



Lake Erie Harmful Algal Bloom Bulletin

03 August, 2017, Bulletin 07

The *Microcystis* cyanobacteria bloom continues in the western basin along- and offshore the Ohio coast from the Maumee Bay east to the Ottawa National Wildlife Refuge and along- and offshore the Michigan north past Stony Point. Observed winds last week (7/31-8/2) reduced mixing that increased surface concentrations from earlier. Scum was present about 3 miles northeast of the mouth of the Tossaint River and 4 miles east of the Maumee Bay. Measured toxin concentrations are below the recreational thresholds throughout most of the bloom extent, but the concentrations can exceed the threshold where the bloom is most dense (which would look green from a boat).

Forecast winds (10-20kn) this weekend (8/4-5) may cause mixing, reducing the surface concentrations of *Microcystis*. Winds will promote the easterly transport of *Microcystis* today through Sunday (8/3-6) towards the Bass Islands. Clouds will likely obscure the lake through Saturday.

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. --Ludema, Davis

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

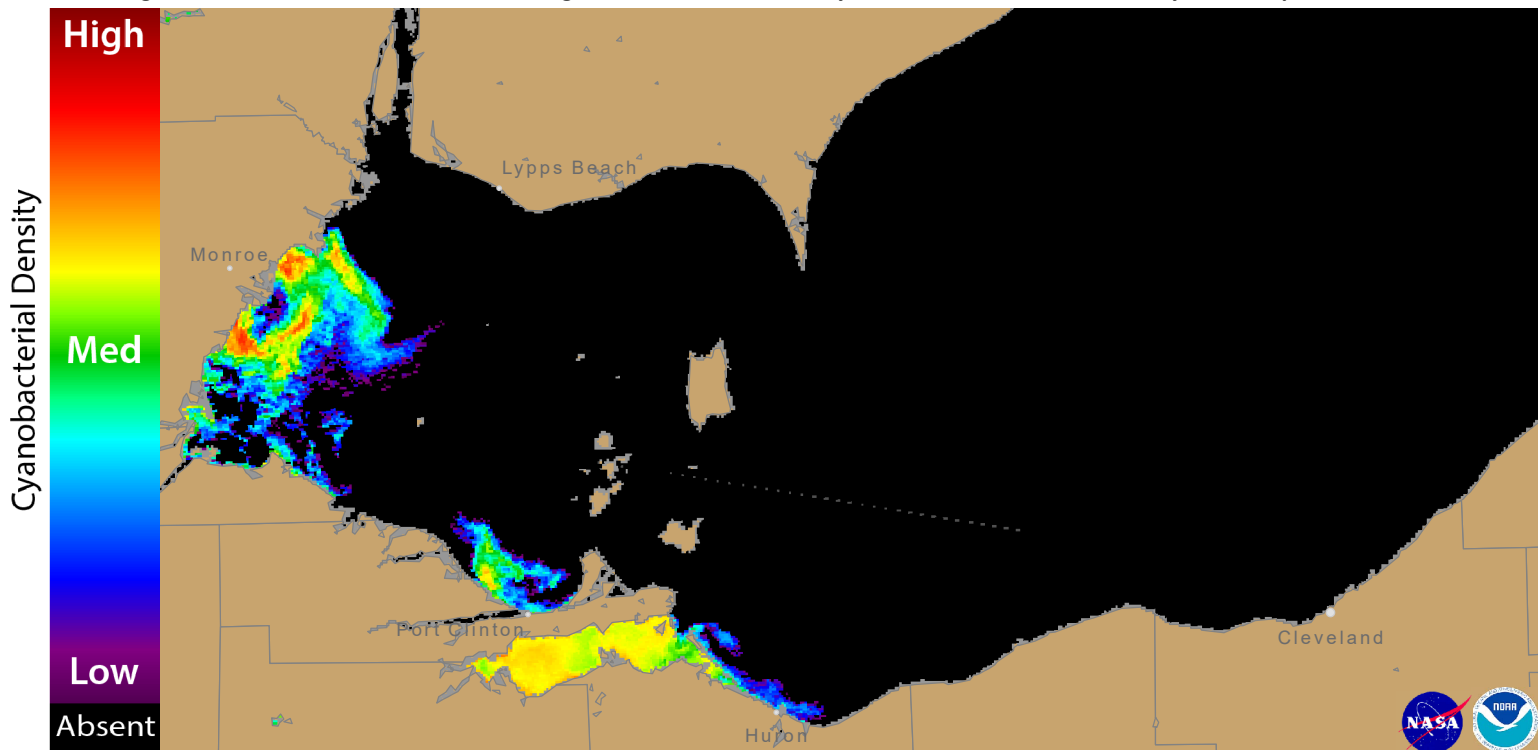


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 31 July, 2017 at 11:33 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

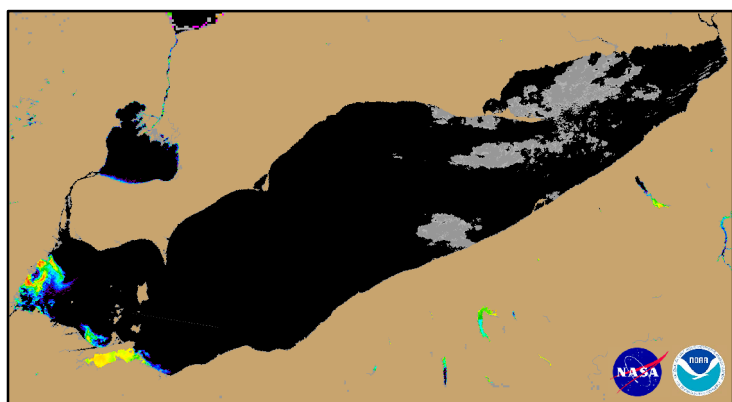
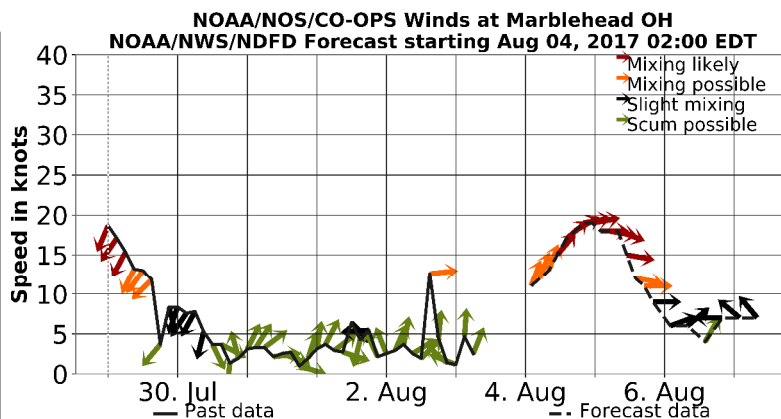


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 31 July, 2017 at 11:33.



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).

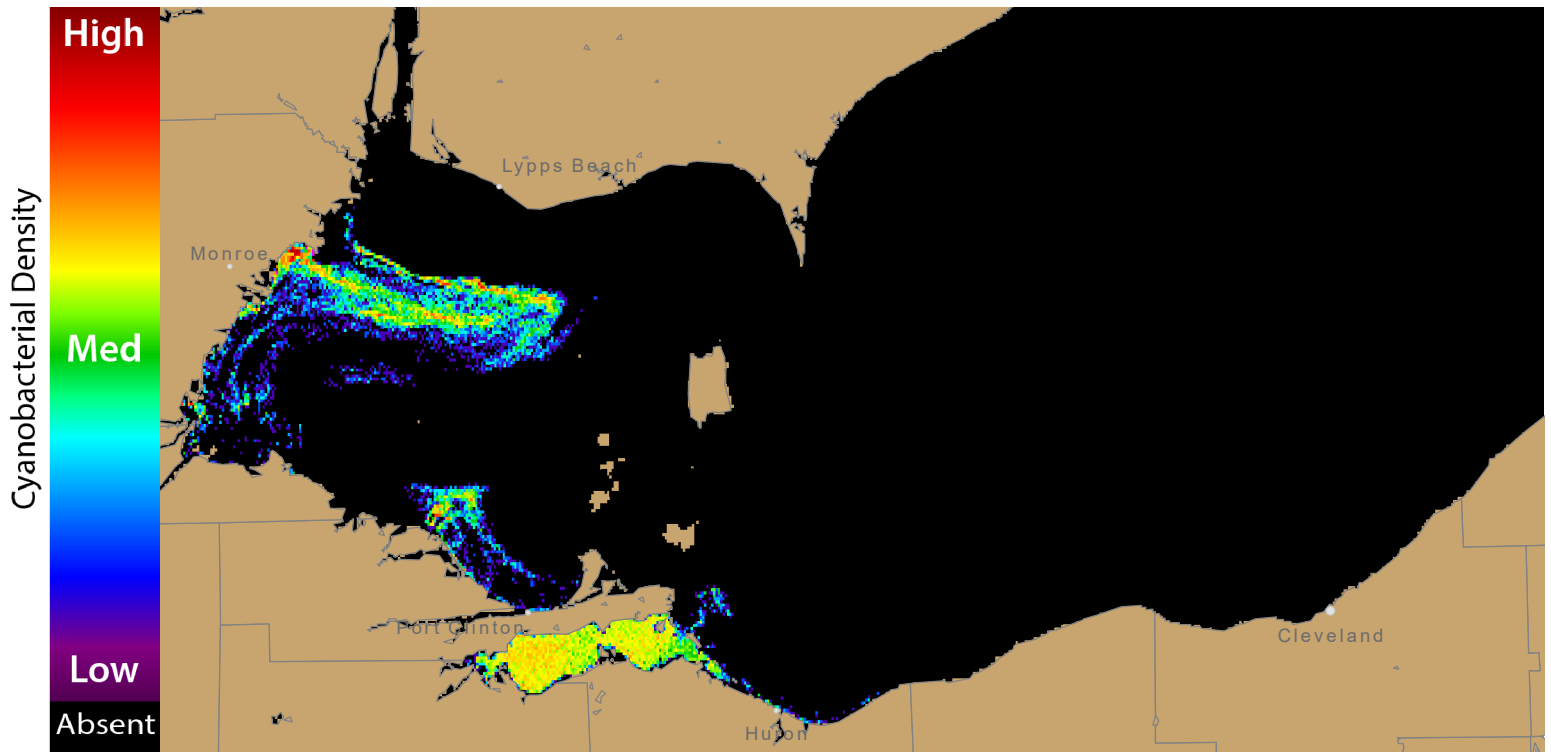


Figure 3. Nowcast position of bloom for 03 August, 2017 using GLFS modelled currents to move the bloom from the 31 July, 2017 image.

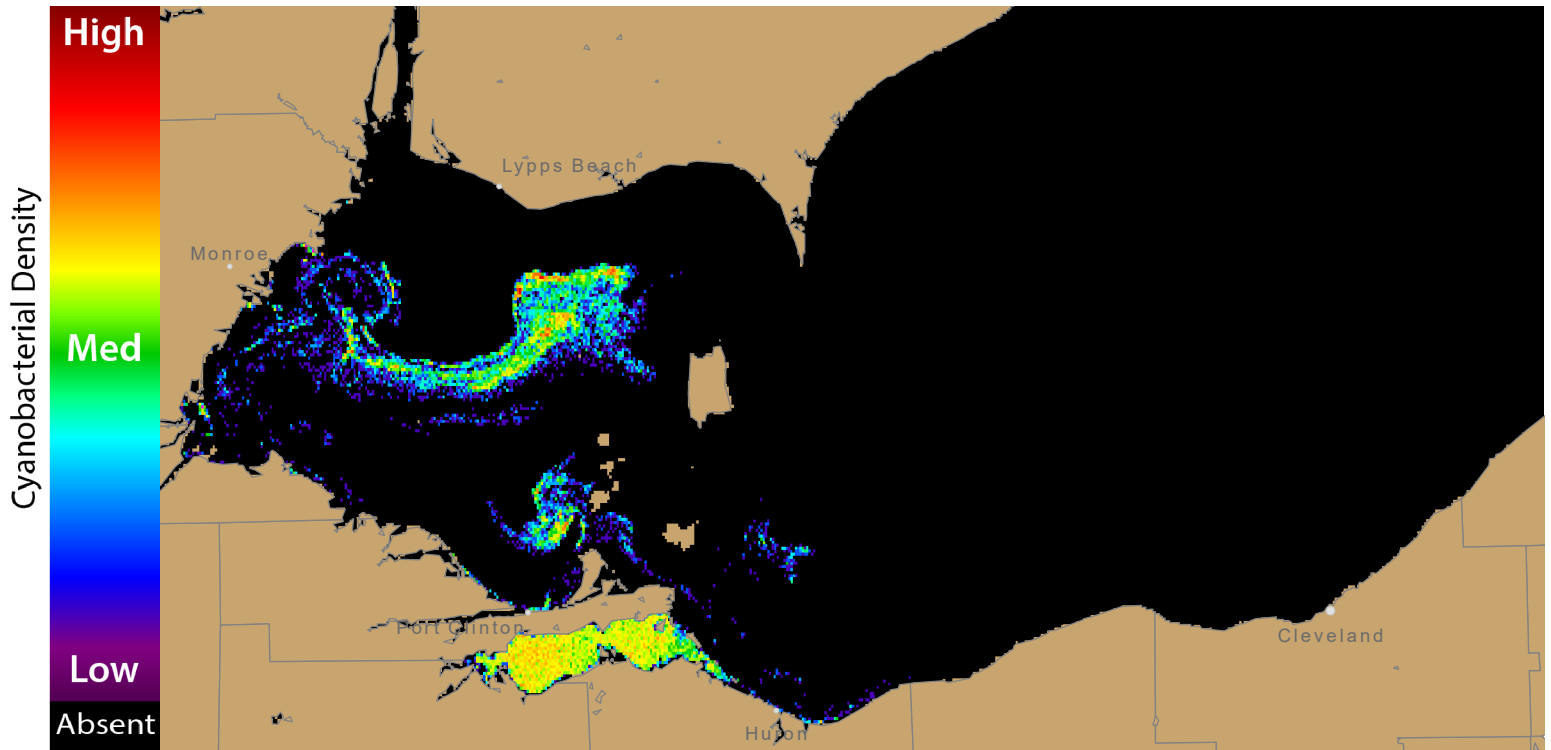
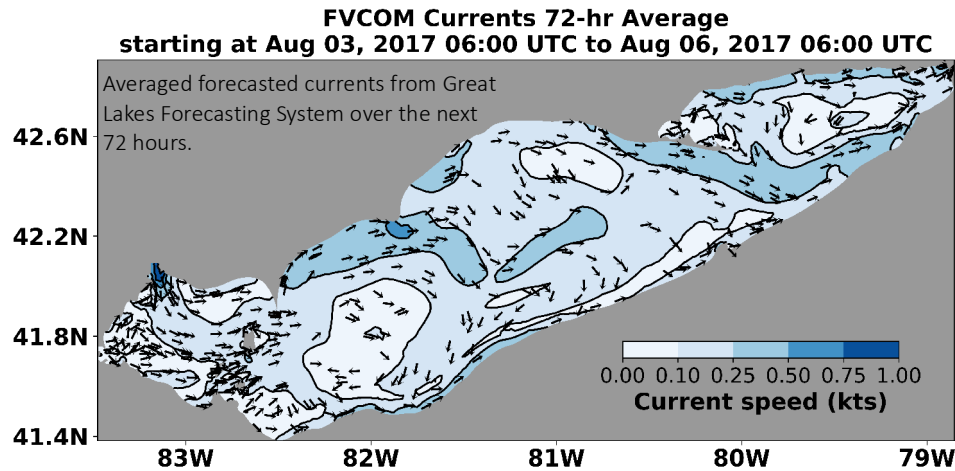


Figure 4. Forecast position of bloom for 06 August, 2017 using GLFS modelled currents to move the bloom from the 31 July, 2017 image.



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