

Experimental Lake Erie Harmful Algal Bloom Bulletin

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

14 October 2014, Bulletin 31

The bloom is still present outside of Monroe and Maumee Bay. Winds 10-15 knots kept the bloom partially mixed reducing surface concentrations over the weekend. The water temperature has dropped below 59 degrees, the point where *Microcystis* effectively stops growing and rapid decline will occur.

High winds today into early Wednesday could further mix the bloom. Moderate winds throughout the remainder of the week may keep the bloom partially mixed. A slight northeastern transport is expected through Friday.

The imagery shows the persistent bloom in Sandusky Bay is present.

There are no reported harmful algal blooms or suspicious features in the Eastern Basin at this time.

-Dupuy, Stumpf

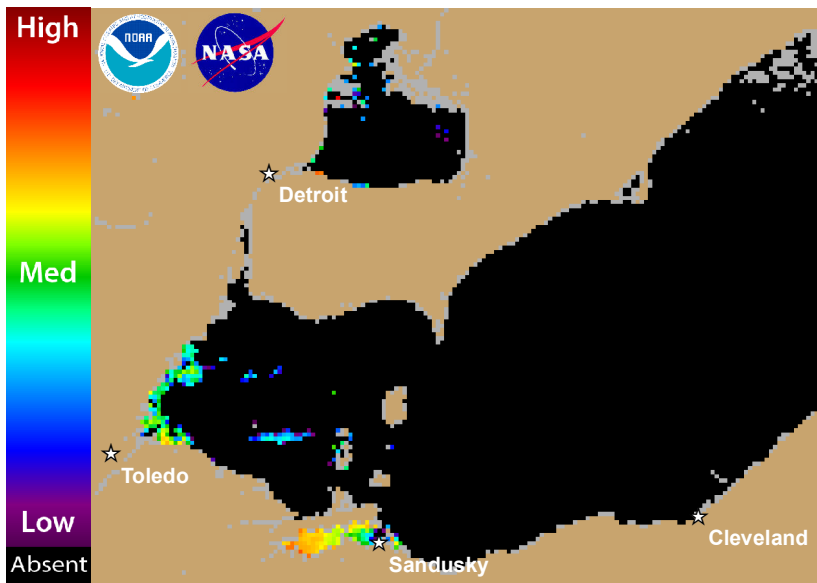


Figure 1. Cyanobacterial Index from NASA's MODIS-Terra data collected 12 October 2014 at 12:30 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

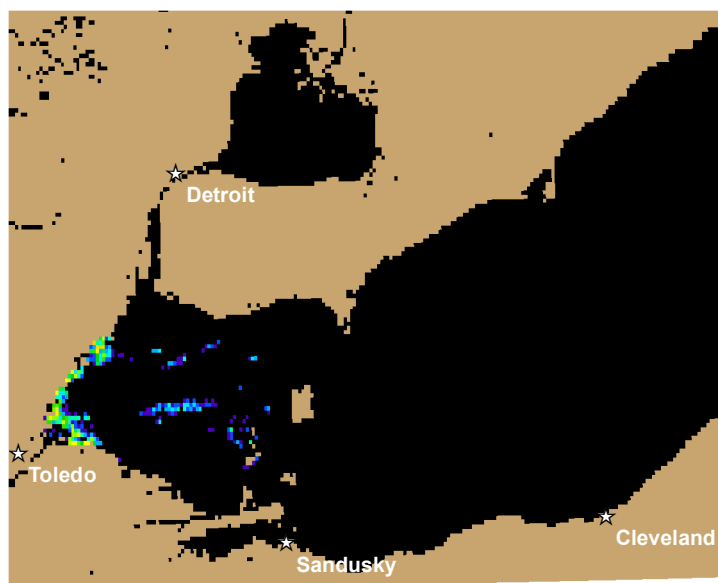


Figure 2. Nowcast position of bloom for 14 October 2014 using GLCFS modeled currents to move the bloom from the 12 October 2014 image.

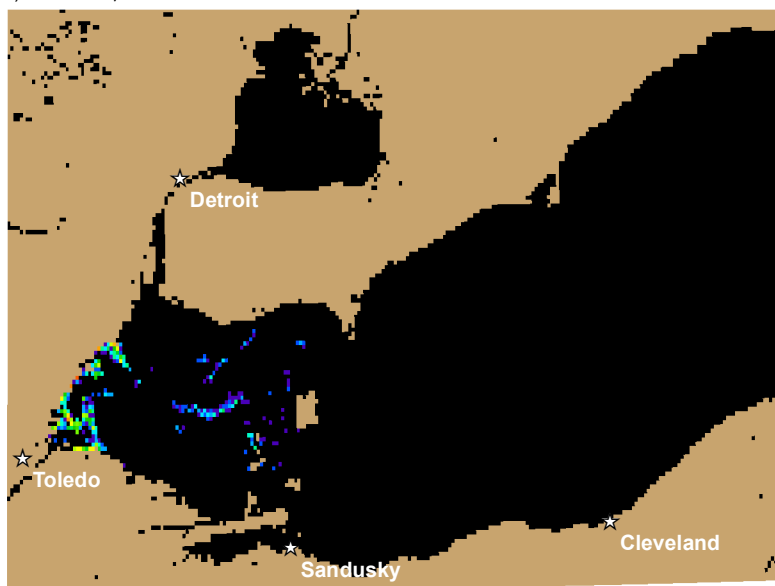
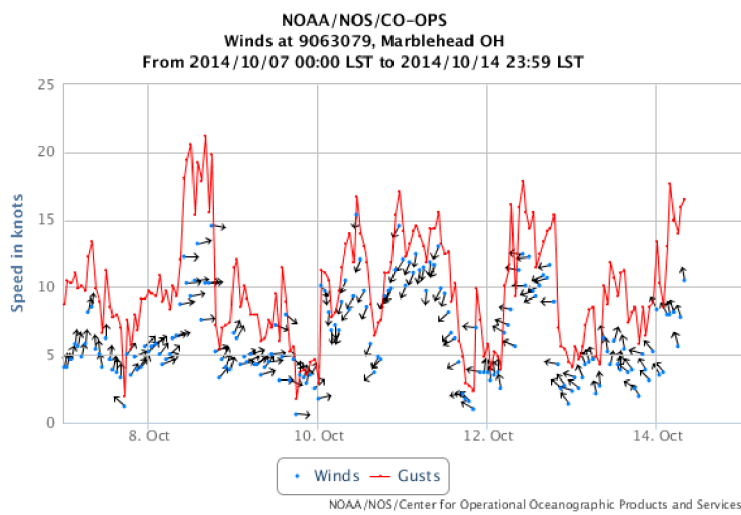
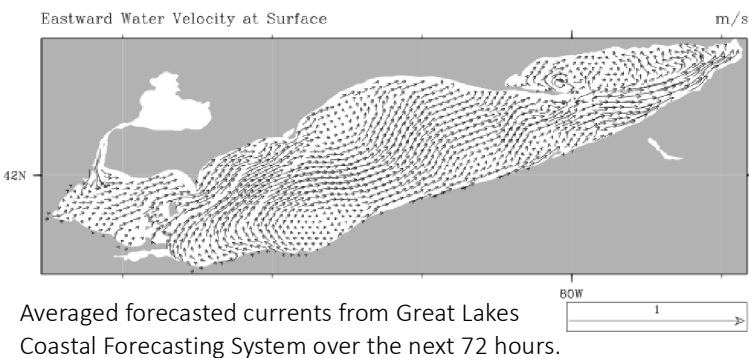


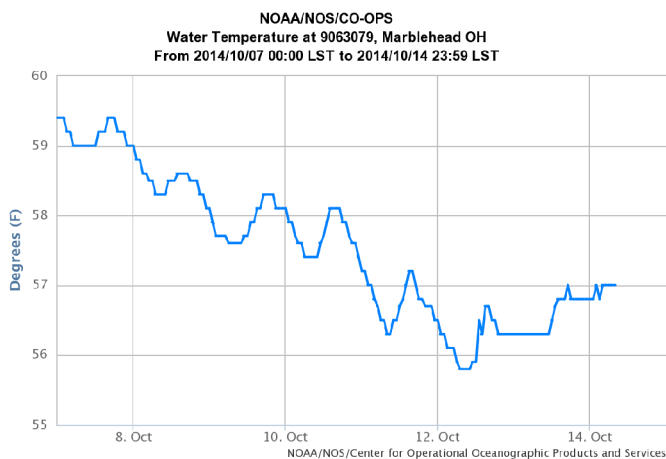
Figure 3. Forecast position of bloom for 17 October 2014 using GLCFS modeled currents to move the bloom from the 12 October 2014 image.



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.



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.

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