie Harmful Algal Bloom Bulletin

16 September, 2019, Bulletin 23

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin of Lake Erie. Observed winds (9/14-15) caused mixing that continues to reduce surface concentrations. In recent satellite imagery (9/14), the *Microcystis* bloom is detectable in Maumee Bay, in patches along Michigan coast, along the Ohio coast near the Marblehead Peninsula, and in low concentrations near Pelee Island. Measured toxin concentrations are below the detection limit in most of the sampling locations, and below the recreational threshold throughout the bloom extent. The persistent cyanobacteria bloom in Sandusky Bay continues.

Forecasts

Winds (5-12 kn) forecast Wednesday and Thursday (9/18-19) will promote mixing and westward transport of surface *Microcystis* concentrations. -Davis, 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.

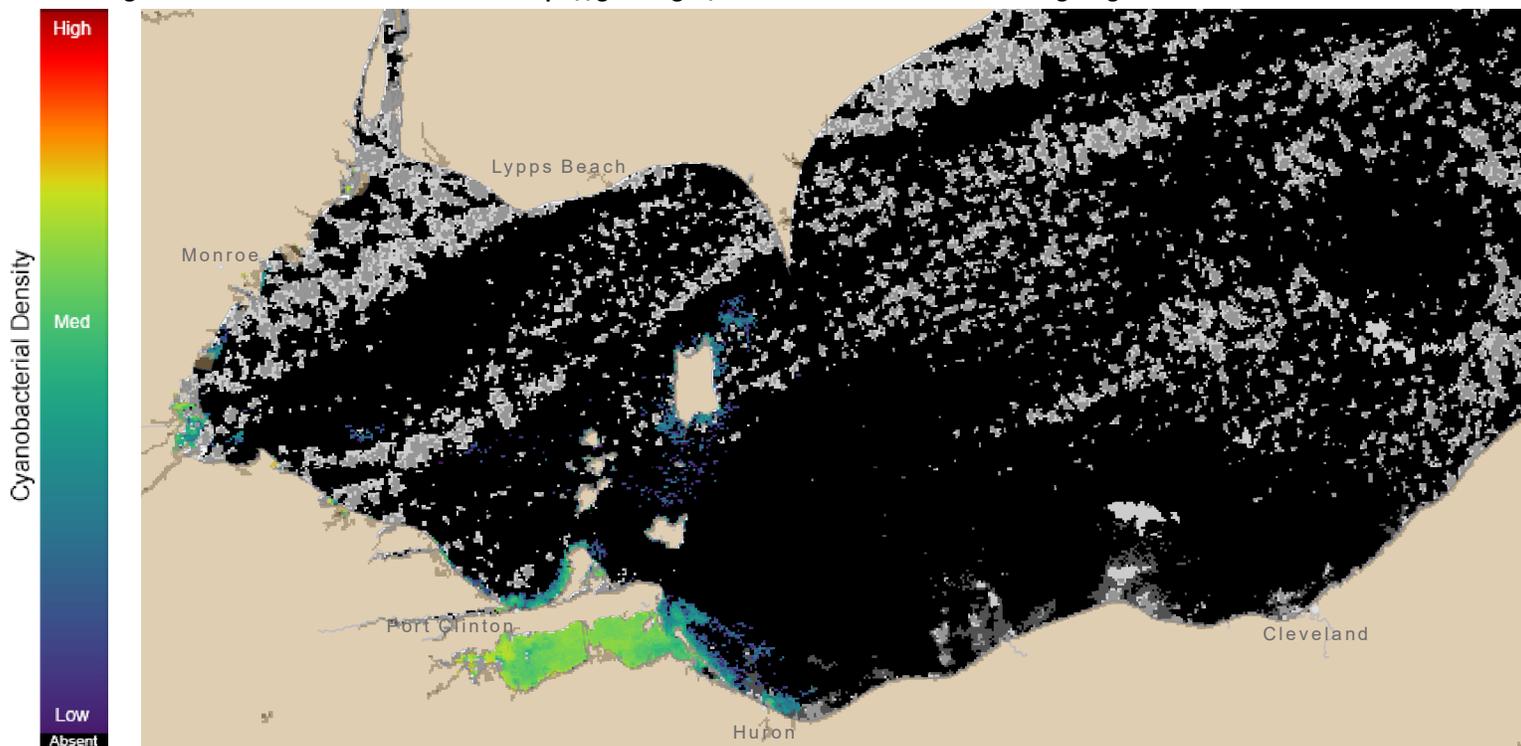


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 14 September, 2019 at 11:38 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

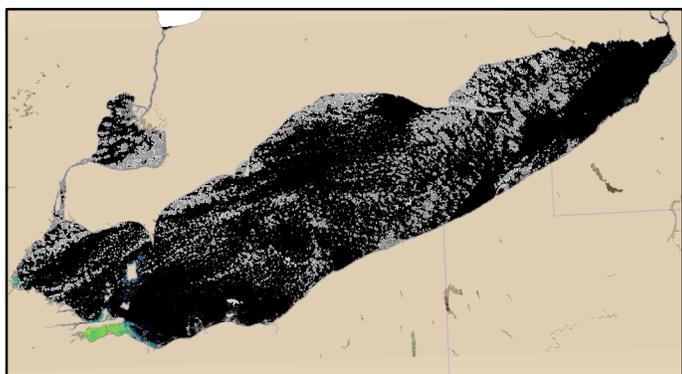
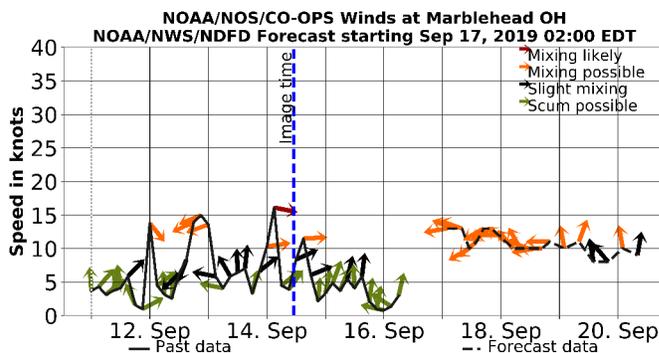


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 14 September, 2019 at 11:38.



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>

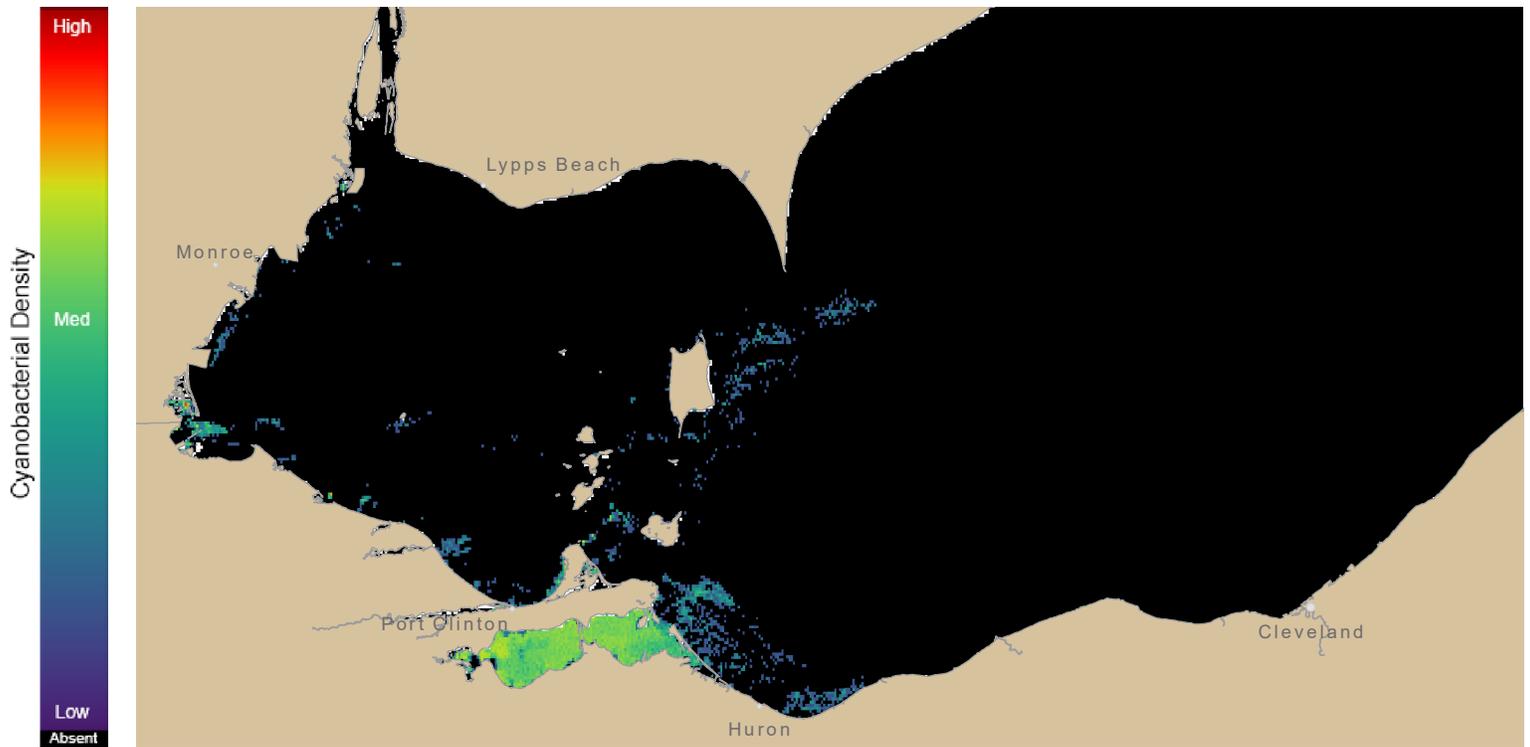
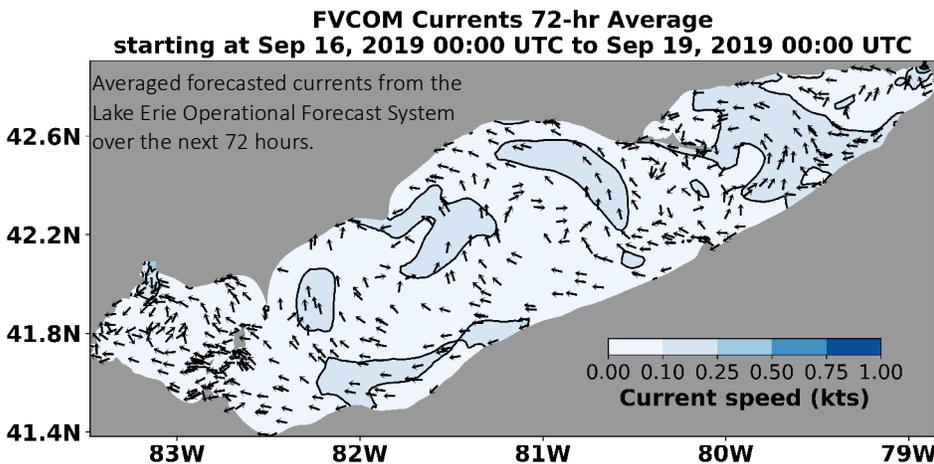


Figure 3. Nowcast position of bloom for 16 September, 2019 using LEOFS modelled currents to move the bloom from the 14 September,



Figure 4. Forecast position of bloom for 19 September, 2019 using LEOFS modelled currents to move the bloom from the 14 September,



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