



Lake Erie Harmful Algal Bloom Bulletin

10 August, 2017, Bulletin 09

The *Microcystis* cyanobacteria bloom continues in the western basin along- and offshore the Ohio and Michigan coast from Maumee Bay north past Stony Point and east towards Middle Sister Island. Observed winds this week (8/7-10) reduced mixing, increasing surface concentrations from earlier. Scums have been reported. Measured toxin concentrations are below the recreational thresholds throughout most of the bloom extent, but concentrations can exceed the threshold where the bloom is most dense (which would look green from a boat).

Forecast winds (5-12kn) today through Saturday (8/10-12) may promote mixing, reducing surface concentrations of *Microcystis*. Winds will promote easterly transport of *Microcystis* today through Sunday (8/10-13) towards the Ontario Coast.

Please check Ohio EPA's site on harmful algal blooms for safety information. <http://epa.ohio.gov/habalgae.aspx>. Keep your pets and yourself out of the water in areas where scum is forming. The persistent cyanobacteria bloom of *Planktothrix* continues in Sandusky Bay and extends into Lake Erie. NOAA's GLERL provides additional HAB data: https://www.glerl.noaa.gov/res/HABs_and_Hypoxia.

-Davis, Lalime

The images below are "GeoPDF". To see the longitude and latitude under your cursor, select "Tools > Analyze > Geospatial Location Tool".

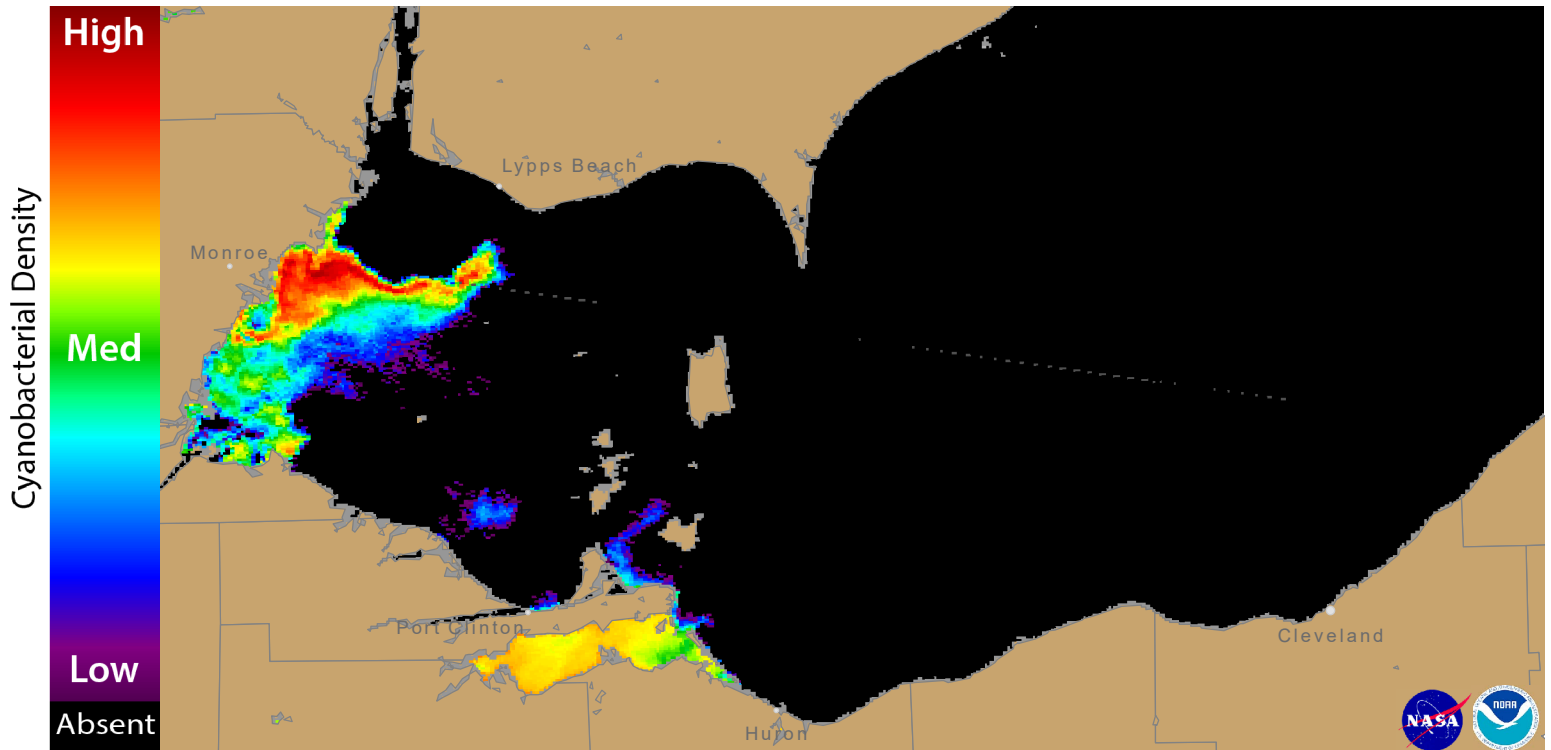


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 08 August, 2017 at 11:26 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

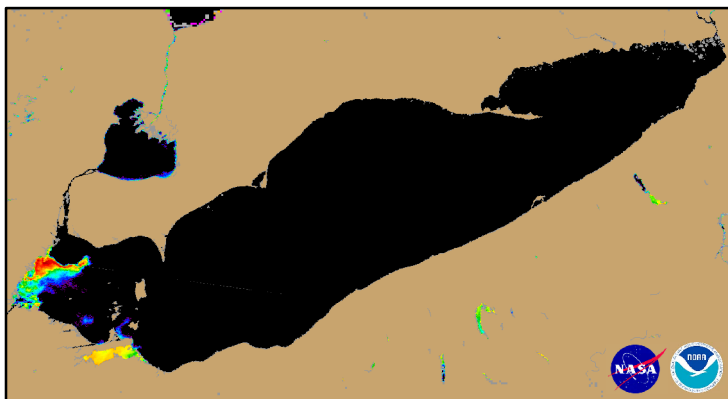
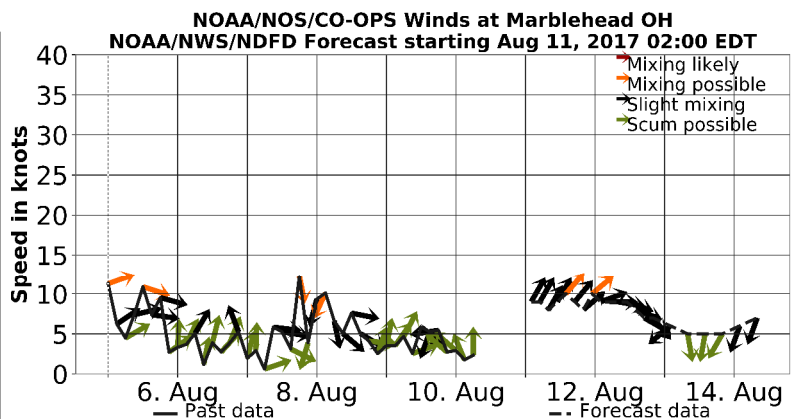


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 08 August, 2017 at 11:26.



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).

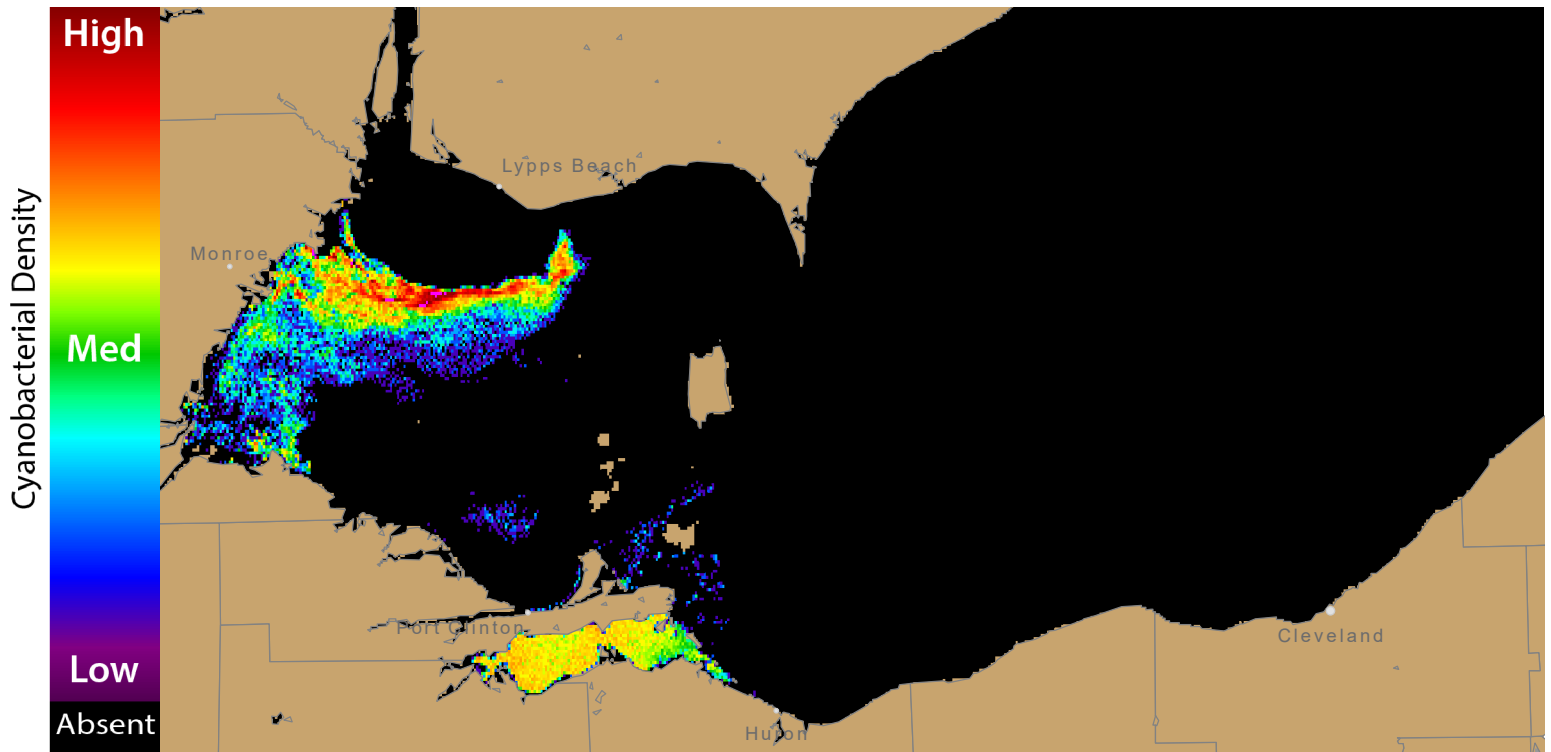


Figure 3. Nowcast position of bloom for 10 August, 2017 using GLFS modelled currents to move the bloom from the 08 August, 2017 image.

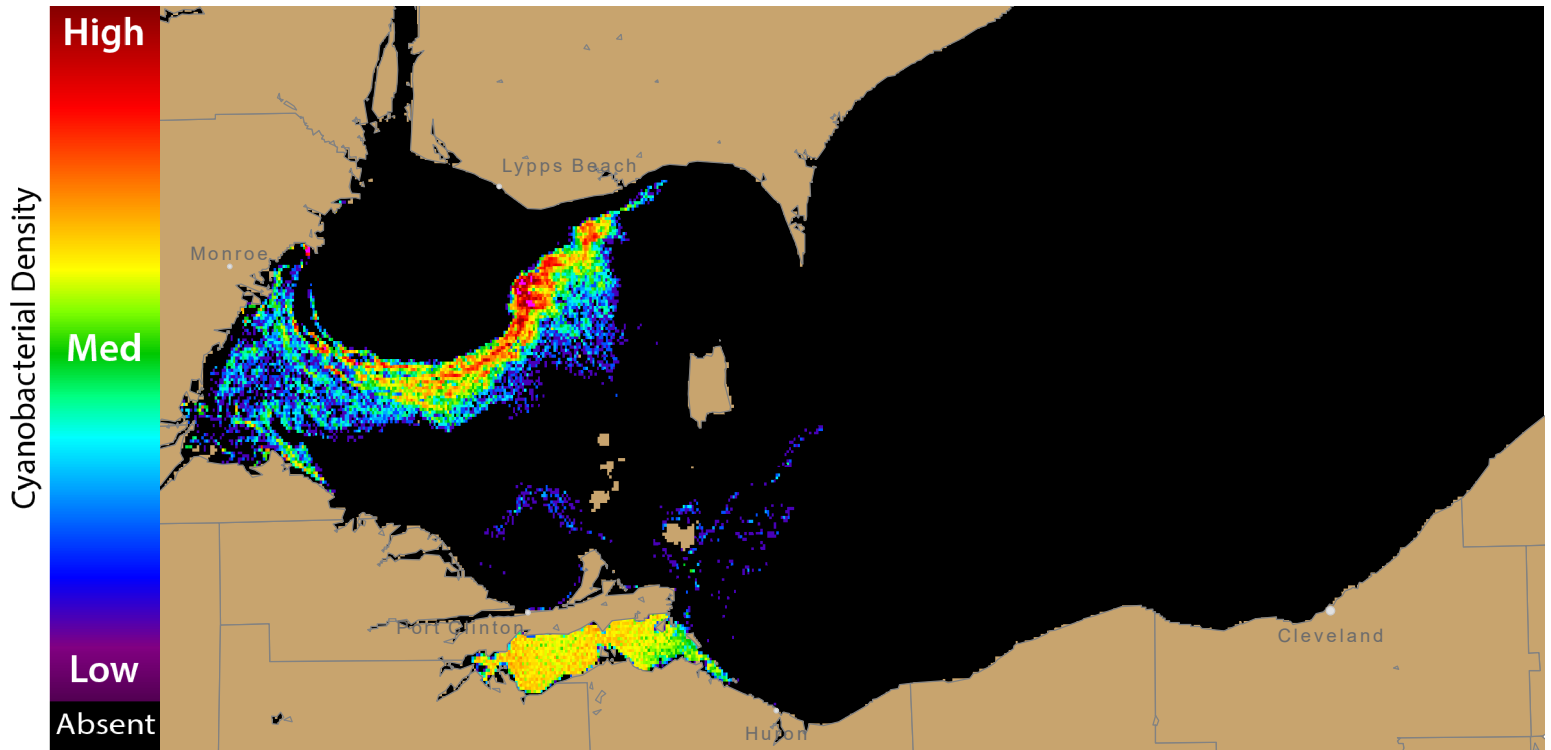
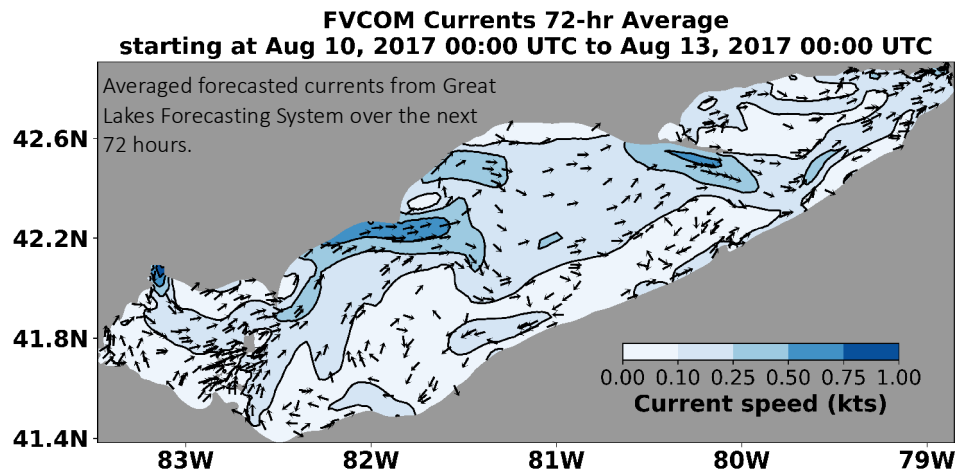


Figure 4. Forecast position of bloom for 13 August, 2017 using GLFS modelled currents to move the bloom from the 08 August, 2017 image.



For more information and to subscribe, please visit the NOAA HAB Forecast page: <https://tidesandcurrents.noaa.gov/hab/lakeerie.html>