



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

03 August, 2015, Bulletin 07

The Microcystis cyanobacteria bloom continues in the western basin. The bloom extends from near Michigan across the western basin south of West Sister Island, southward to the Ohio coast, then east through the islands. Microcystin is present, with toxin levels especially high in scums.

High winds (10-20 knots) today may cause mixing, reducing the surface concentration. Mixing should decrease on Tuesday and Wednesday, which may lead to scum formation in areas of high concentration (shown in orange and red) when winds diminish. Westerly winds over the next few days will favor eastward transport. East winds may develop late Wednesday into Thursday, causing slight movement back toward the Michigan and Ohio coasts on Thursday. The persistent bloom in Sandusky Bay continues. No other blooms are evident in the central basin and eastern basins.

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.

- Stumpf, Dupuy

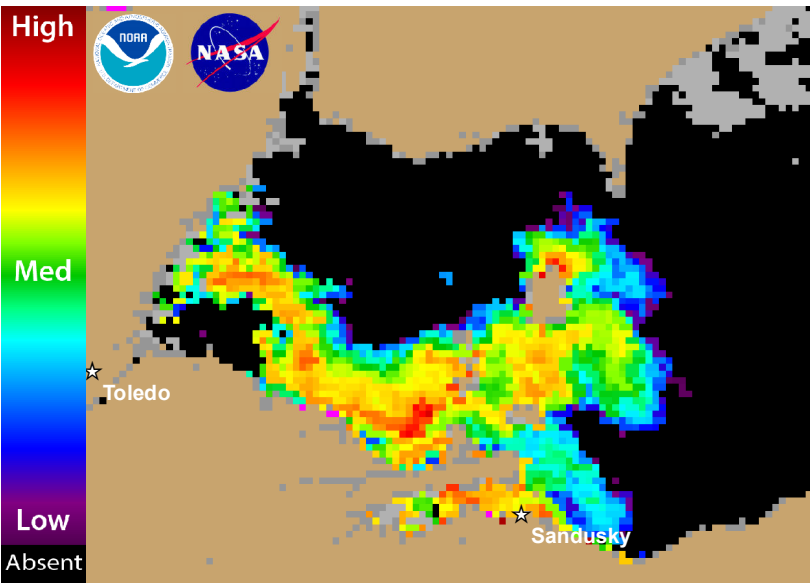


Figure 1. Cyanobacterial Index from NASA's MODIS- Terra data collected 01 August, 2015 at 11:10 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

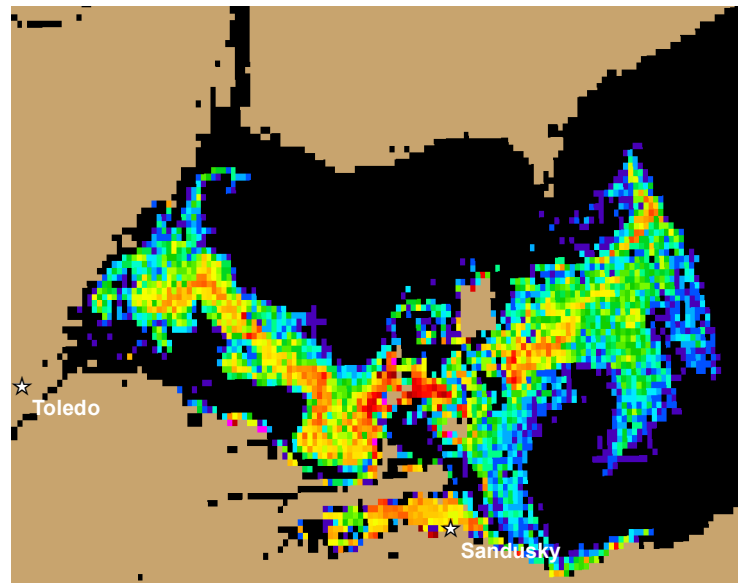


Figure 2. Nowcast position of bloom for 03 August, 2015 using GLCFS modeled currents to move the bloom from the 01 August, 2015 image.

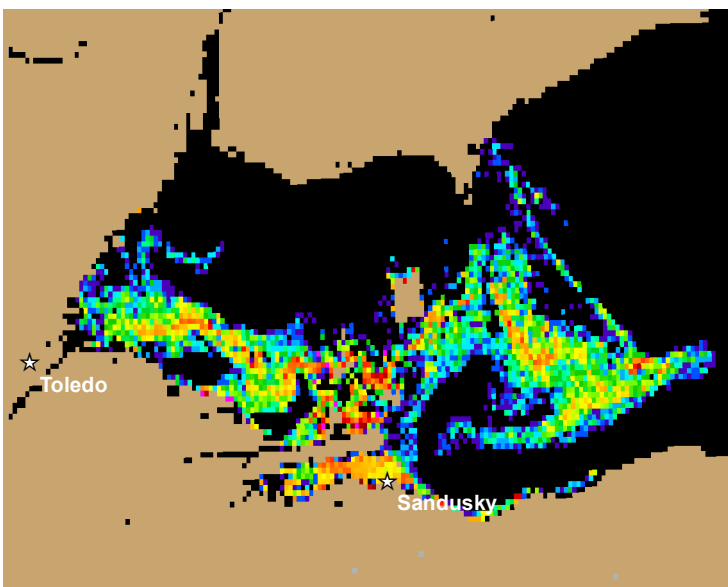
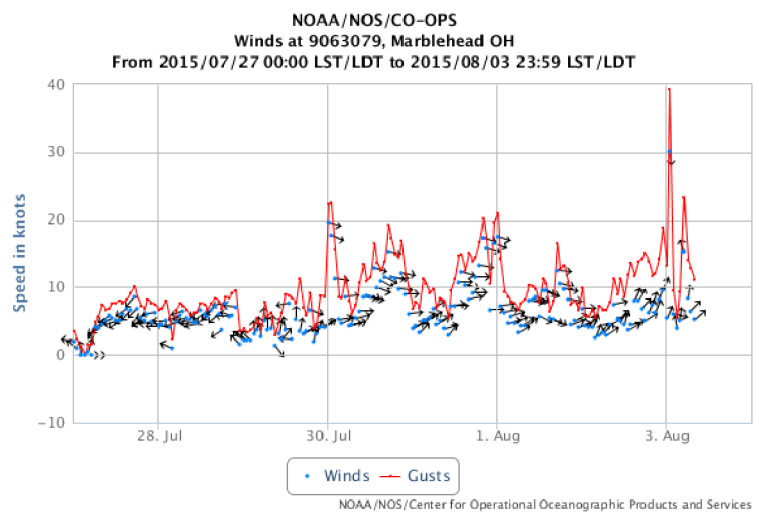
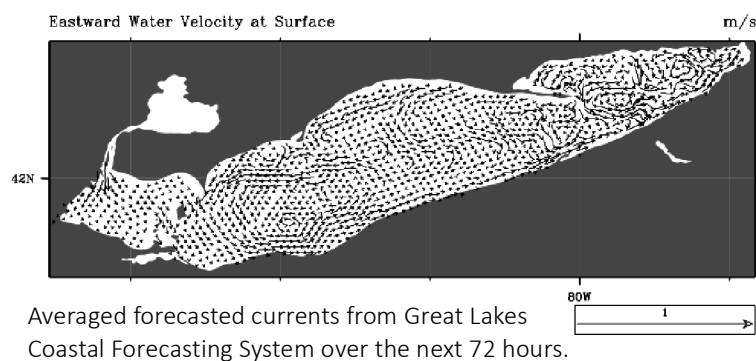


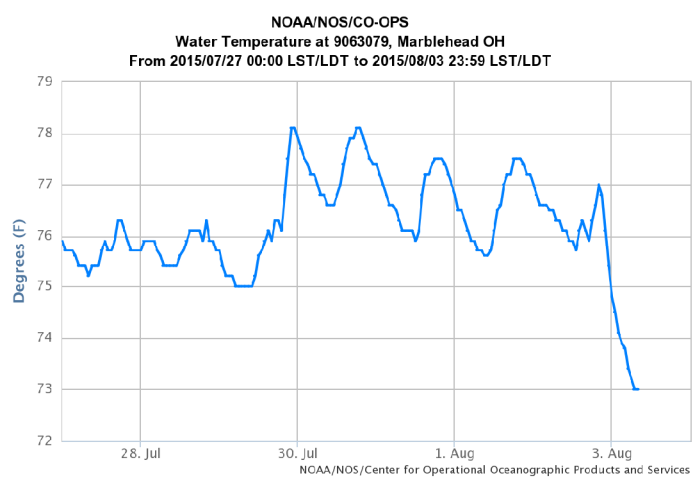
Figure 3. Forecast position of bloom for 06 August, 2015 using GLCFS modeled currents to move the bloom from the 01 August, 2015 image.



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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