



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

01 October, 2015, Bulletin 24

Relatively strong winds have reduced the scale of the *Microcystis* cyanobacteria bloom in western Lake Erie. The image shows the last calm conditions. In the southwestern part of the Western basin, the concentration is low, and it is not detectable during strong winds. Moderate concentrations ran through the islands to Point Pelee. Further east, the bloom remains below detection. Toxins were present, but low, in the southwestern basin.

Strong northeast winds are expected through Sunday. The water temperature will continue to drop with the cool weather. The bloom should weaken as a result of the intense mixing and cool water. We expect a substantial decrease in the bloom by next week, with low concentrations in most areas, and we do not expect scums again this season. With the storms this weekend, we do not expect to produce a bulletin before Wednesday of next week.

The persistent bloom in Sandusky Bay continues. No other blooms are evident in the central and eastern basins.

Please check for updates on parks at Ohio State Parks at Ohio EPA's site, <http://epa.ohio.gov/habalgae.aspx>. Be careful boating.

-Dupuy, Stumpf

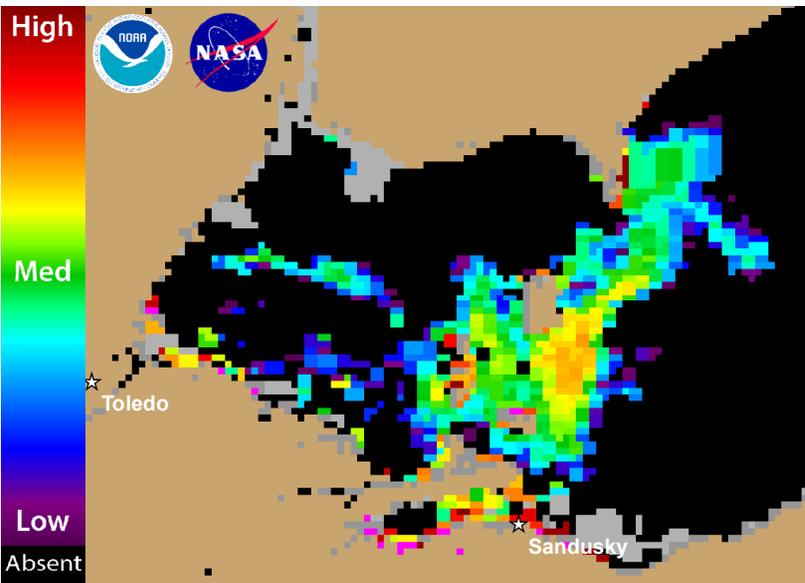


Figure 1. Cyanobacterial Index from NASA's MODIS- Aqua_terra data collected 28 September, 2015 at 11:45 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

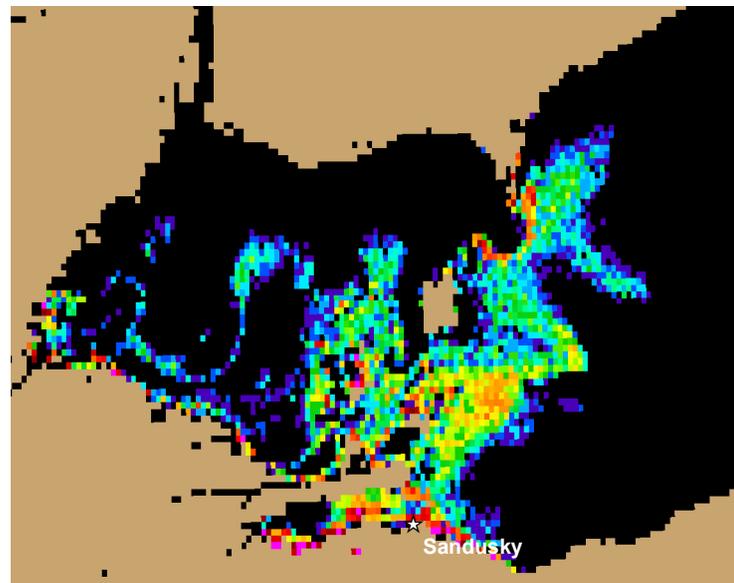


Figure 2. Nowcast position of bloom for 01 October, 2015 using GLCFS modeled currents to move the bloom from the 28 September, 2015 image.

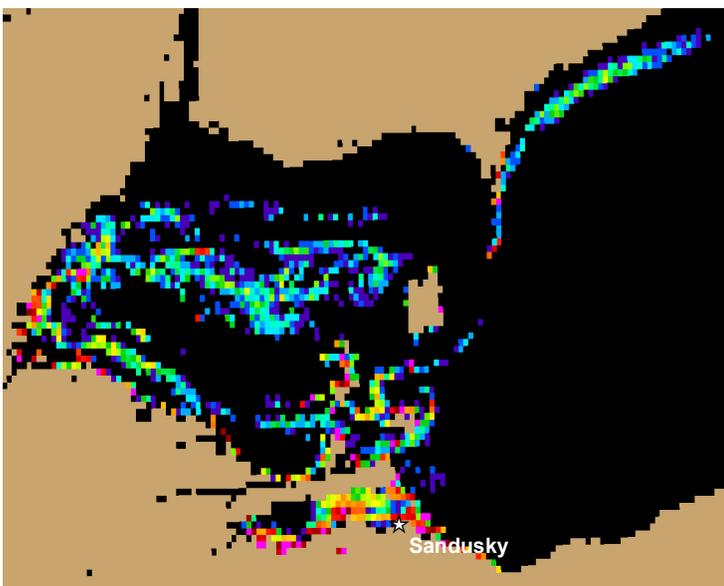
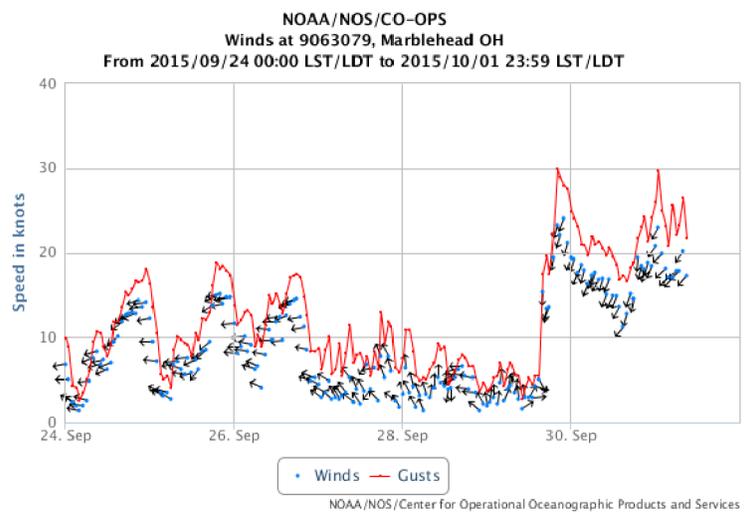
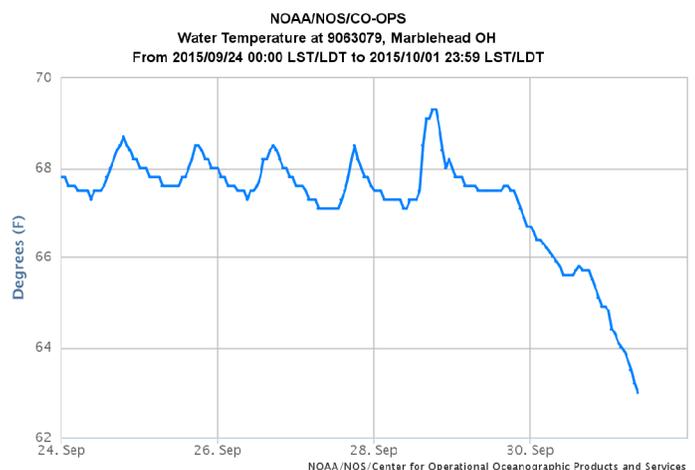


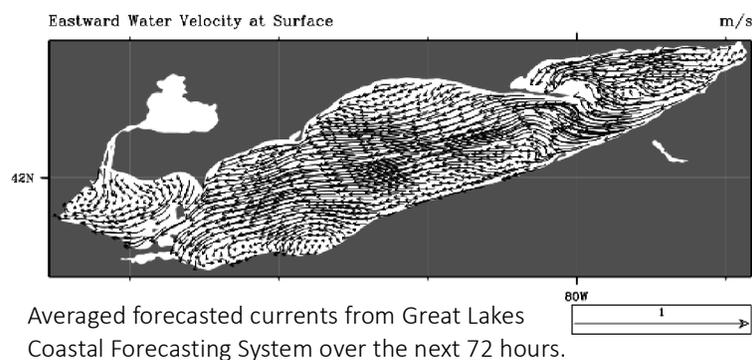
Figure 3. Forecast position of bloom for 04 October, 2015 using GLCFS modeled currents to move the bloom from the 28 September, 2015 image.



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).



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



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

For more information and to subscribe to this bulletin, go to: <http://www.glerl.noaa.gov/res/waterQuality/?targetTab=habs>