

Experimental Lake Erie Harmful Algal Bloom Bulletin

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

4 August 2014, Bulletin 10

The microcystis bloom has intensified since last Thursday, and the area covered by medium to high concentrations (green to red) has increased. Calm winds have allowed the bloom to concentrate near surface; patches of scum were present in the areas of high concentration.

Today and Tuesday expect slight northeast transport (away from the Maumee Bay area). However, this pattern will change and light southward transport is expected through the end of the week. Mixing is expected to be weak.

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

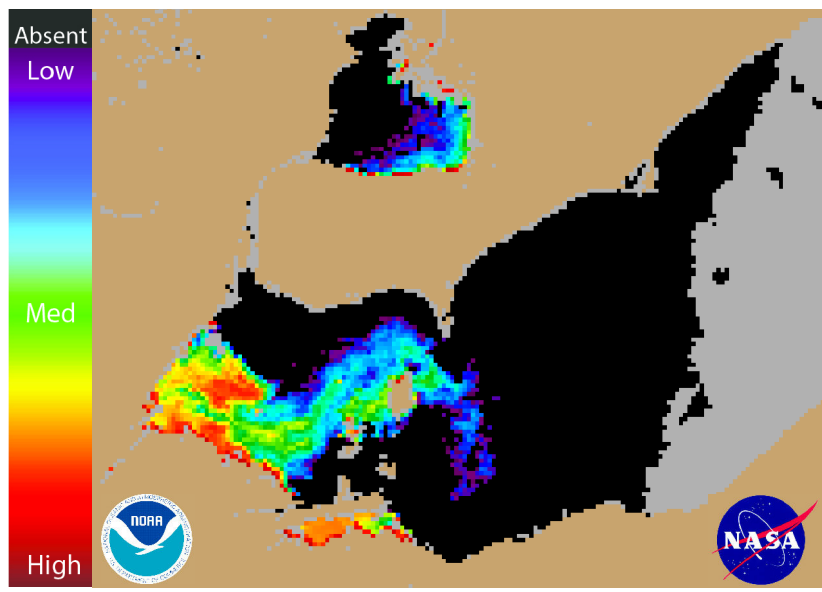


Figure 1. Cyanobacterial Index from NASA's MODIS-Aqua data collected 3 August 2014 at 1:10 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

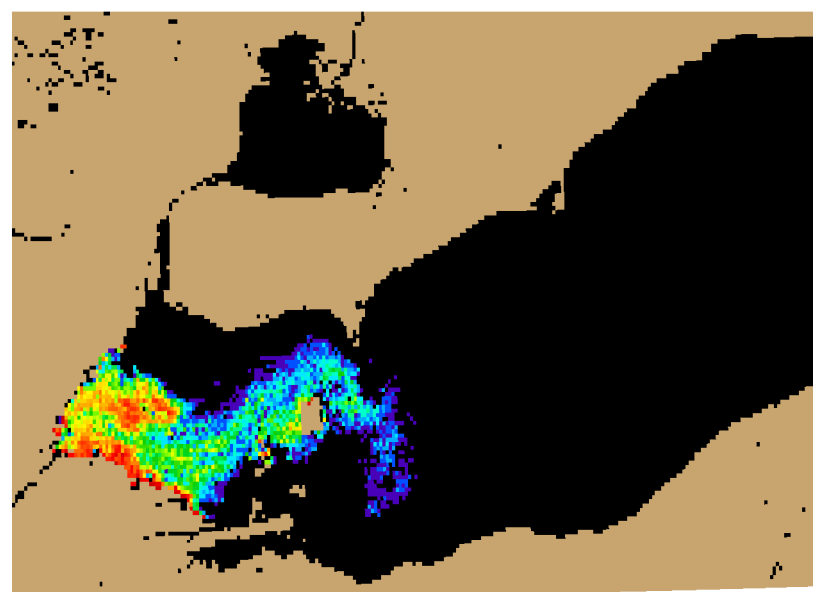


Figure 2. Nowcast position of bloom for 4 August 2014 using GLCFS modeled currents to move the bloom from the 3 August 2014 image.

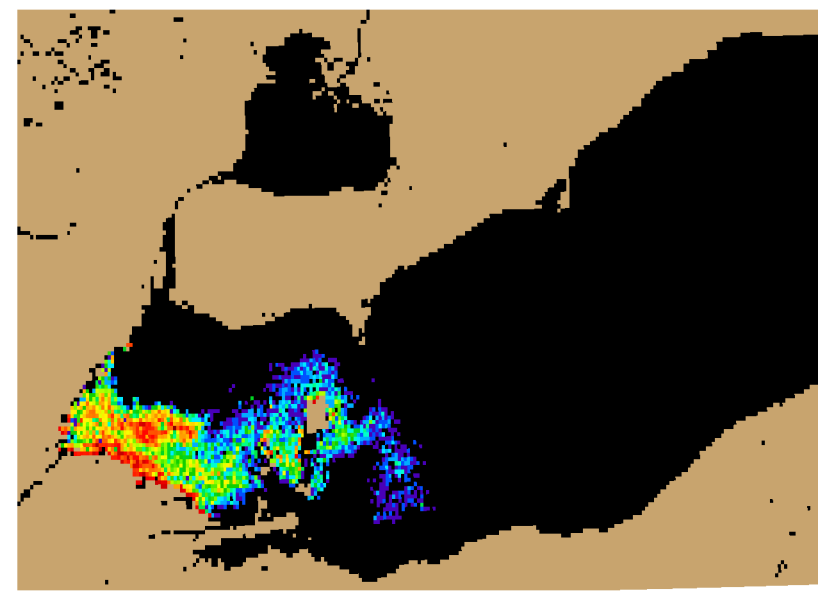
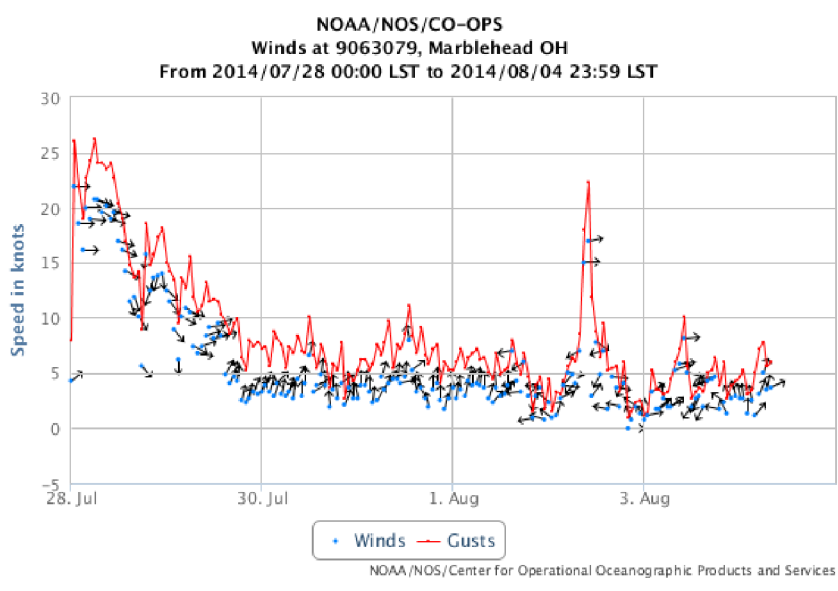
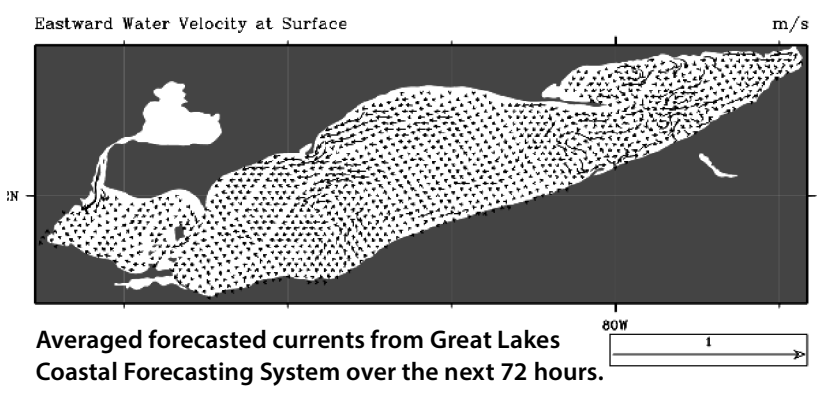


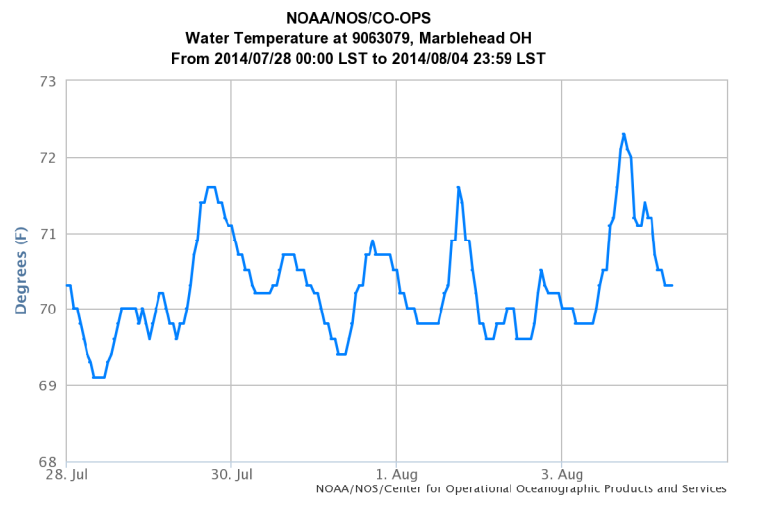
Figure 3. Forecast position of bloom for 7 August 2014 using GLCFS modeled currents to move the bloom from the 3 August 2014 image.



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).