Lake Erie Harmful Algal Bloom Bulletin

31 August, 2017, Bulletin 15

Due to the upcoming federal holiday, the next bulletin will be issued on Tuesday, September 5.

The *Microcystis* cyanobacteria bloom continues in the western basin, extending north along the Michigan coast and east along the Ohio coast toward the islands. Observed winds since Monday (8/28-30) caused mixing that reduced surface concentrations previously visible along the Ontario coast. Scum is present along the Michigan coast and Maumee Bay, corresponding with areas of dark red in Figure 1. Measured toxin concentrations exceed the public health recreation threshold in the northwest portion of Maumee Bay, where it is most dense (appearing green from a boat).

Forecast winds (5-21kn) today through Monday (8/31-9/4) may promote mixing, reducing surface concentrations of *Microcystis*. Winds may promote the northwesterly transport of *Microcystis* today through Monday (8/31-9/4) towards the Michigan 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. NOAA's GLERL provides additional HAB data: https://www.glerl.noaa.gov/res/HABs_and_Hypoxia. The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are evident in the central and eastern basins. -Keeney, Davis

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

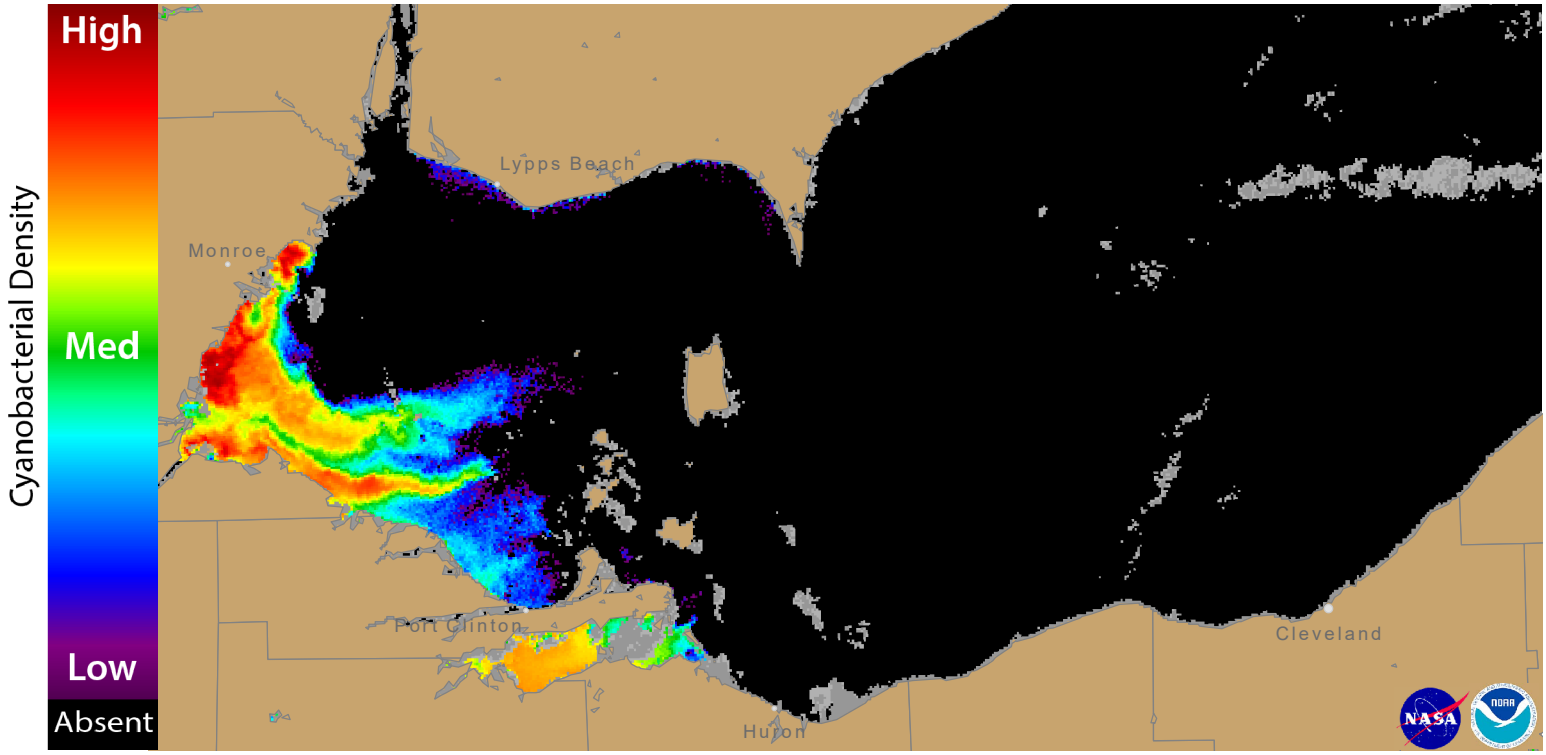


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 30 August, 2017 at 11:55 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

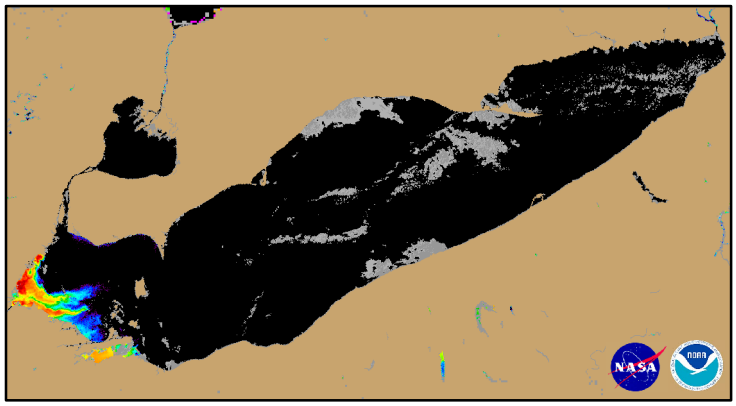
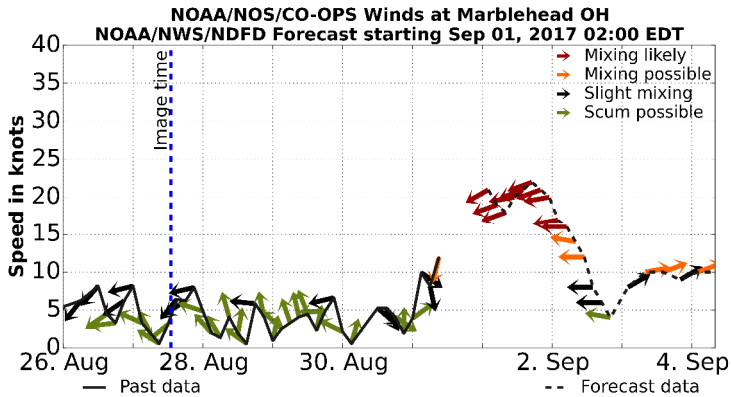


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 30 August, 2017 at 11:55.



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

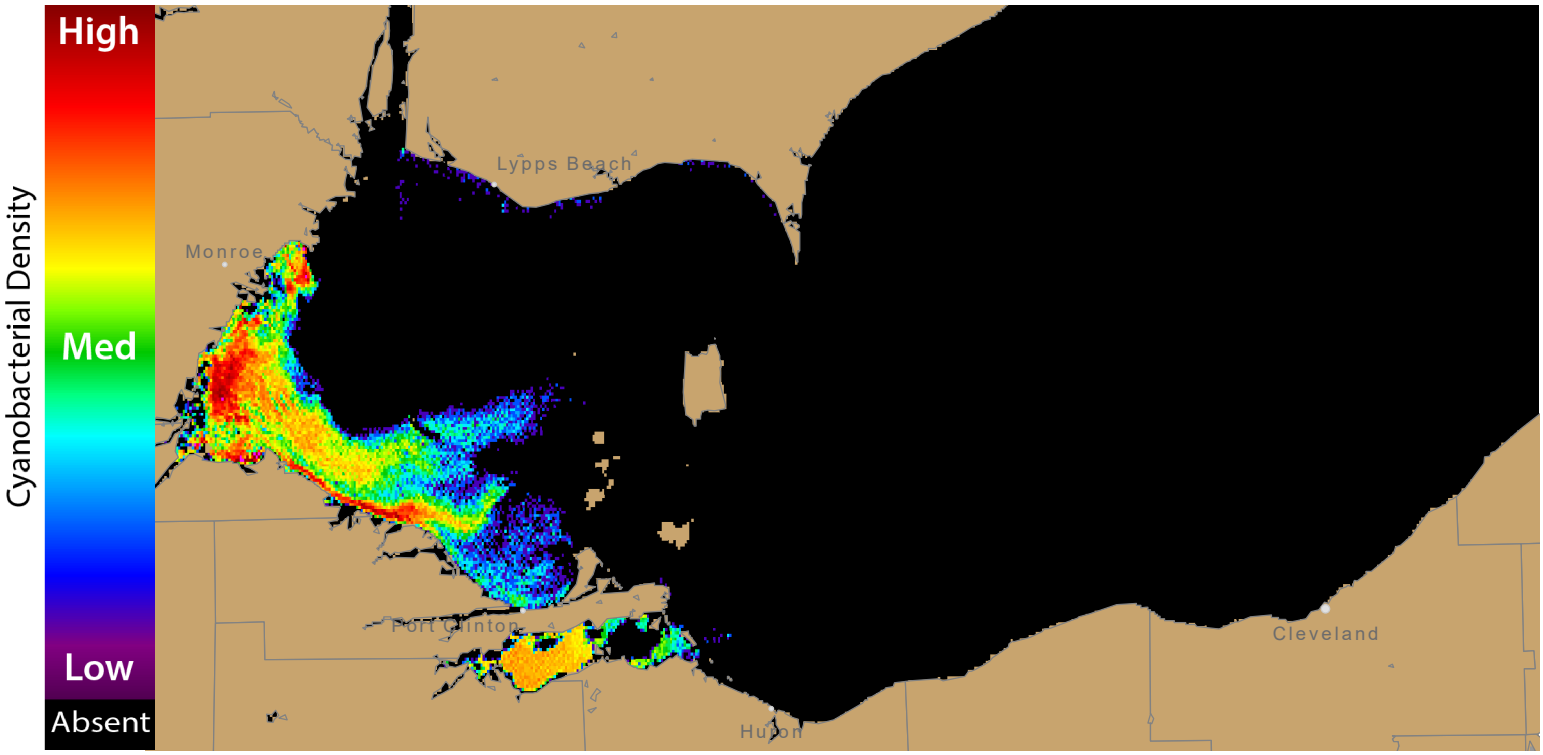


Figure 3. Nowcast position of bloom for 31 August, 2017 using GLFS modelled currents to move the bloom from the 30 August, 2017 image.

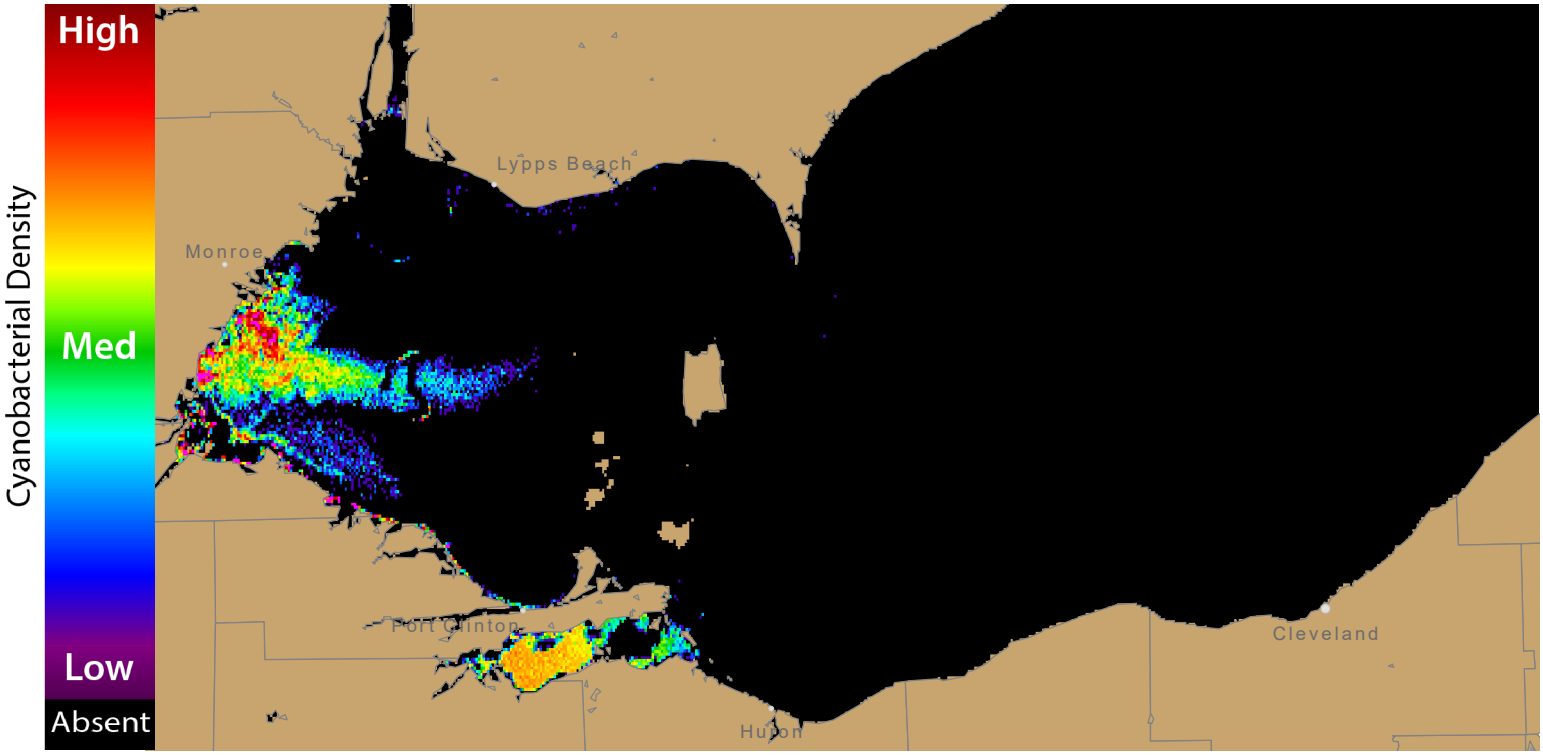
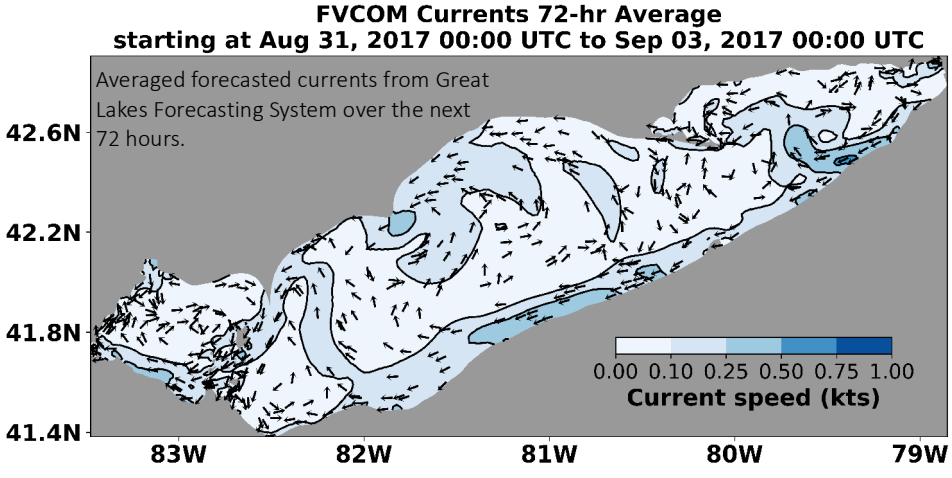


Figure 4. Forecast position of bloom for 03 September, 2017 using GLFS modelled currents to move the bloom from the 30 August, 2017



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