



# Experimental Lake Erie Harmful Algal Bloom Bulletin

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

5 August 2013; Bulletin 11

The bloom in western Lake Erie has intensified. Extensive areas of scum were observed in the imagery on August 3 (Sat) along western Lake Erie, with scum reaching the south shore of Maumee Bay. (This appears as "rose" color in the image).

Eastward transport along the Ohio coast is forecast over the next few days.

Winds > 15 knots (16 mph) will cause scum to mix into the water in the open lake. This appeared to be the case on August 4 (Sun). Winds < 10 knots will favor redevelopment of the scum in areas of medium-high to high concentrations in the western Lake.

- Dupuy, Stumpf

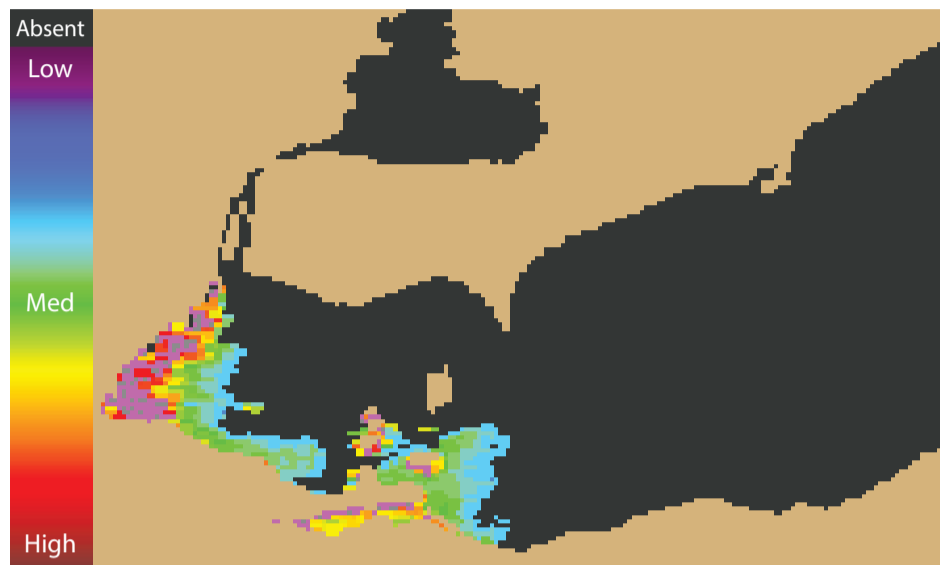


Figure 1. MODIS Cyanobacterial Index from 3 August 2013. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

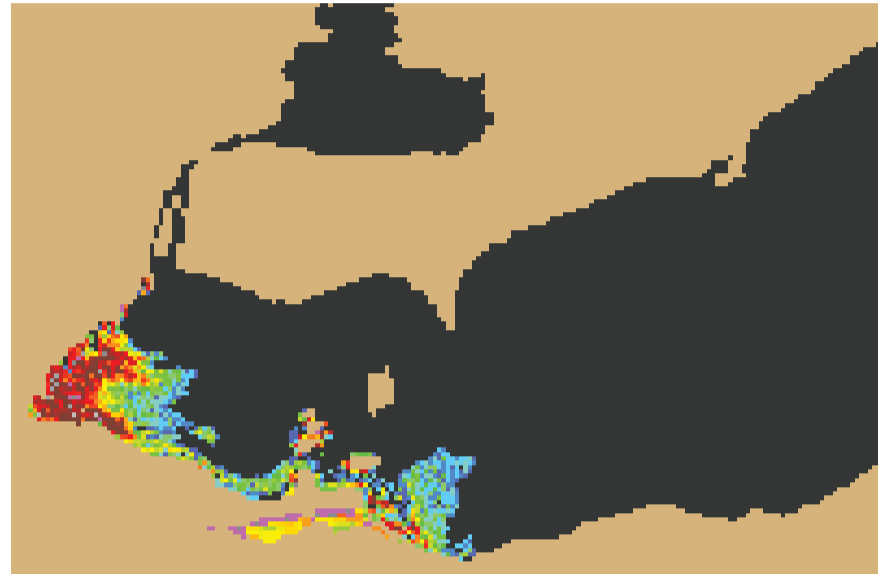


Figure 2. Nowcast position of bloom for 5 August 2013 using GLCFS modeled currents to move the bloom from the 3 August 2013 image.

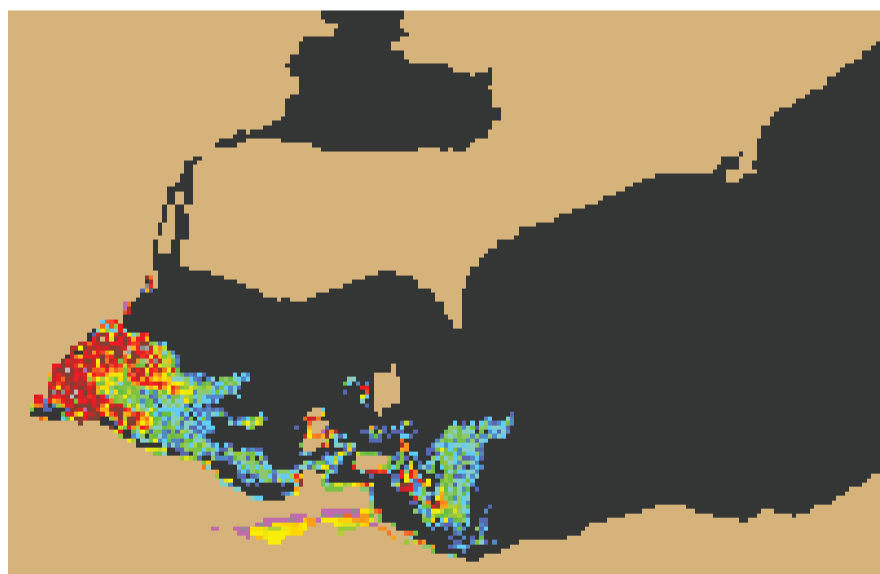
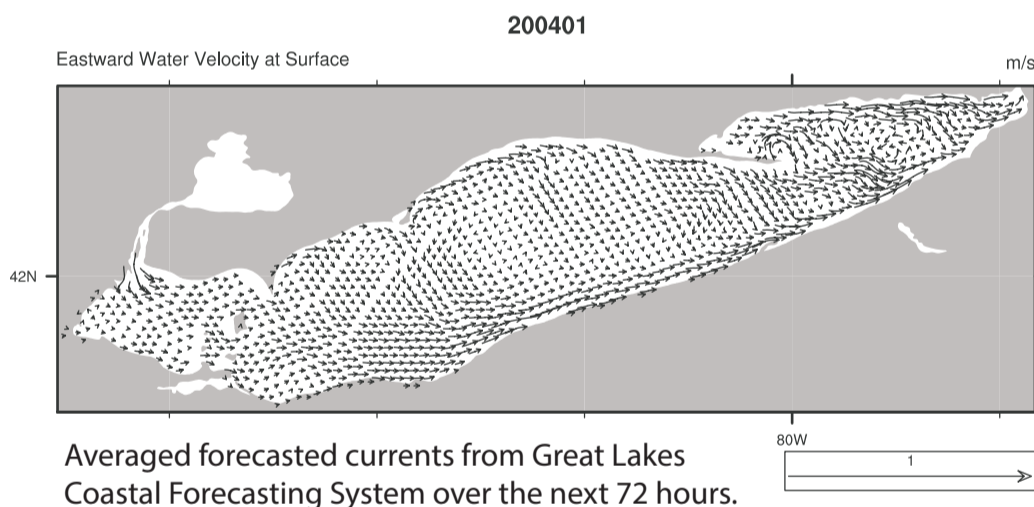
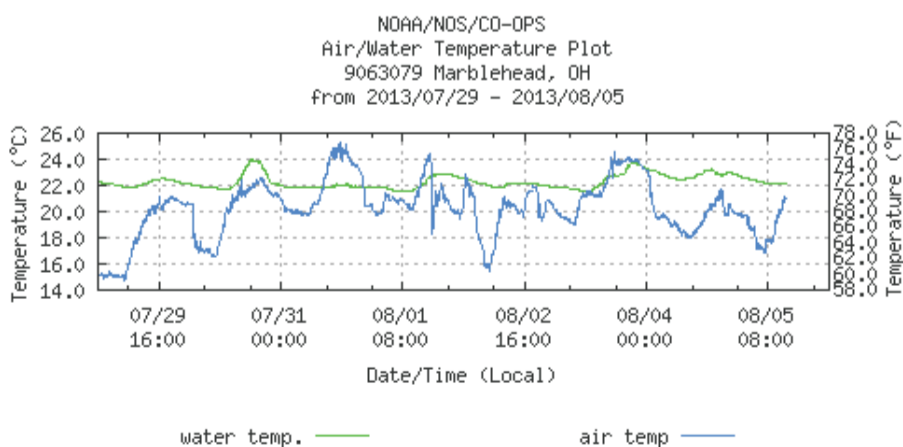


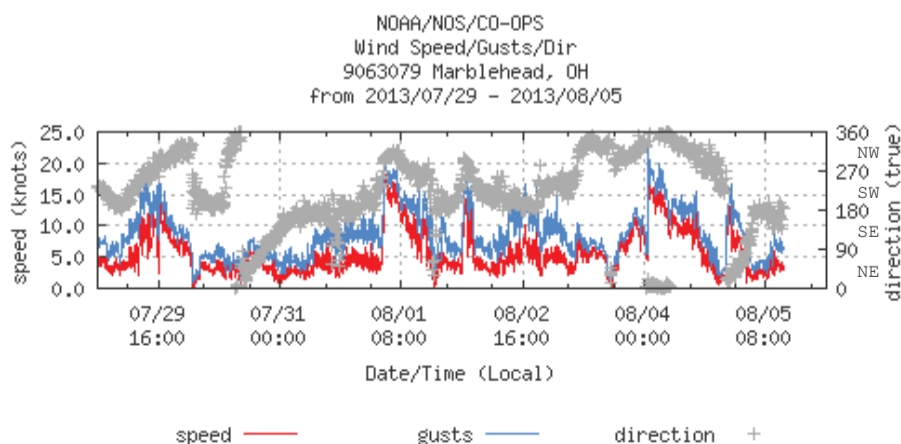
Figure 3. Forecast position of bloom for 8 August 2013 using GLCFS modeled currents to move the bloom from the 3 August 2013 image.



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



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



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).