



Lake Erie Harmful Algal Bloom Bulletin

11 September, 2017, Bulletin 18

The *Microcystis* cyanobacteria bloom continues in the western basin, but is decreasing in toxicity. Observed winds from the weekend (9/9-11) caused mixing that reduced surface concentrations previously visible along the Ohio and Michigan coasts. Scum was not present in MODIS or Sentinel satellite imagery from the weekend. Measured toxin concentrations are below recreational thresholds throughout most of the bloom extent, but concentrations can exceed the threshold in the Maumee Bay region of the bloom where scums may persist (appearing green from a boat).

Forecast winds (5-15kn) today through Thursday (9/11-14) may cause slight mixing of the surface concentrations, and westerly transport of remaining *Microcystis* concentrations. Water Temperatures are below or approaching 68 ° F (20° C), limiting growth of *Microcystis* concentrations in the western basin.

Please check Ohio EPA's site on harmful algal blooms for safety information. <http://epa.ohio.gov/habalgae.aspx>. Keep yourself and your pets out of the water where scums are present. NOAA's GLERL provides additional HAB data:

https://www.glerl.noaa.gov/res/HABs_and_Hypoxia. The persistent cyanobacteria bloom in Sandusky Bay continues. -Keeney, Ludema

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

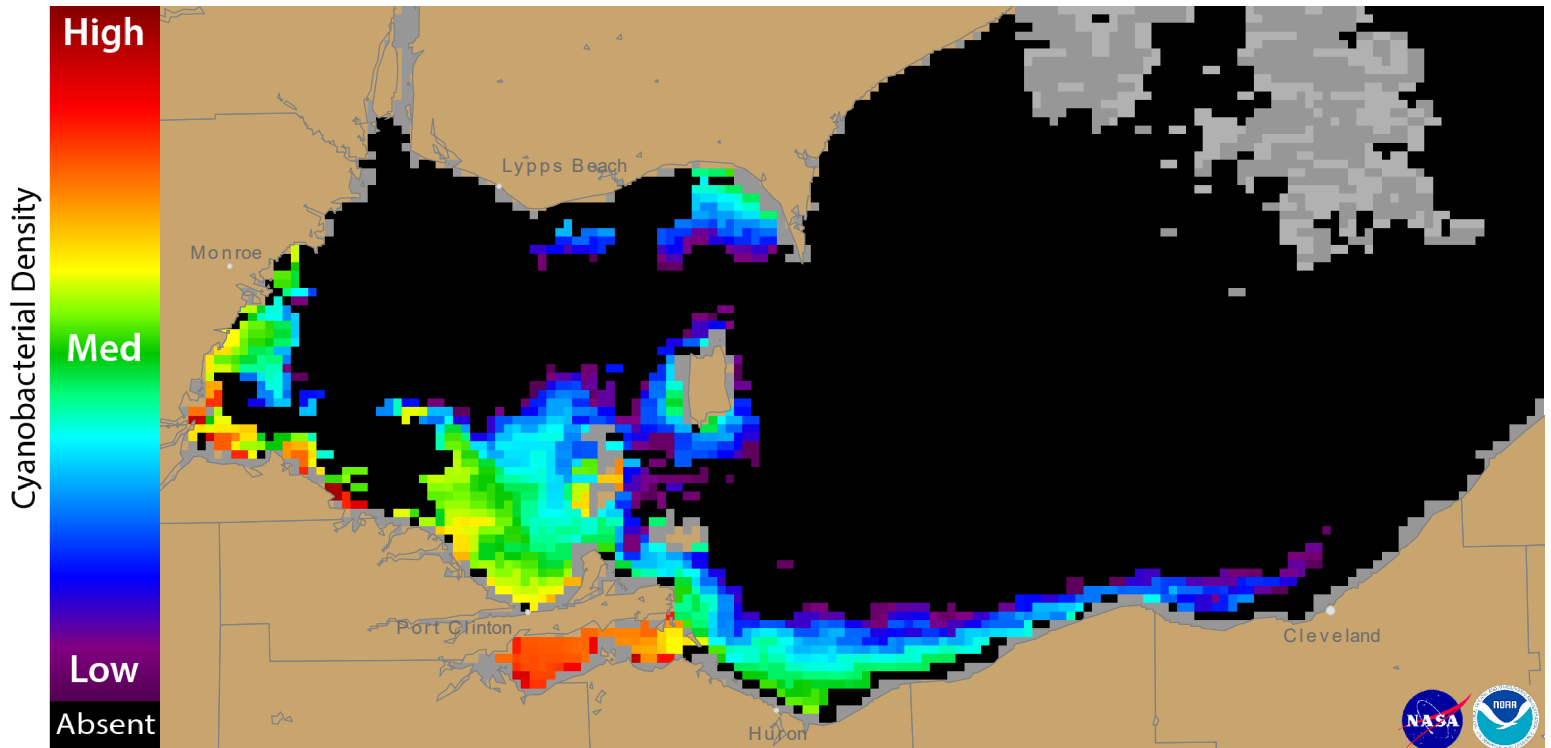


Figure 1. Cyanobacterial Index from NASA MODIS-Aqua data collected 10 September, 2017 at 13:25 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

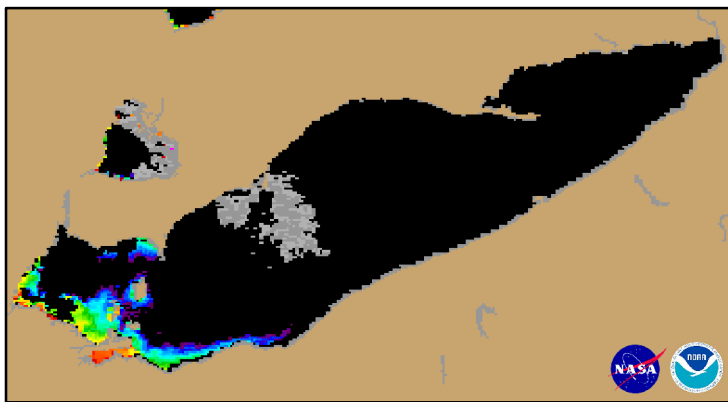
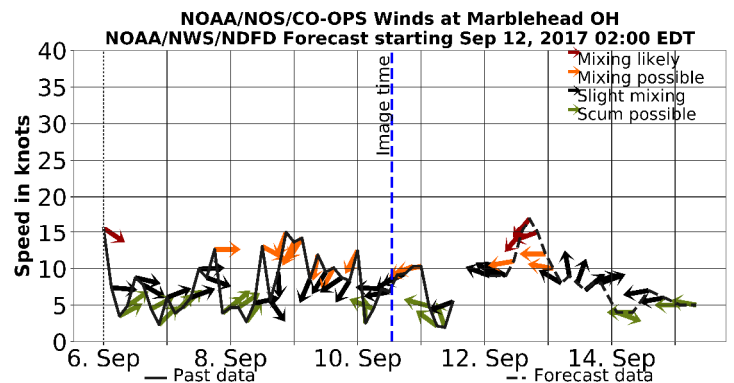


Figure 2. Cyanobacterial Index from NASA MODIS-Aqua data collected 10 September, 2017 at 13:25.



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).

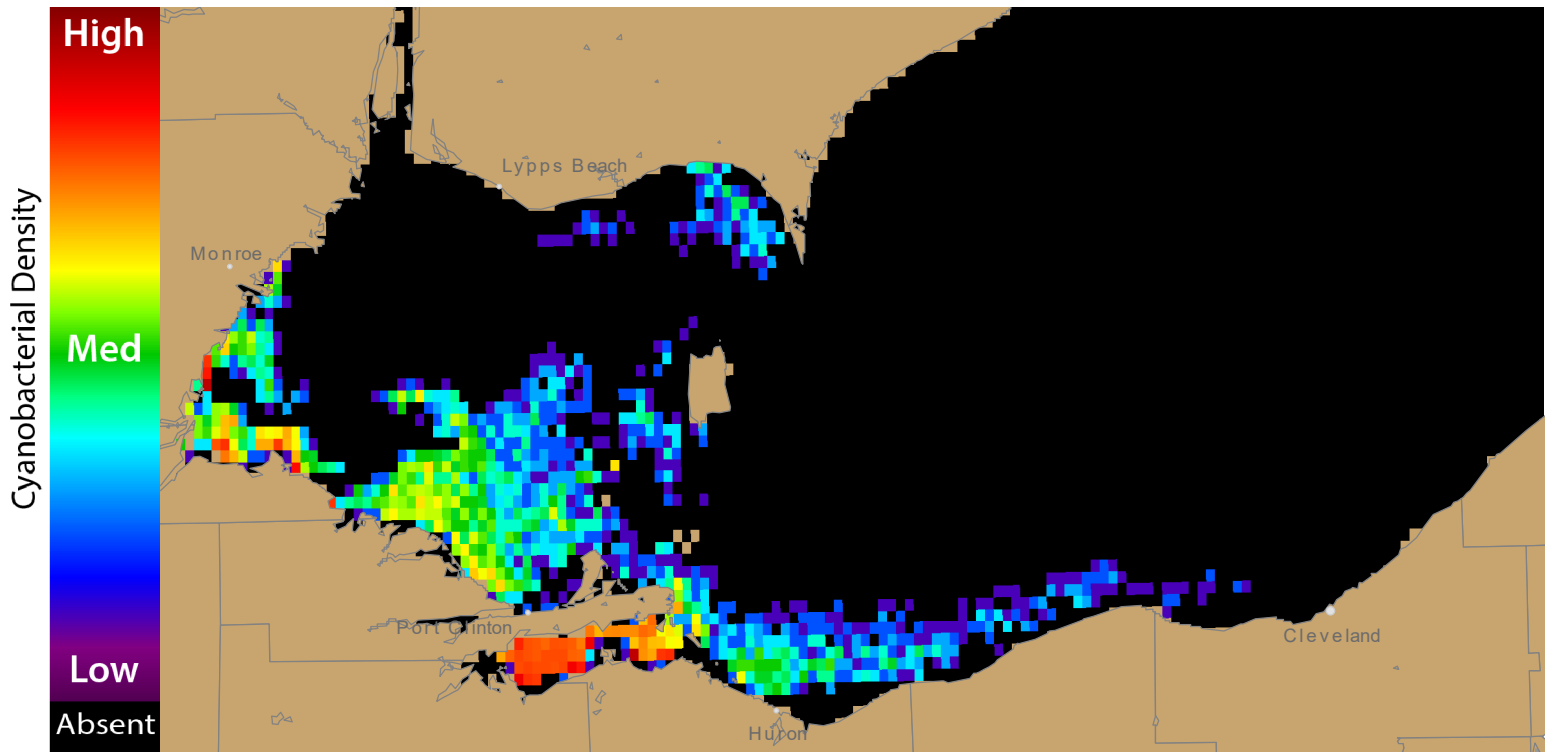


Figure 3. Nowcast position of bloom for 11 September, 2017 using GLFS modelled currents to move the bloom from the 10 September, 2017

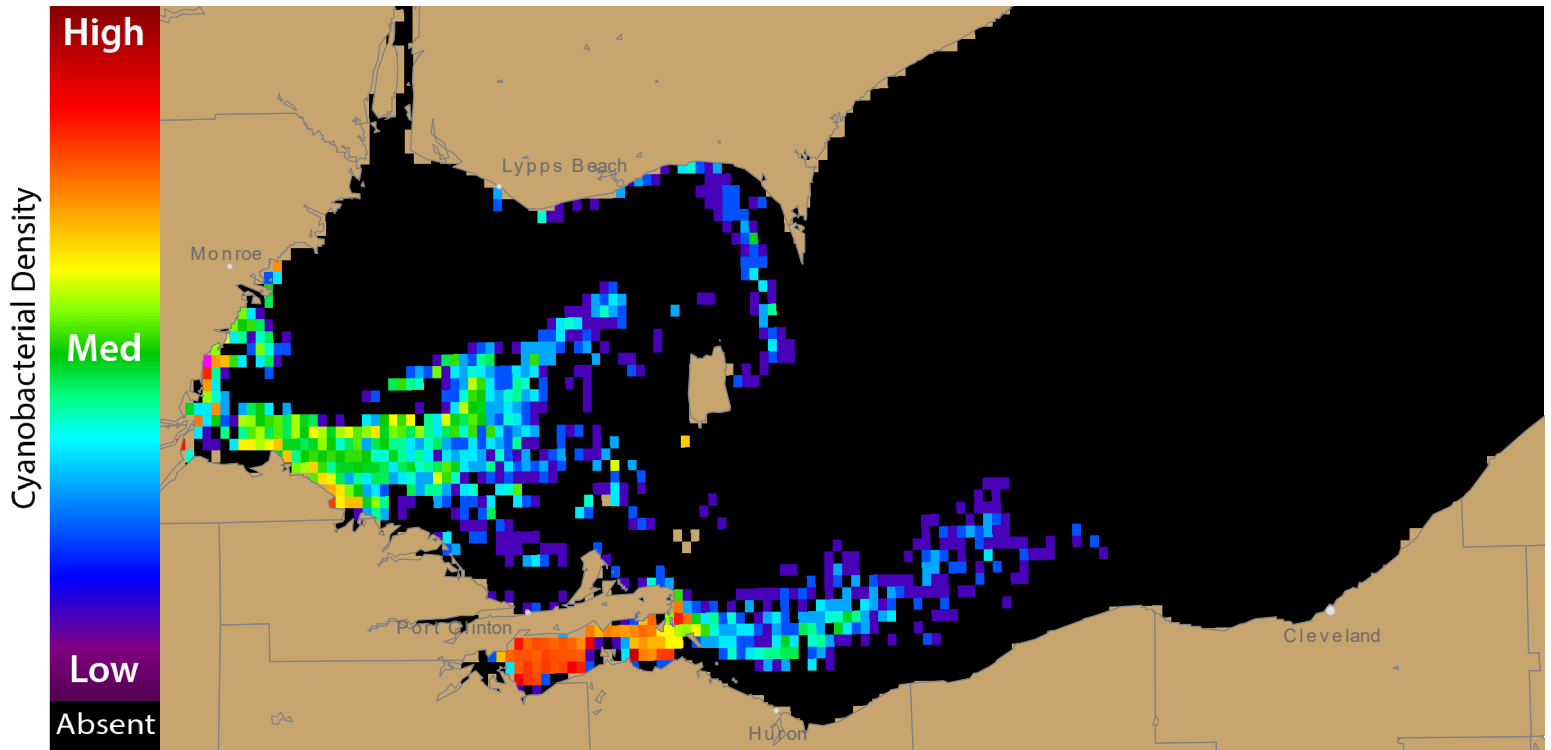
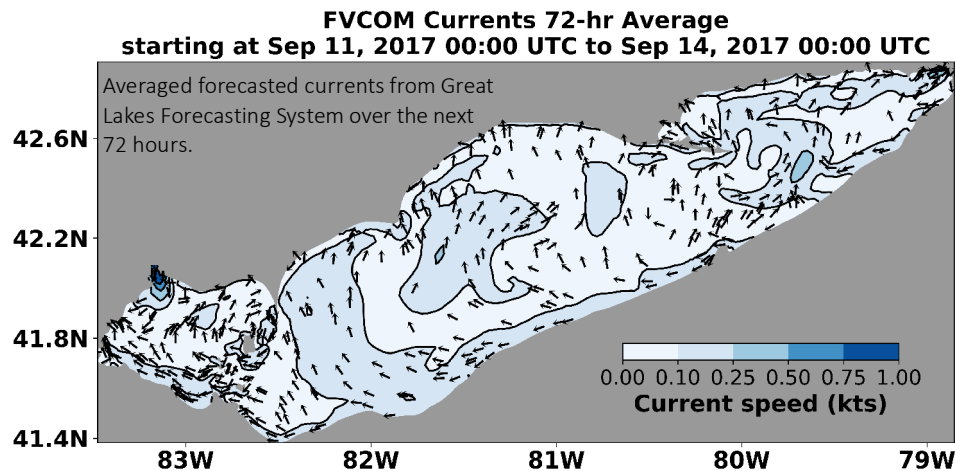


Figure 4. Forecast position of bloom for 14 September, 2017 using GLFS modelled currents to move the bloom from the 10 September, 2017



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