



Experimental Lake Erie Harmful Algal Bloom Bulletin

National Centers for Coastal Ocean Science and Great Lakes Environmental Research Laboratory

24 August, 2015, Bulletin 13

The *Microcystis* cyanobacteria bloom continues across a large part of the western basin along the Michigan and Ohio coasts and into the central basin. The recent southwesterly winds have pushed the bloom northward along the Michigan coast. Moderate to high concentrations extend eastward to midway between Cleveland and Rondeau, Ontario. Scum has been scattered in the last few days. Microcystin toxins are still present in the bloom, but the concentration has decreased in general. However, scum areas remain a significant risk.

Strong, westerly winds are expected through Tuesday, creating strong mixing. A possible shift to NW winds on Wed and Thursday may favor southward movement. Milder winds on Thursday may reduce mixing, giving greater potential for scum formation. The persistent bloom in Sandusky Bay continues. No other blooms are evident in the central and eastern basins.

Please check for updates on Ohio State Parks at Ohio EPA's site, <http://epa.ohio.gov/habalgae.aspx>. Keep your pets and yourself out of the water in areas where scum is forming.

-Stumpf, Tomlinson

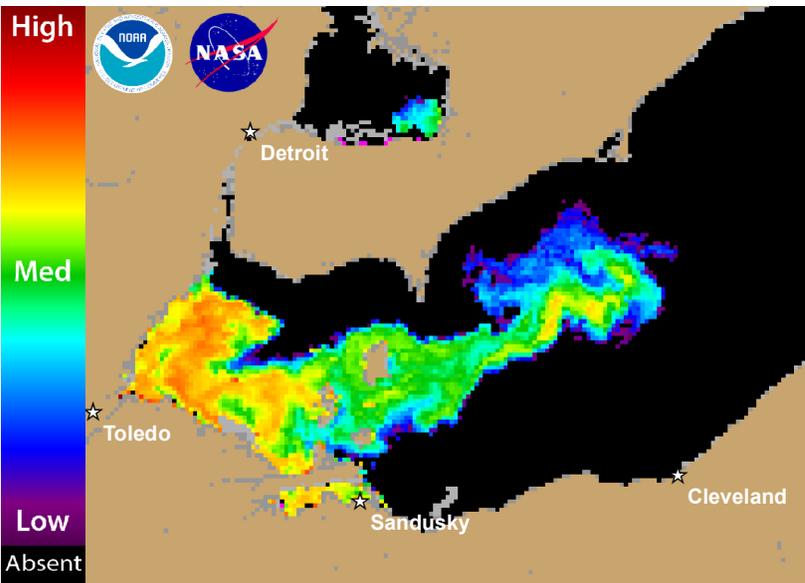


Figure 1. Cyanobacterial Index from NASA's MODIS- Aqua data collected 22 August, 2015 at 13:10 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

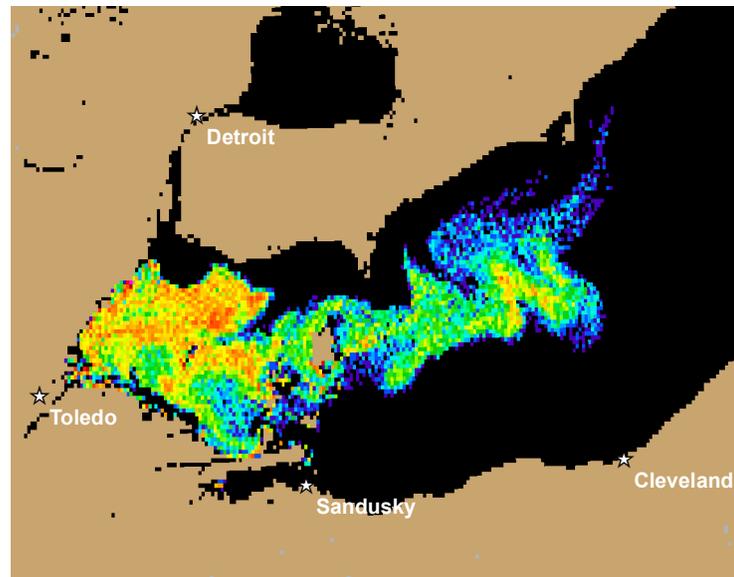


Figure 2. Nowcast position of bloom for 24 August, 2015 using GLCFS modeled currents to move the bloom from the 22 August, 2015 image.

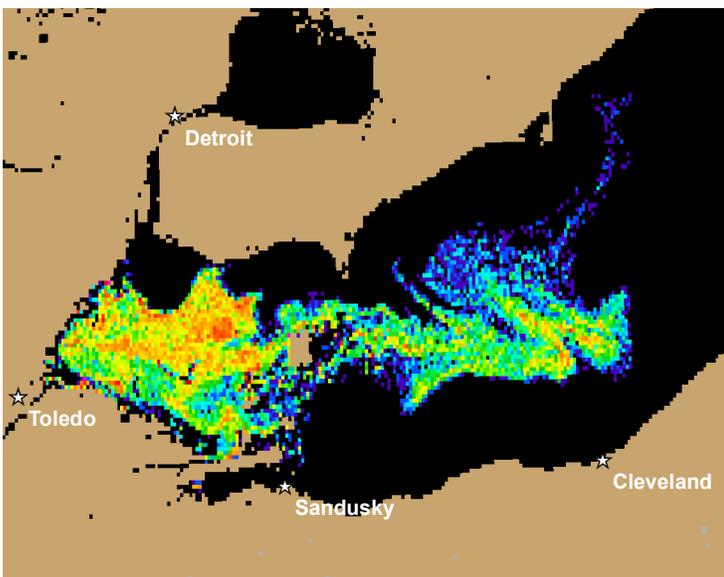
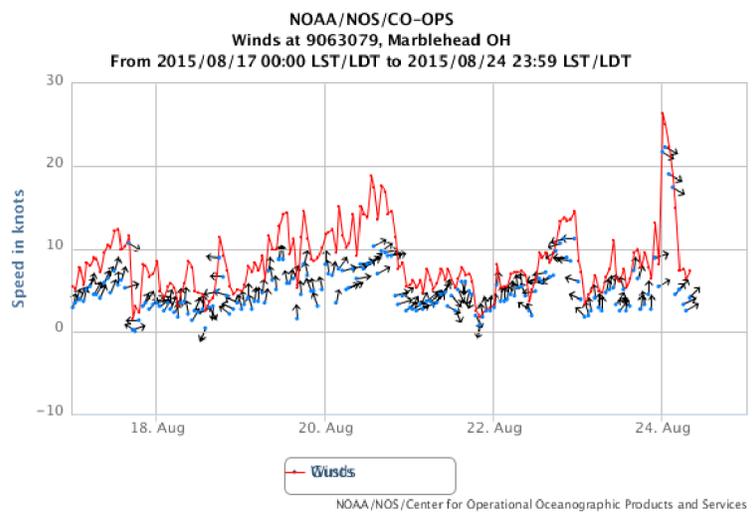
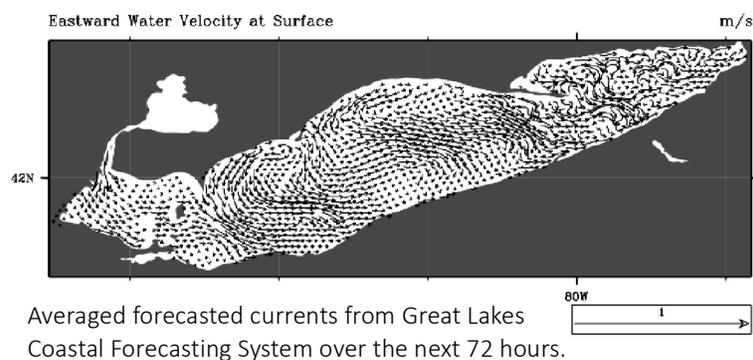


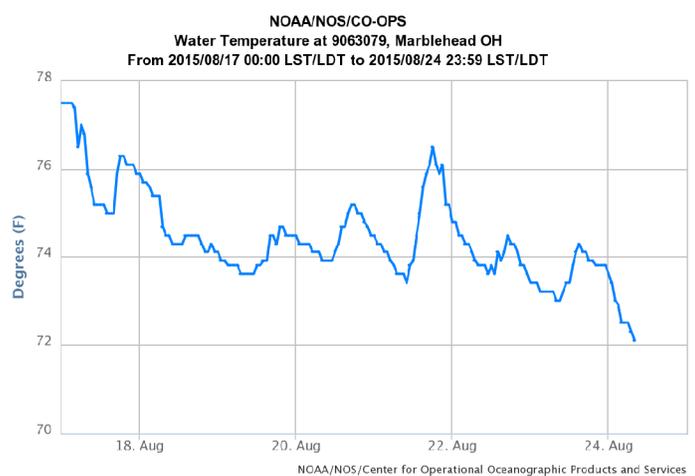
Figure 3. Forecast position of bloom for 26 August, 2015 using GLCFS modeled currents to move the bloom from the 22 August, 2015 image.



Wind Speed, Gusts and Direction from Marblehead, OH. From: NOAA/Center for Operational Oceanographic Products and Services (CO-OPS). Note: 1 knot = 0.51444 m/s. Blooms mix through the water column at wind speeds greater than 7.7 m/sec (~ 15 knots).



Supported by the NASA Applied Sciences Health and Air Quality Program. Wind forecasts derived from NOAA/National Weather Service in Cleveland.



Water Temperature from Marblehead, OH. From: NOAA/Center for Operational Oceanographic Products and Services (CO-OPS).

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