Lake Erie Harmful Algal Bloom Bulletin

27 July, 2017, Bulletin 05

The *Microcystis* cyanobacteria bloom is present in the western basin stretching along- and offshore the Michigan coast to Brest Bay and along- and offshore the Ohio coast past Cedar Point. Observed winds yesterday (7/26) caused mixing that reduced surface concentrations from earlier. Measured toxin concentrations are below recreational thresholds throughout most of the bloom extent.

Forecast winds (10-25 kn) today and tomorrow (7/27-28) may cause mixing, further reducing the surface concentrations of *Microcystis* in the bloom region. Forecast winds today through Sunday (7/27-30) will minimize bloom transport. Clouds will likely obscure the lake through Friday.

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.

-Urízar, Ludema

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

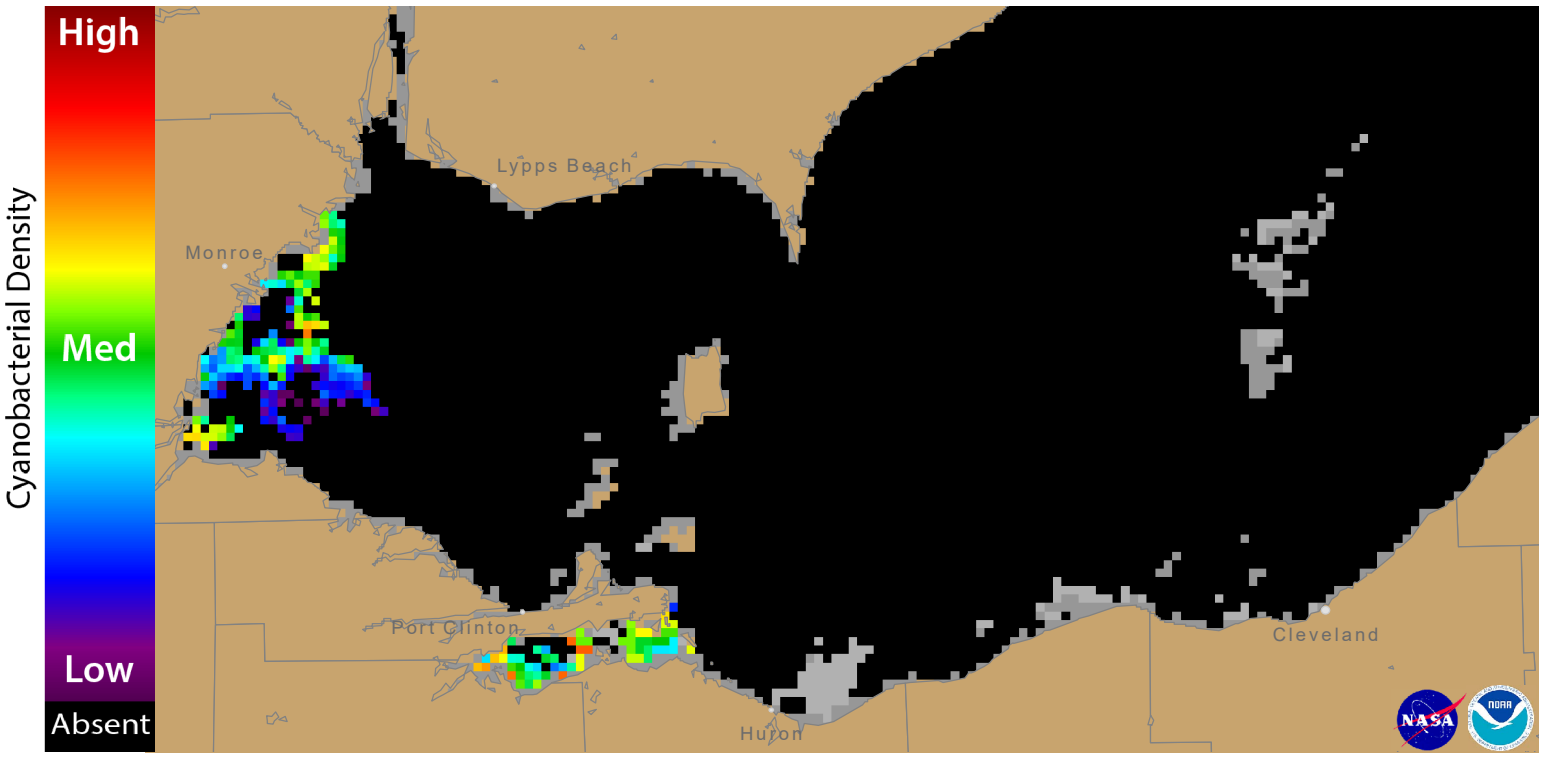


Figure 1. Cyanobacterial Index from NASA's MODIS-Terra & Aqua data collected 25 July, 2017 at 12:26 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

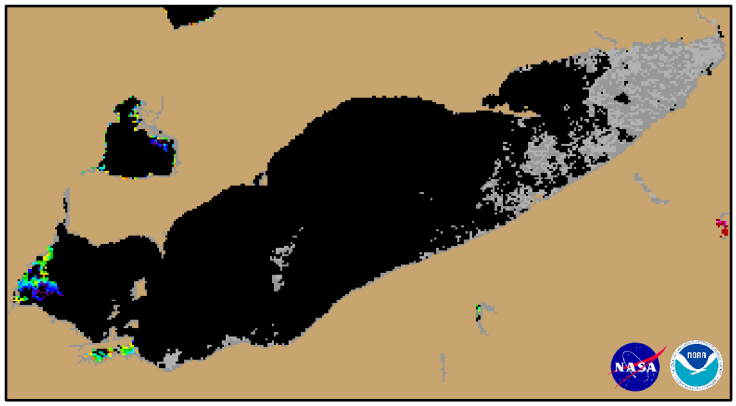
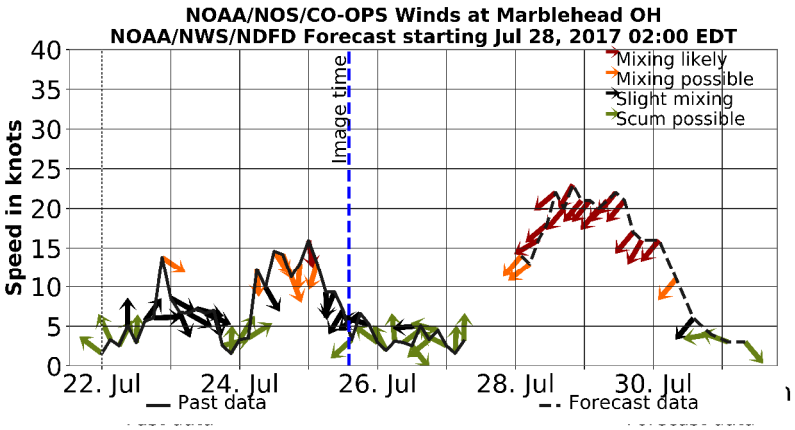


Figure 2. Cyanobacterial Index from NASA's MODIS-Terra & Aqua data collected 25 July, 2017 at 12:26.



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).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

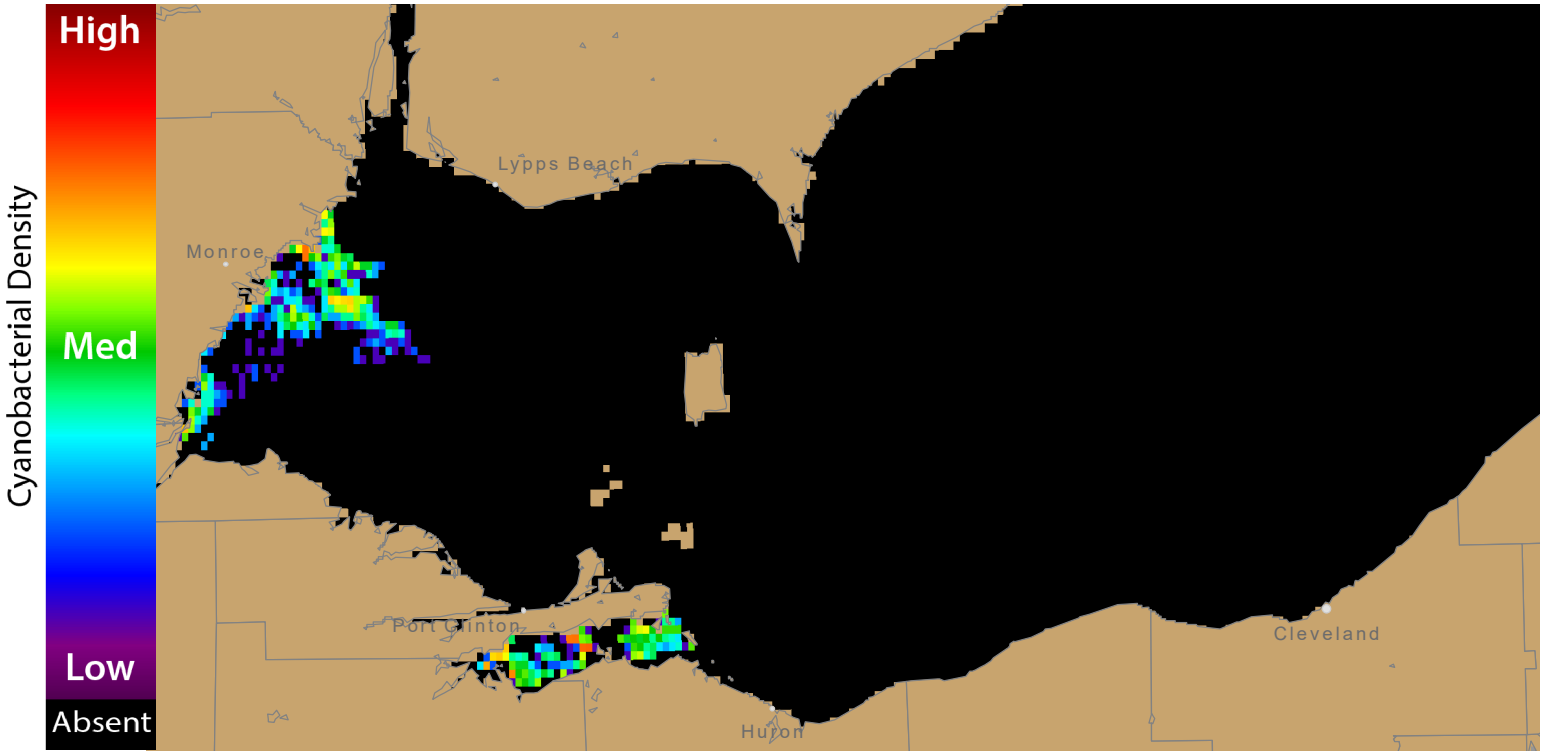


Figure 3. Nowcast position of bloom for 27 July, 2017 using GLFS modelled currents to move the bloom from the 25 July, 2017 image.

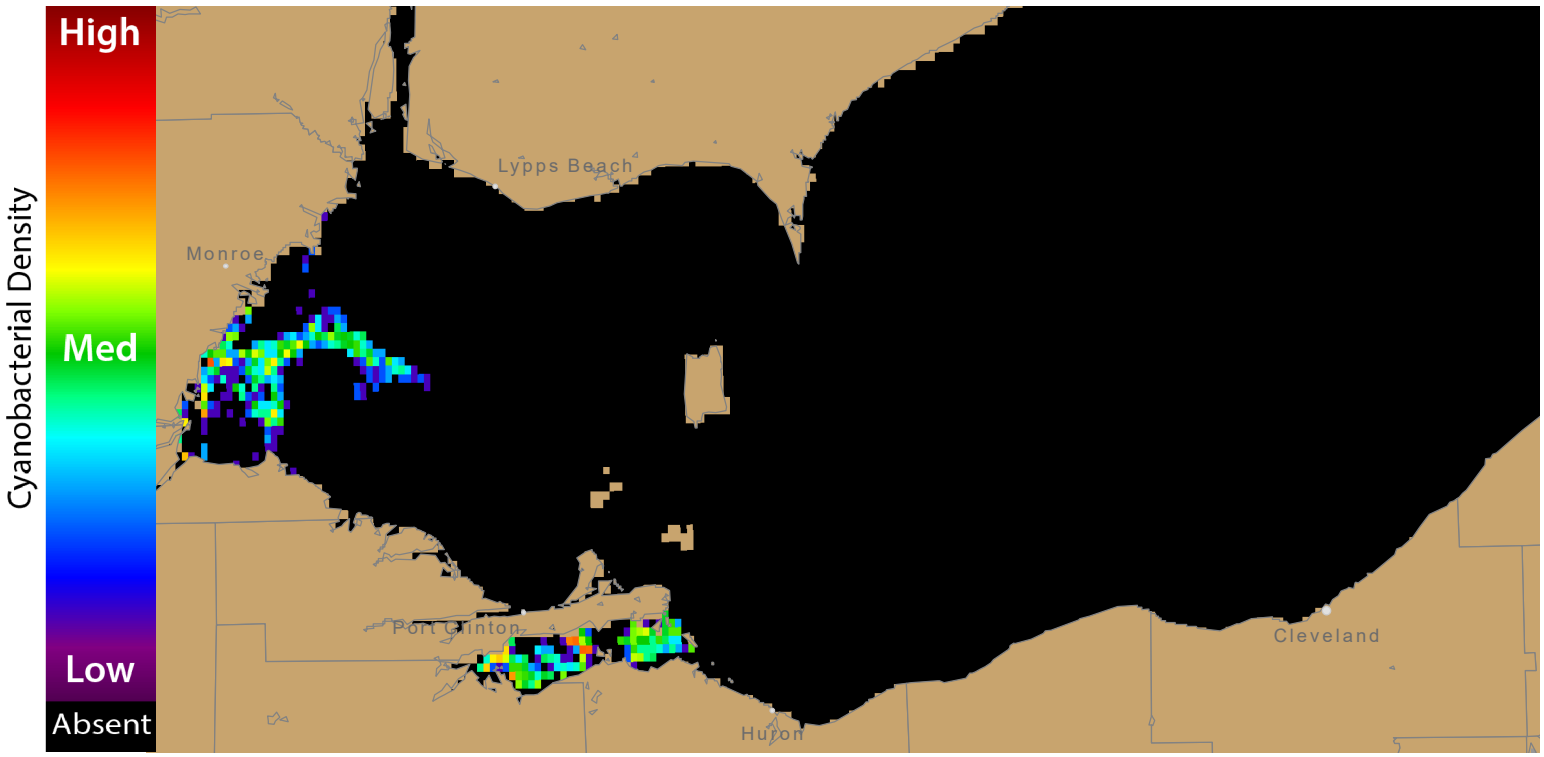
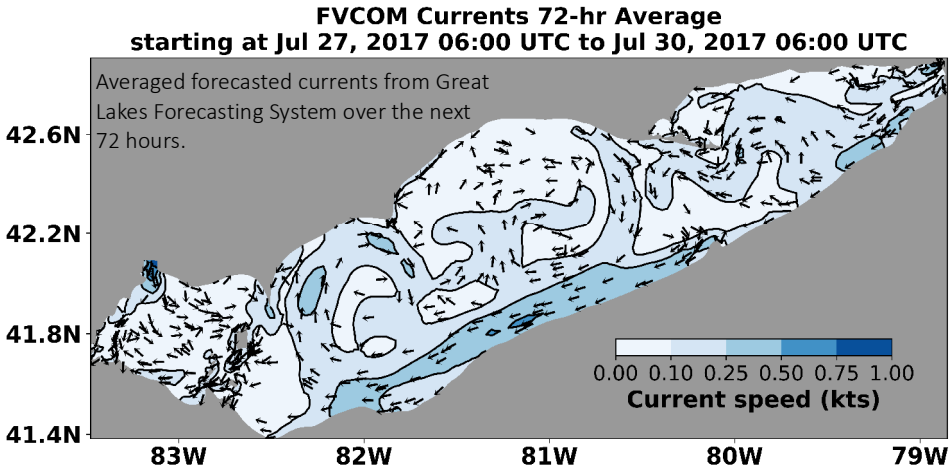


Figure 4. Forecast position of bloom for 30 July, 2017 using GLFS modelled currents to move the bloom from the 25 July, 2017 image.



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