



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

31 August, 2015, Bulletin 15

The *Microcystis* cyanobacteria bloom west of West Sister Island, while still of relatively high concentration and area, has continued to decrease in toxicity. Scum areas remain a significant risk. Localized blooms with toxins have been found nearshore at several places in the Cleveland area. These are smaller than the scale of the satellite imagery.

Unresolved sensor issues have caused portions of missing data near Maumee Bay and along the northern portion of the bloom.

Mild southwestern winds are expected throughout the week, increasing the likelihood of scum development in areas of moderate to high concentration. A slight eastern transport is likely through Thursday. 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.

-Dupuy, Stumpf

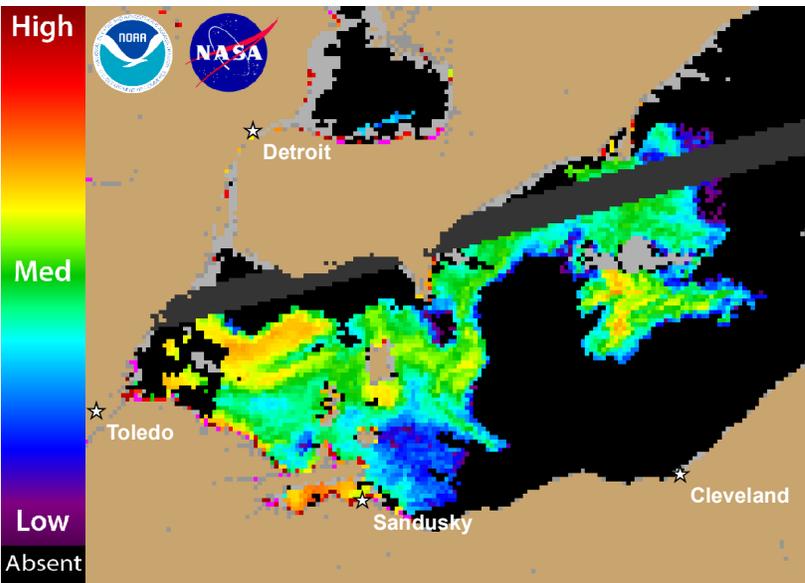


Figure 1. Cyanobacterial Index from NASA's MODIS- Aqua data collected 28 August, 2015 at 14:10 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

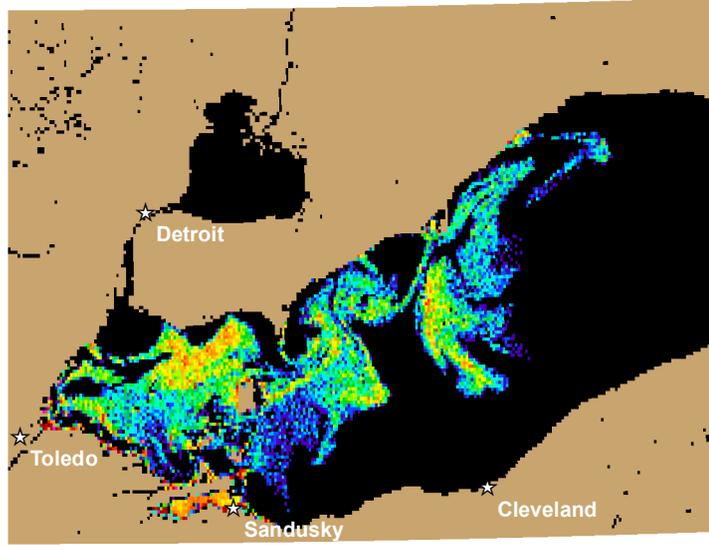


Figure 2. Nowcast position of bloom for 31 August, 2015 using GLCFS modeled currents to move the bloom from the 28 August, 2015 image.

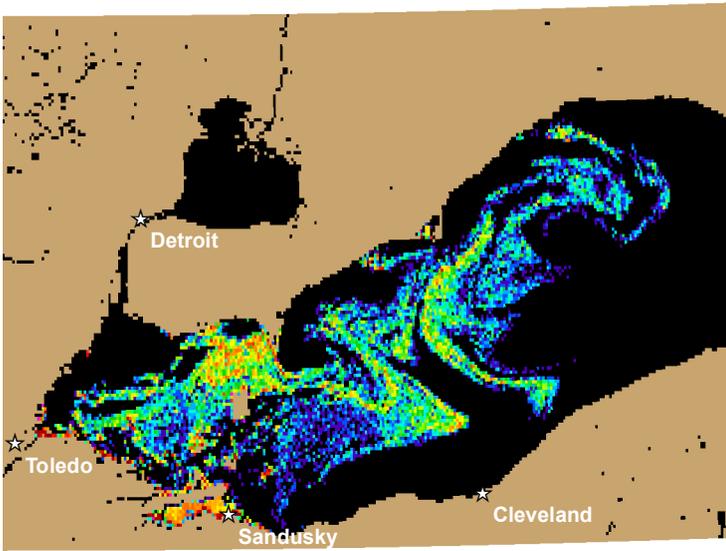
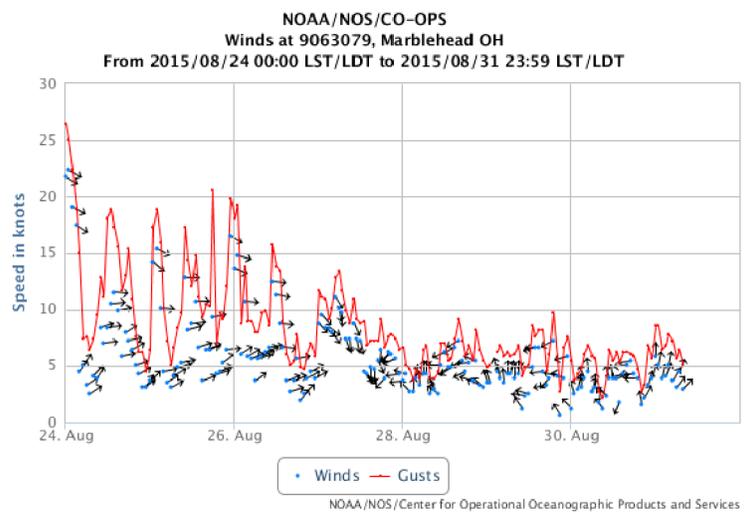
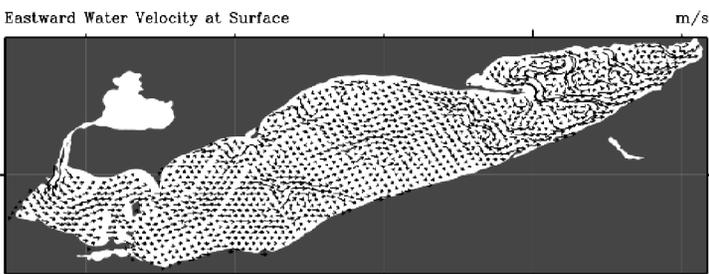


Figure 3. Forecast position of bloom for 03 September, 2015 using GLCFS modeled currents to move the bloom from the 28 August, 2015 image.



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).



Averaged forecasted currents from Great Lakes Coastal Forecasting System over the next 72 hours.

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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