Lake Erie Harmful Algal Bloom Bulletin

19 October, 2017, Bulletin 29

The *Microcystis* cyanobacteria bloom continues in localized patches in the western basin from Maumee Bay to offshore south of Point Pelee. Winds observed Monday through Wednesday (10/16-18) caused mixing that reduced surface concentrations from earlier. Measured toxin concentrations are below recreational thresholds throughout the bloom extent.

Forecast winds (5-15kn) today through Monday (10/19-23) will promote possible mixing and easterly transport of remaining *Microcystis* concentrations. Water temperatures are below 68˚F (20˚C), limiting the growth of *Microcystis* concentrations, and are forecasted to approach 59˚F (15˚C) which should substantially decrease bloom concentrations through the weekend.

Please check Ohio EPA's site on harmful algal blooms for safety information: http://epa.ohio.gov/habalgae.aspx. NOAA's GLERL provides additional HAB data: https://www.glerl.noaa.gov/res/HABs_and_Hypoxia. Keep your pets and yourself out of the water in areas where scum is present. The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are evident in the central or eastern basins.
–Yang, Kavanaugh

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

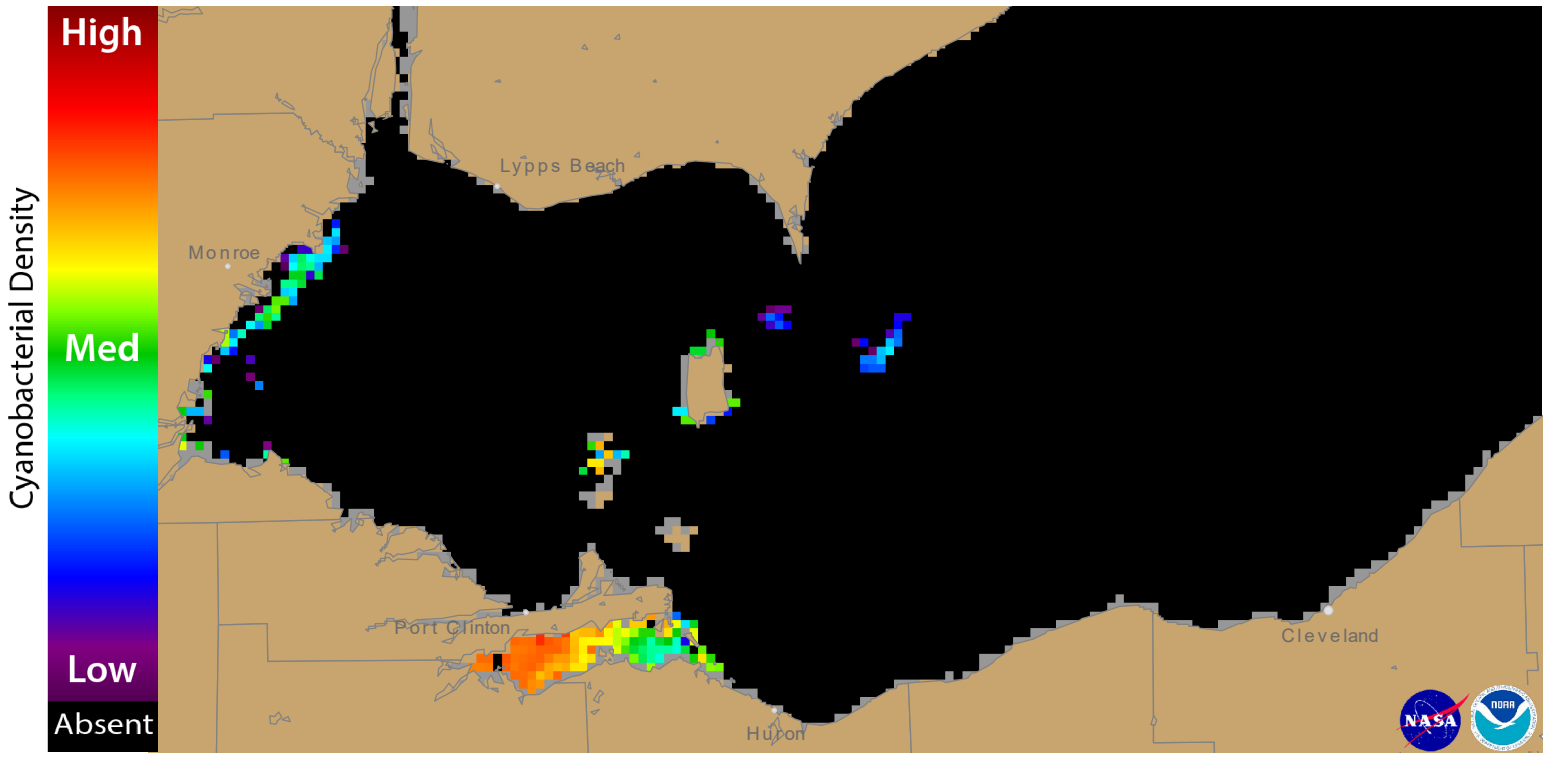


Figure 1. Cyanobacterial Index from NASA MODIS-Terra data collected 18 October, 2017 at 11:06 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

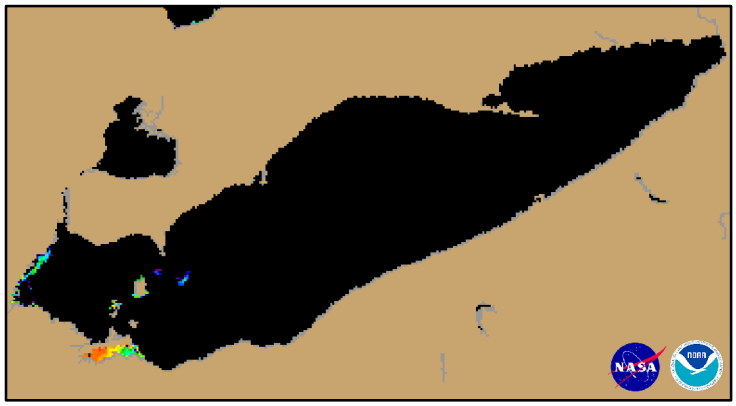
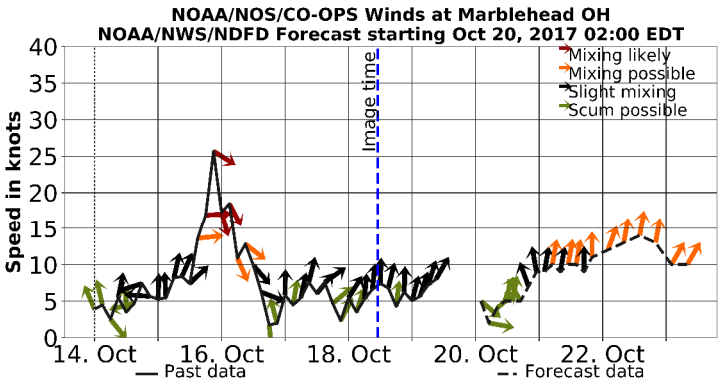


Figure 2. Cyanobacterial Index from NASA MODIS-Terra data collected 18 October, 2017 at 11:06.



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

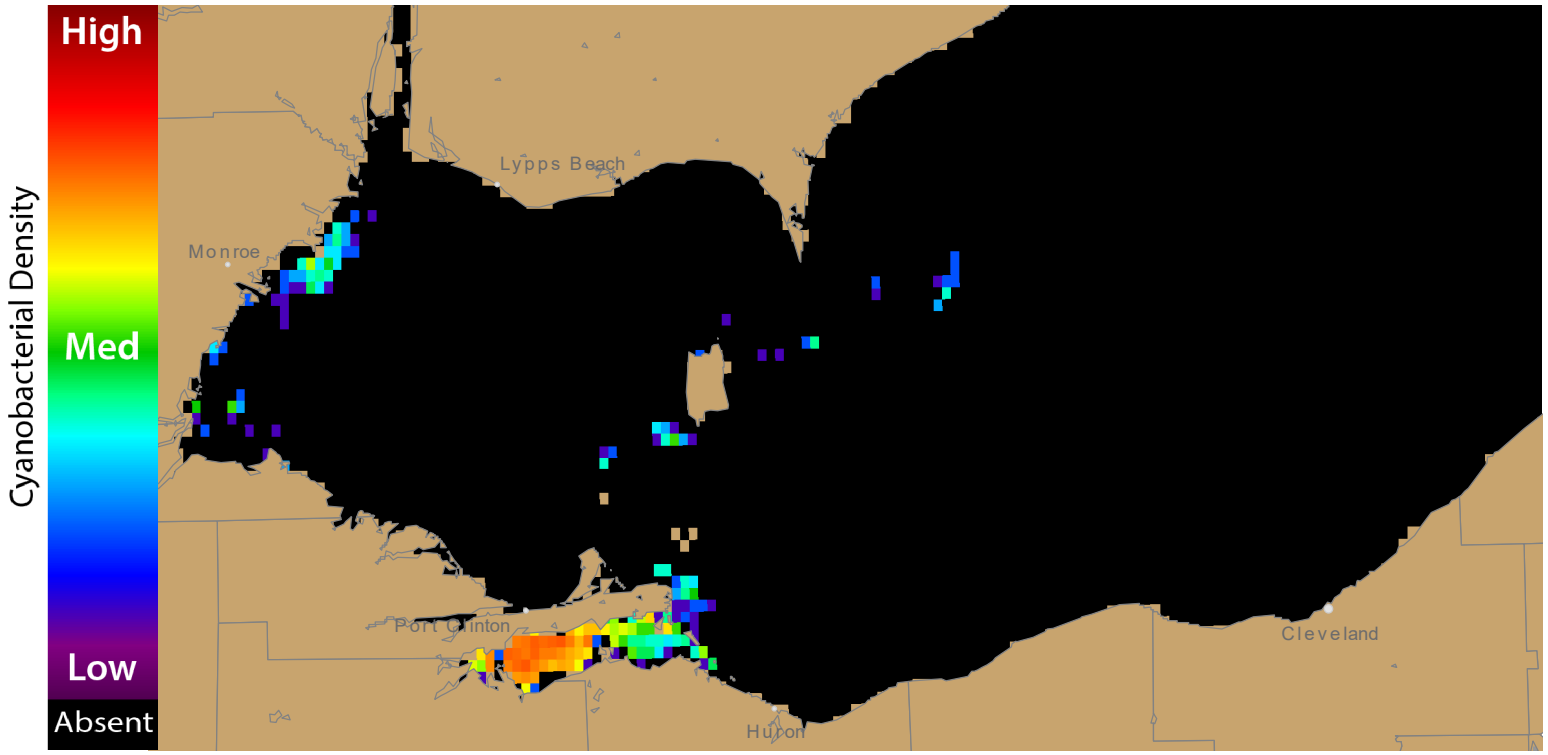


Figure 3. Nowcast position of bloom for 19 October, 2017 using GLFS modelled currents to move the bloom from the 18 October, 2017

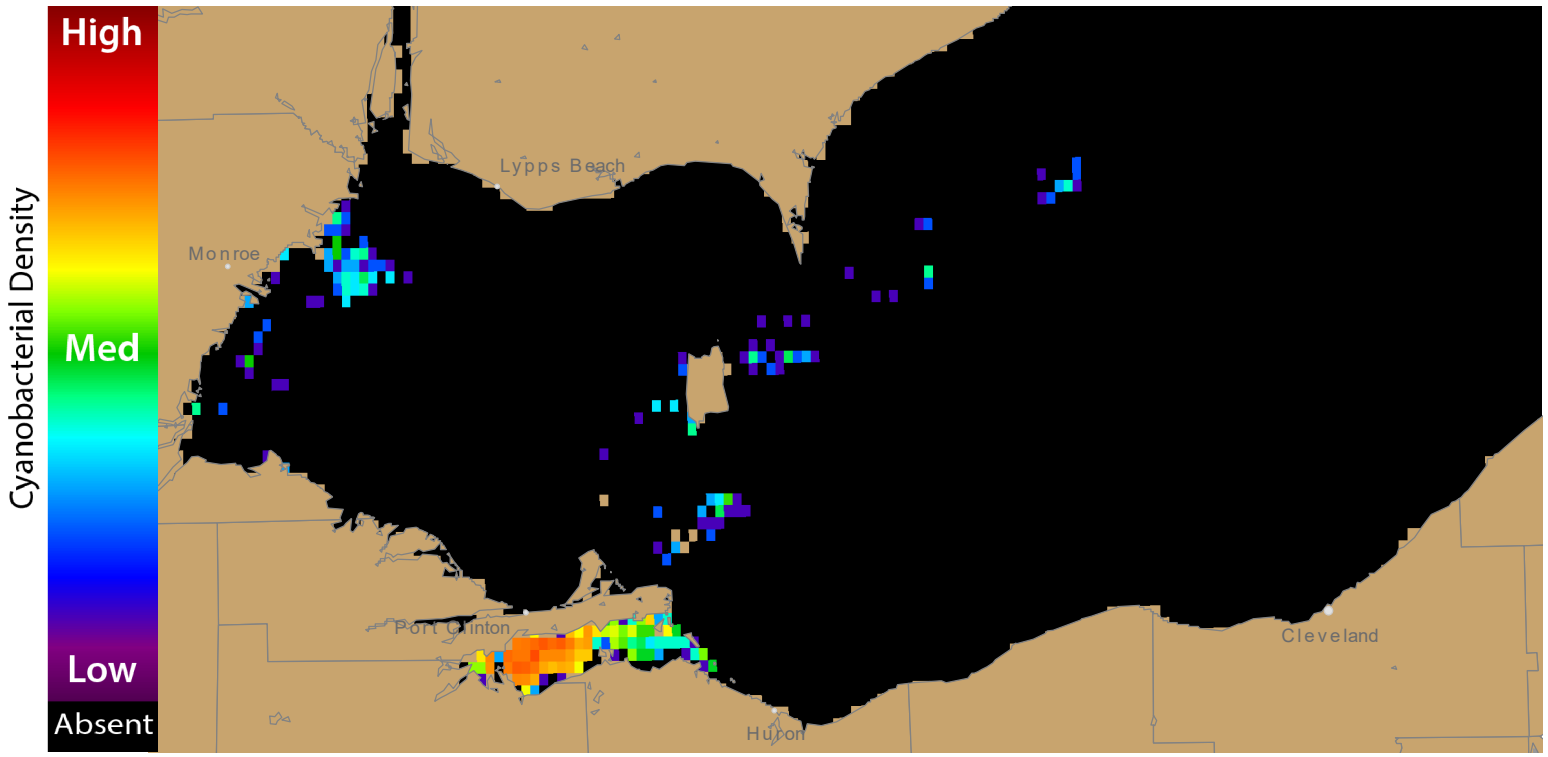
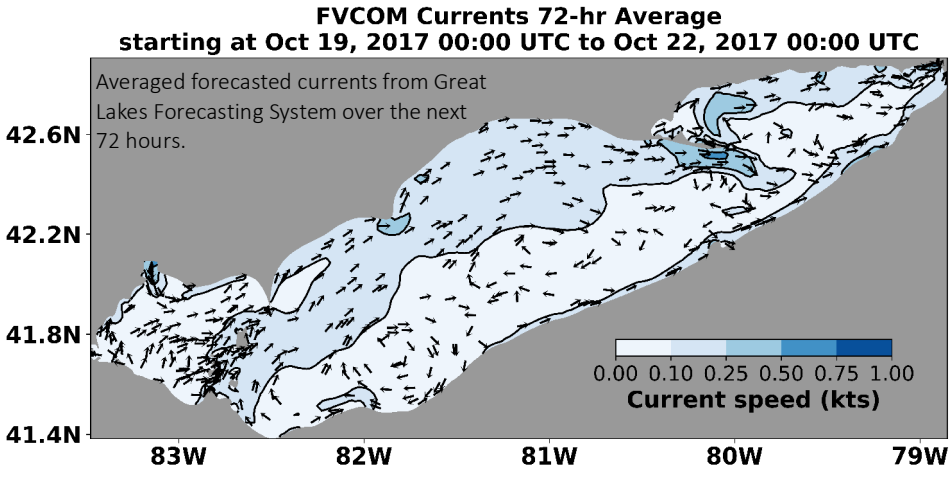


Figure 4. Forecast position of bloom for 22 October, 2017 using GLFS modelled currents to move the bloom from the 18 October, 2017



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