



Experimental Lake Erie Harmful Algal Bloom Bulletin

National Centers for Coastal Ocean Science and Great Lakes Environmental Research Laboratory
17 July 2014, Bulletin 07

The features in the northern part of the western basin (south of the Detroit River) are suspected to be harmless algae which may discolor the water in this area. The feature near the Maumee River may be a mild cyanobacteria bloom, but is unconfirmed at this time. Concentration is not high enough to produce a risk. A slight eastward transport is forecasted for the next few days. OSU/Stone Lab reported presence of microcystis in this area last week. Observed concentration is not high enough to produce a risk or highly discolored water. The imagery shows the persistent bloom in Sandusky Bay is present. There are no reported harmful algal blooms or suspicions features in the Eastern Basin at this time.

- Dupuy, Stumpf, Tomlinson

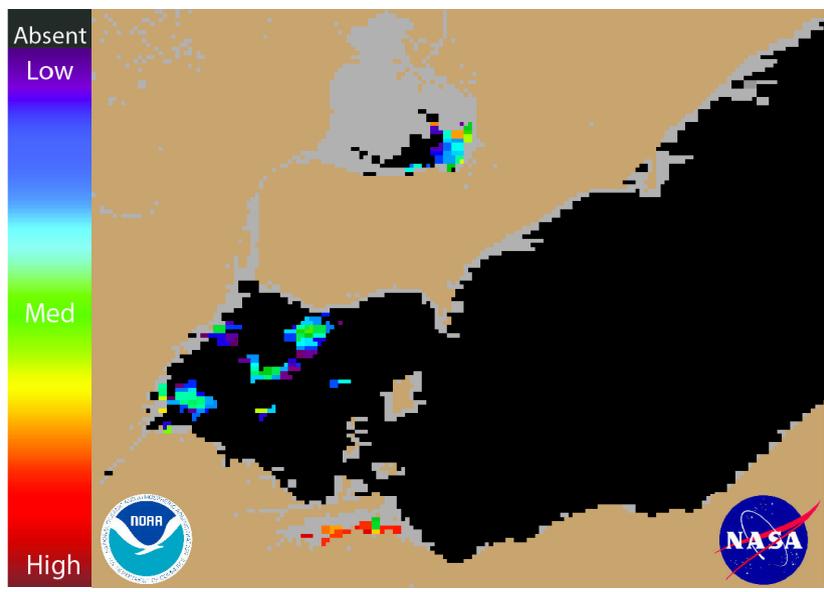


Figure 1. Cyanobacterial Index from NASA's MODIS-Aqua data collected 14 July 2014 at 1:35 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels usually indicate the presence of cyanobacteria, however at this time only the feature in the southwest corner is suspected to be 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.

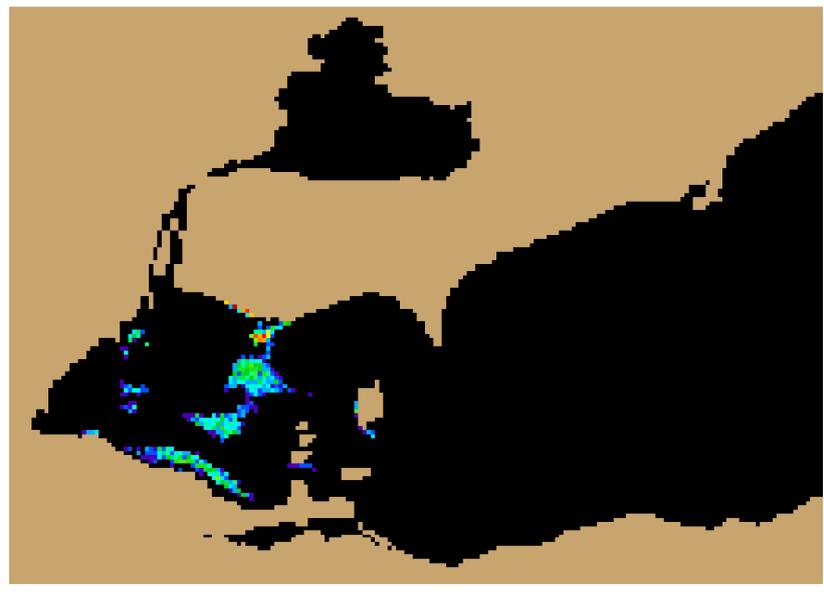


Figure 2. Nowcast position of bloom for 17 July 2014 using GLCFS modeled currents to move the bloom from the 14 July 2014 image.

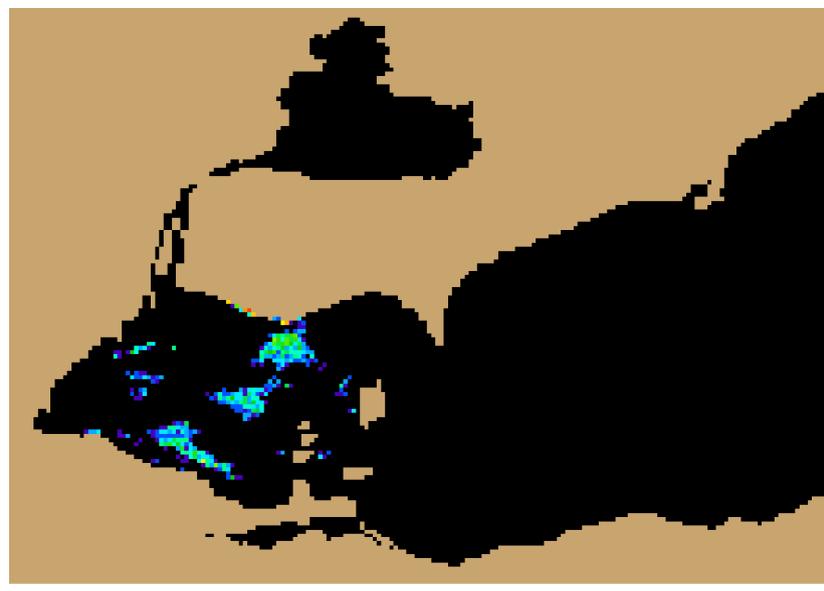
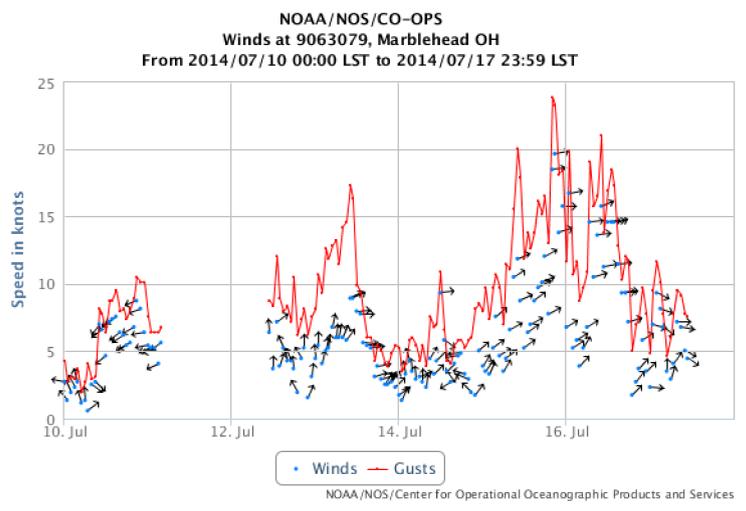
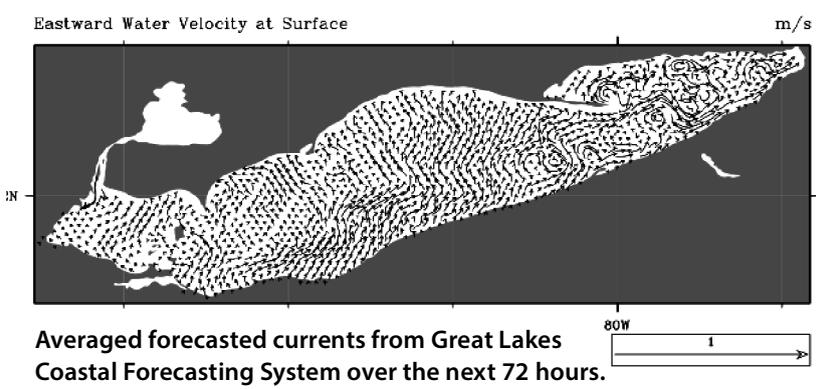


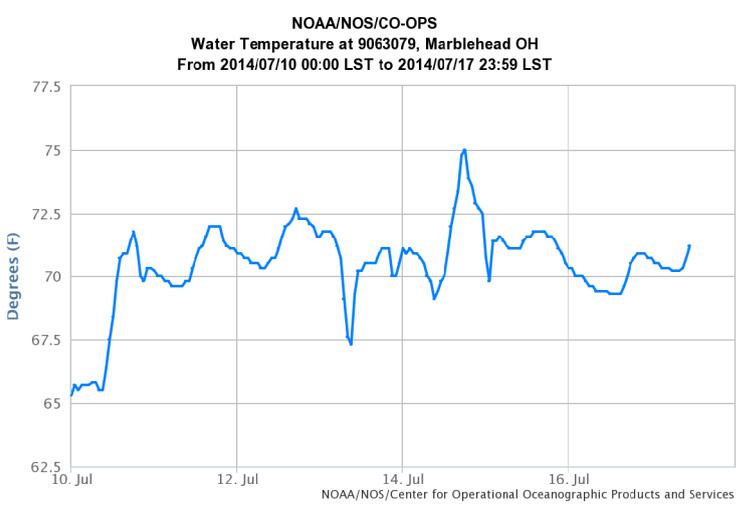
Figure 3. Forecast position of bloom for 20 July 2014 using GLCFS modeled currents to move the bloom from the 14 July 2014 image.



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.

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