



Lake Erie Harmful Algal Bloom Bulletin

03 July, 2019, Bulletin 02

Analysis

Satellite imagery from 7/1 shows a bloom of cyanobacteria is present in Lake Erie's western basin along the Michigan coast. Observed winds yesterday (7/2) promoted northeast transport of surface bloom concentrations, now present between Maumee Bay and 6 miles south of Brest Bay, extending up to 2 miles offshore. Recent sampling (6/17) still indicates measured toxin concentrations are below detectable limits throughout the bloom extent. A cyanobacteria bloom of *Planktothrix* is present in- and spilling out of Sandusky Bay. No other blooms are present in Lake Erie.

Forecasts

Calm winds (0-7 kn) forecast today through Friday (7/3-5) will create the potential for scum formation and promote northeast movement of surface *Microcystis* concentrations. Winds (7-14 kn) forecast Saturday through Monday (7/6-8) will create the potential for mixing of surface *Microcystis* concentrations. -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.

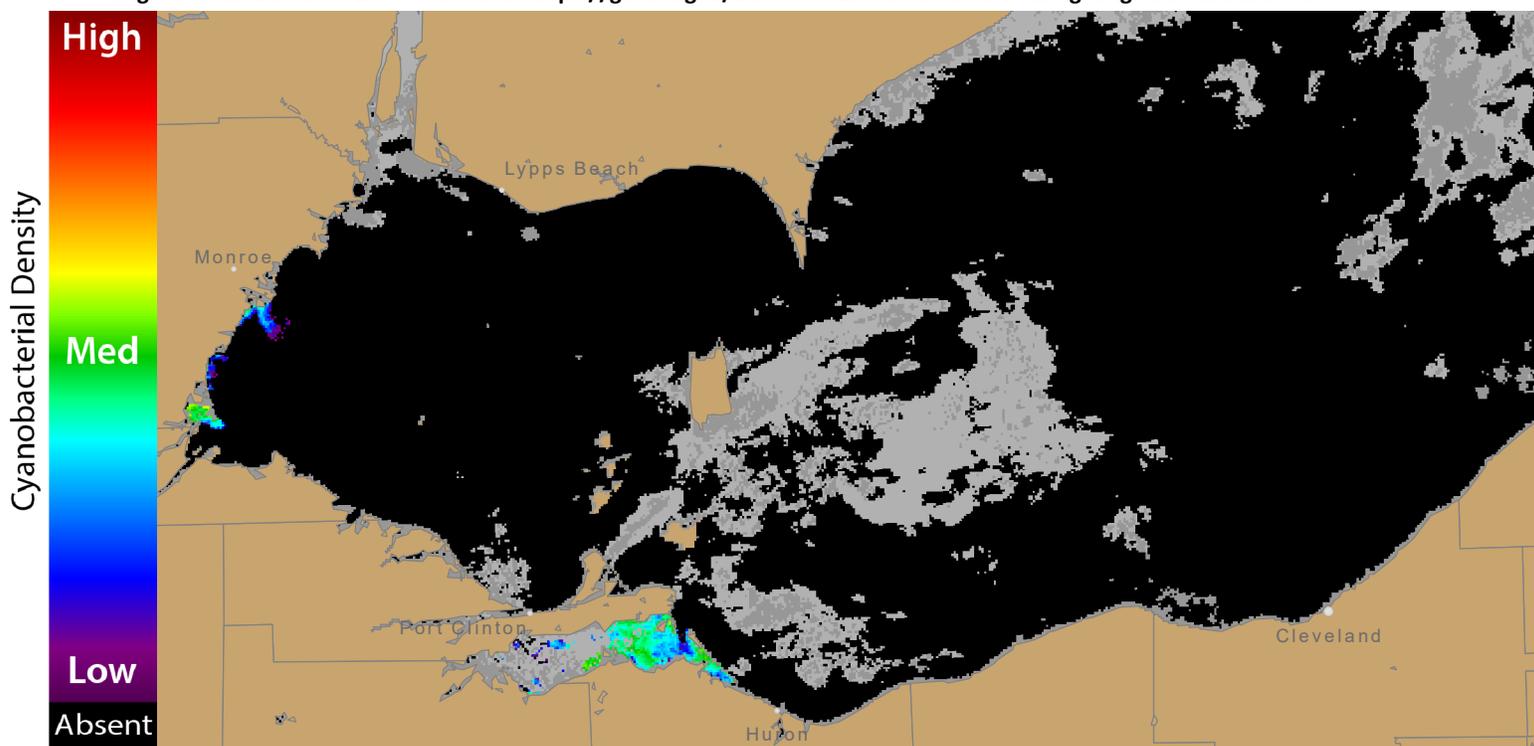


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 02 July, 2019 at 11:57 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/ml

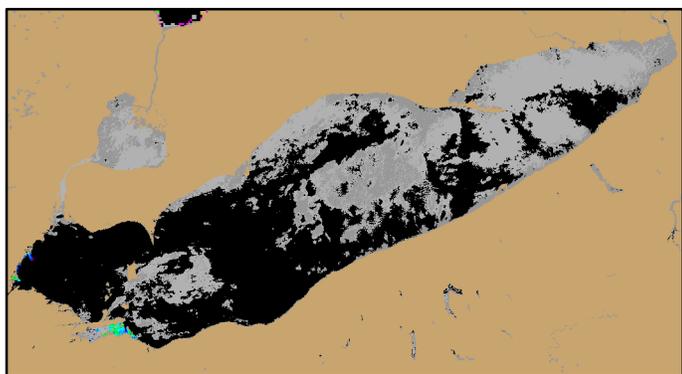
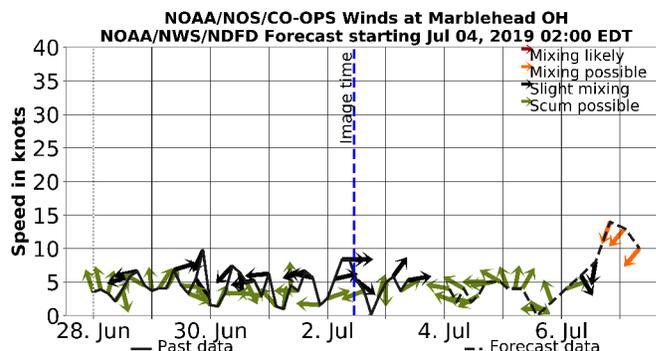


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 02 July, 2019 at 11:57.



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>

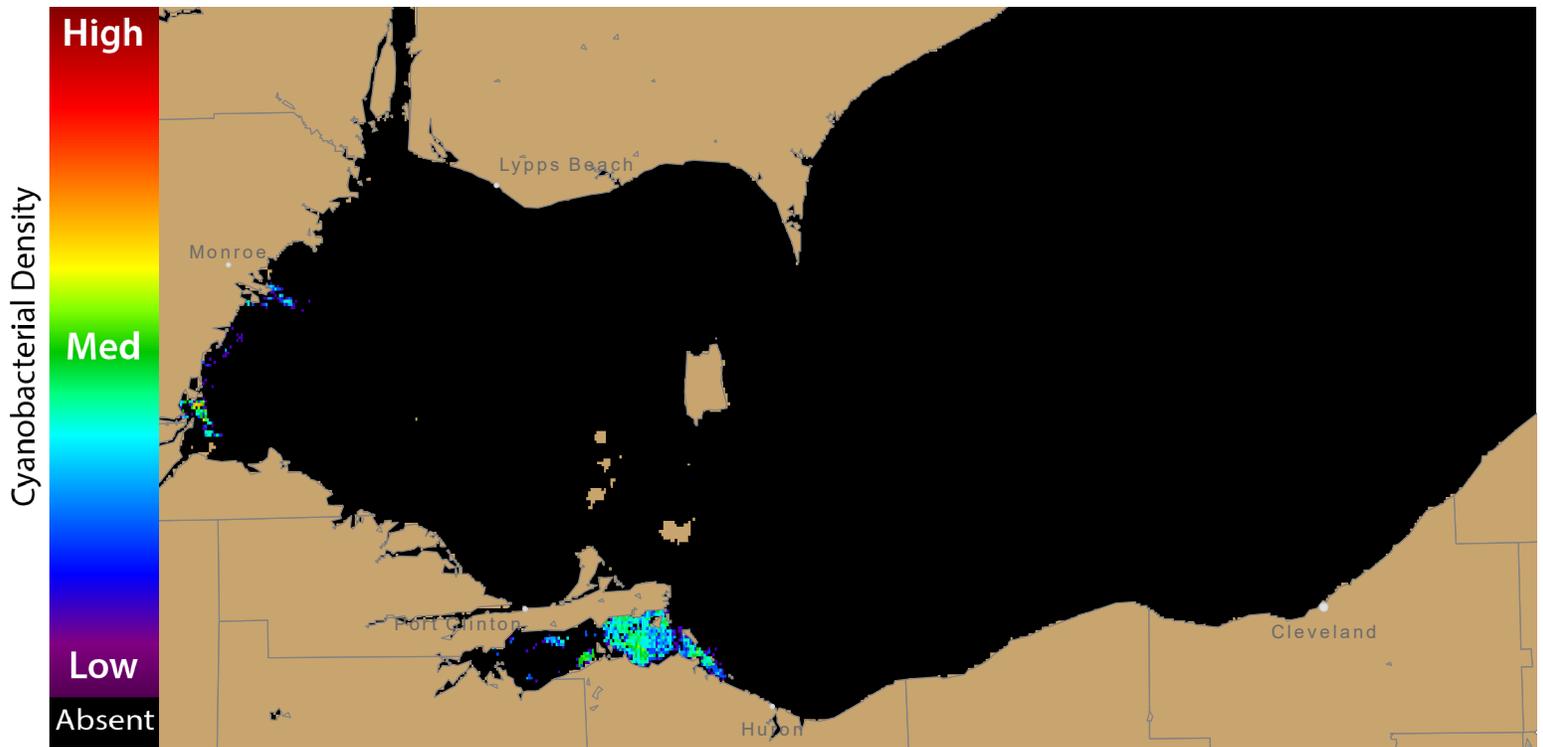


Figure 3. Nowcast position of bloom for 03 July, 2019 using LEOFS modelled currents to move the bloom from the 02 July, 2019 image.

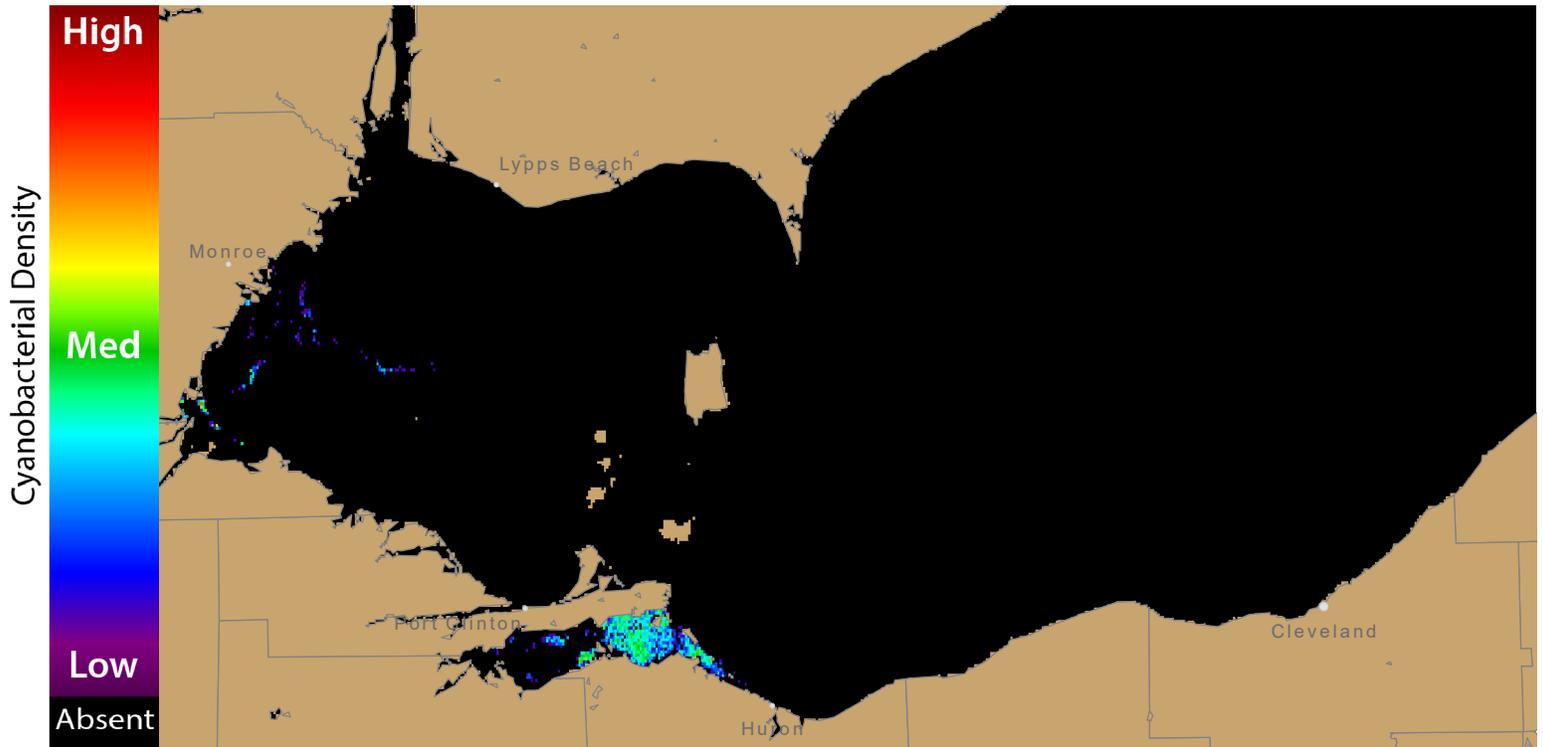
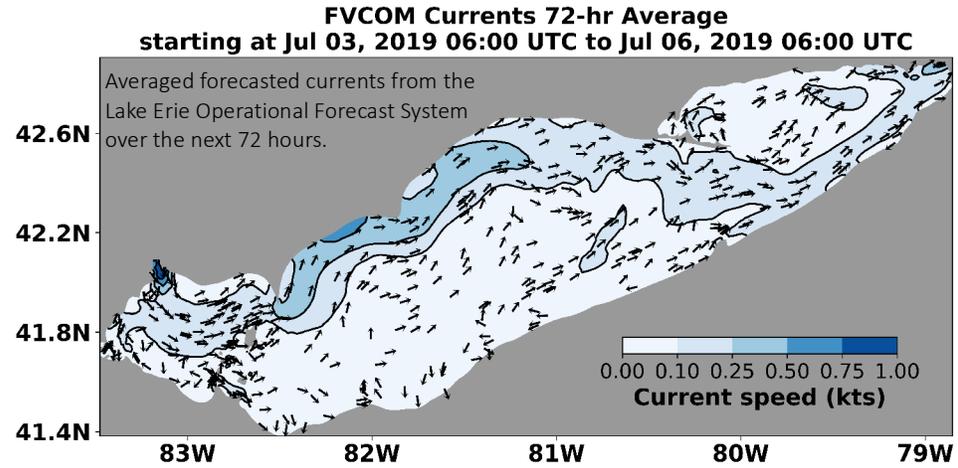


Figure 4. Forecast position of bloom for 06 July, 2019 using LEOFS modelled currents to move the bloom from the 02 July, 2019 image.



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