



# Lake Erie Harmful Algal Bloom Bulletin

14 September, 2017, Bulletin 19

The *Microcystis* cyanobacteria bloom continues in the western basin, along the Michigan and Ohio coasts. Observed winds since Monday (9/11-14) allowed for the formation of scum and only slight mixing of surface concentrations occurred Tuesday (9/12). Scums were visible west of the Bass Islands corresponding with areas of dark orange and red in Figure 1. Measured toxin concentrations are below recreational thresholds throughout most of the bloom extent, but concentrations can exceed the threshold east of Maumee Bay State Park and west of South Bass Island where the bloom is most dense (appearing green from a boat).

Forecast winds (5-9kn) today through Sunday (9/14-9/17) may promote the potential for scum formation and northerly transport of remaining *Microcystis* concentrations. The water temperature is approaching or below 68°F (20°C) throughout the western basin, limiting the growth of *Microcystis* concentrations.

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](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 basin and eastern basin. -Keeney, Kavanaugh

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

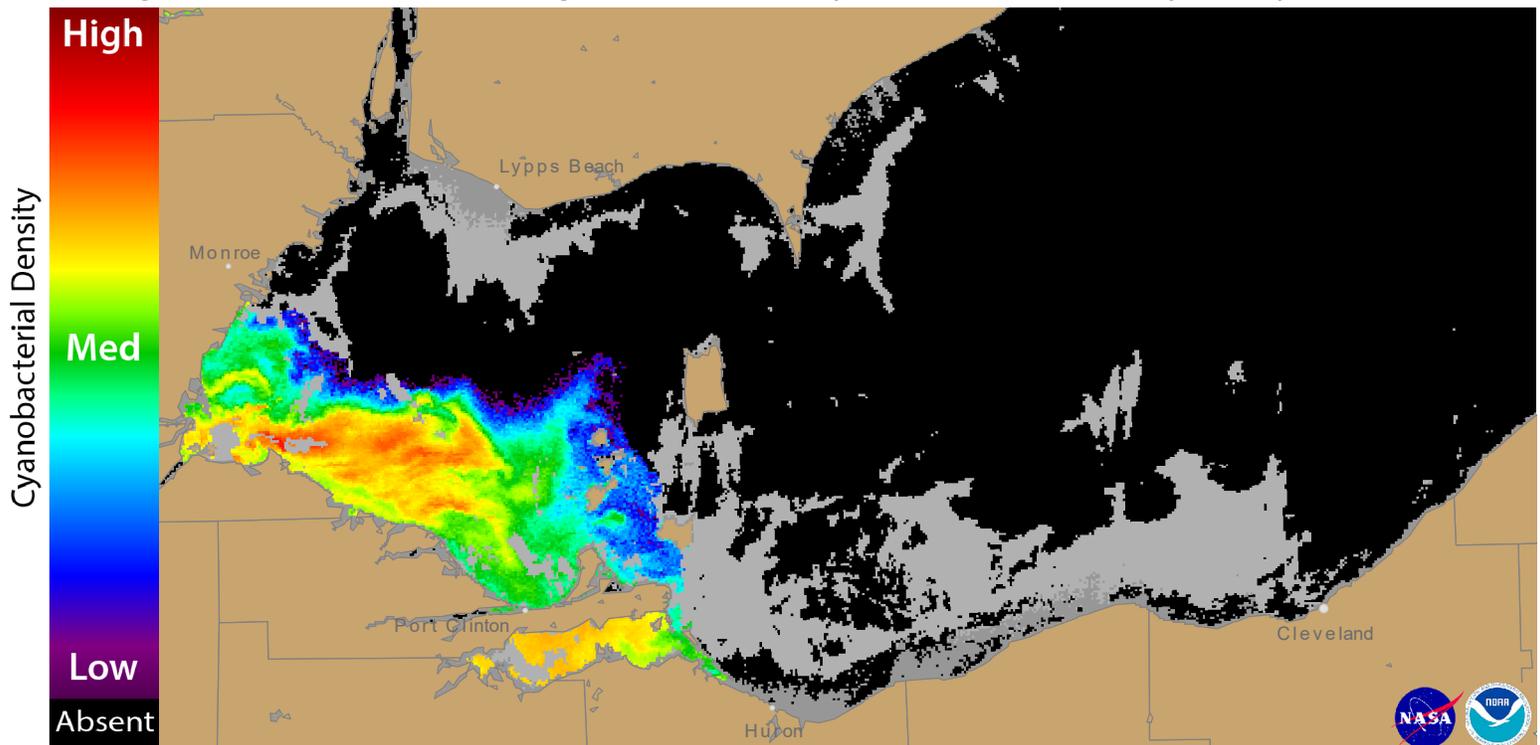


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 11 September, 2017 at 11:44 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

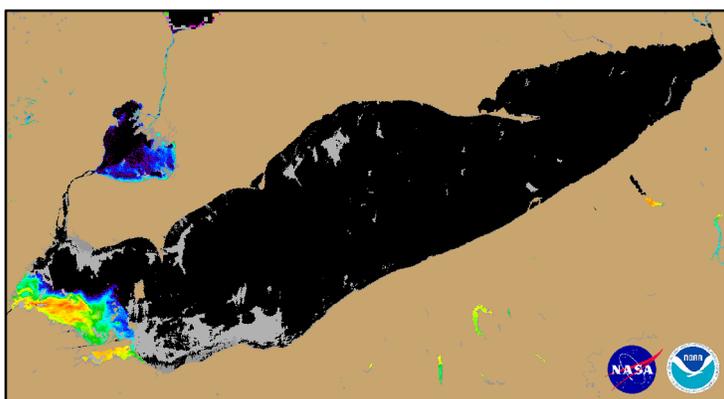
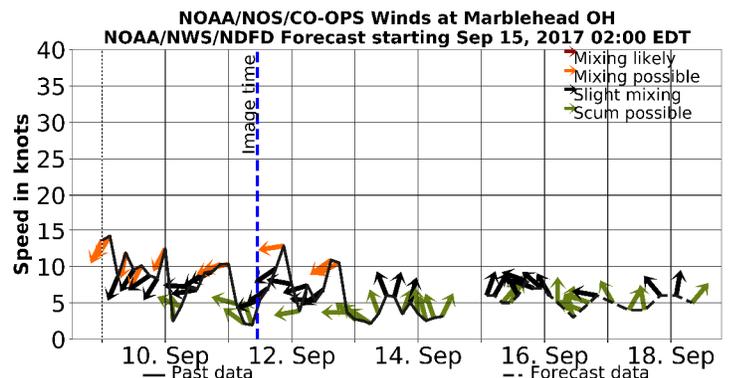


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 11 September, 2017 at 11:44.



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).

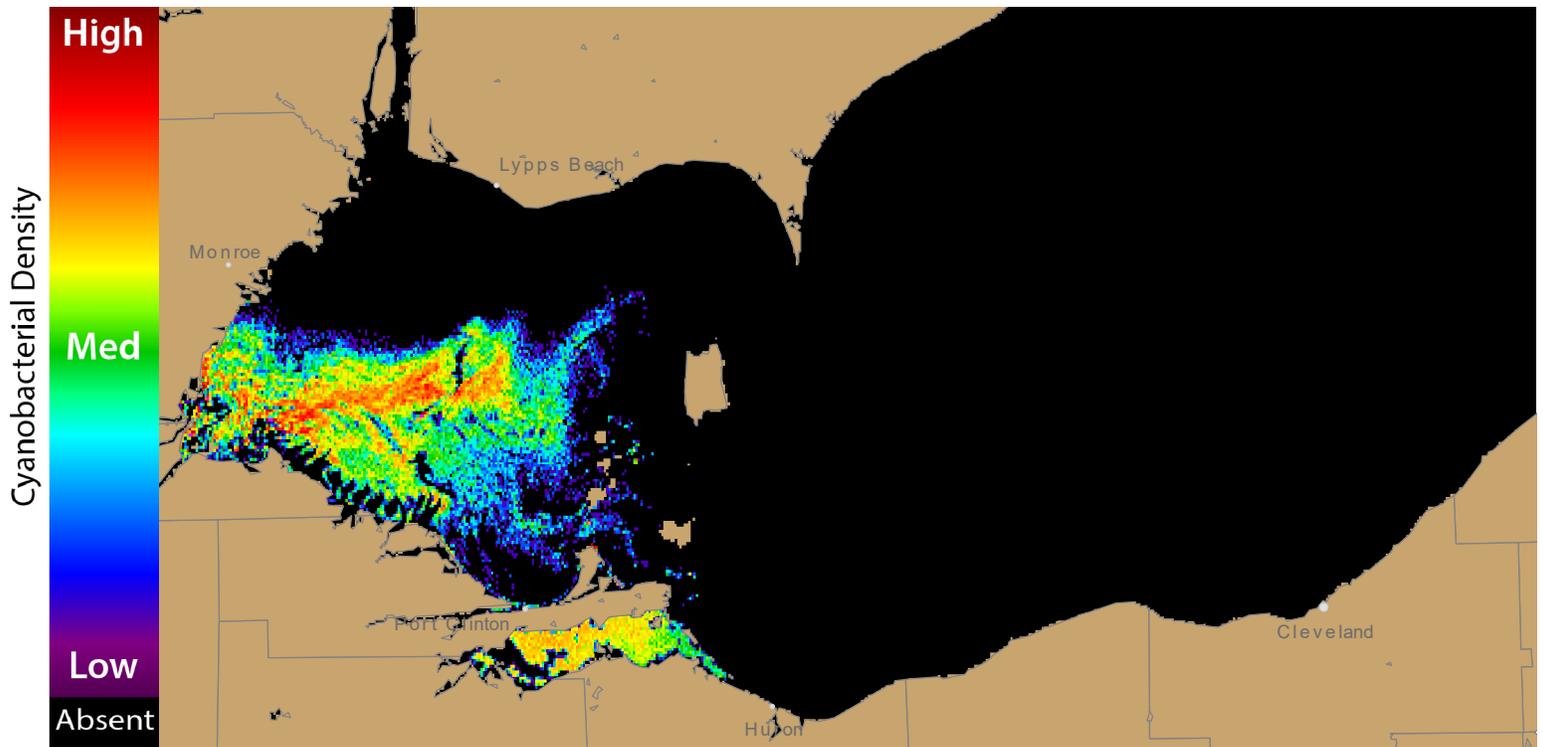


Figure 3. Nowcast position of bloom for 14 September, 2017 using GLFS modelled currents to move the bloom from the 11 September, 2017

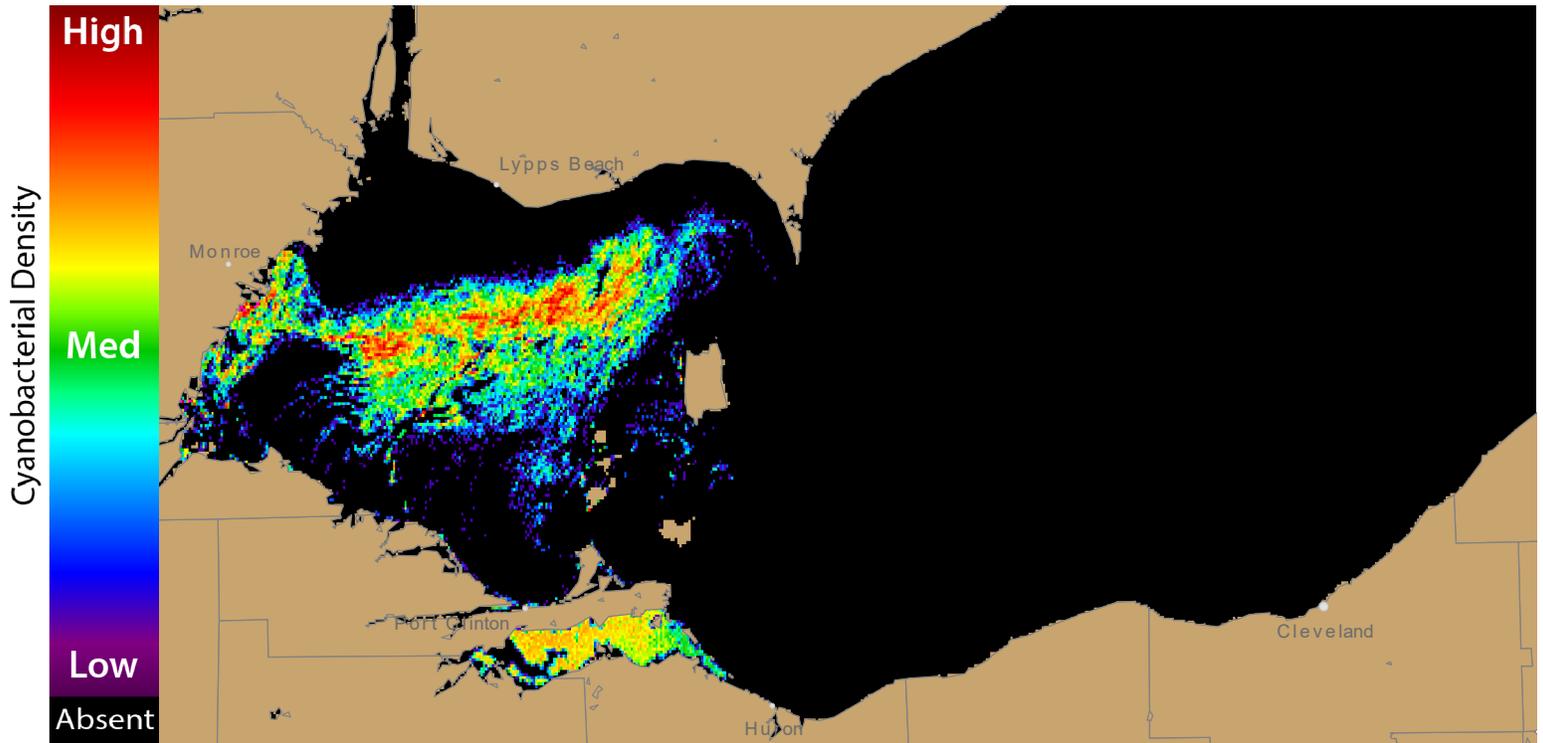
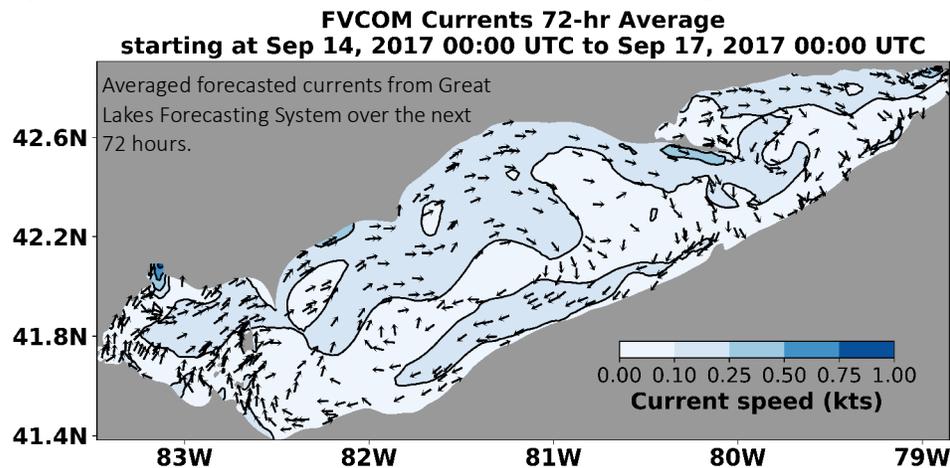


Figure 4. Forecast position of bloom for 17 September, 2017 using GLFS modelled currents to move the bloom from the 11 September, 2017



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