



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

19 July 2013; Bulletin 08

The cyanobacteria bloom has changed substantially over the last few days. Much of the bloom in the central lake dispersed. The satellite does not show evidence of a bloom along most of the Ontario coastline. There was southward transport, pushing the remaining surface bloom toward Ohio. The area between Sandusky and Vermillion may have some blooms, as may some of the area east of Cleveland, where it is patchy.

With a front expected to cross the lake over the weekend, we do not expect reformation of the central lake bloom over the next few days. Storms may promote mixing (dilution of the bloom).

Continued southward transport is expected over the next few days.

Clouds obscure the Maumee Bay, Michigan shore, and Port Clinton areas. U.Toledo and NOAA/GLERL report that microcystis is present in small patches in the far western basin, although there is also a large bloom of harmless diatoms in that area.

- Dupuy, Stumpf

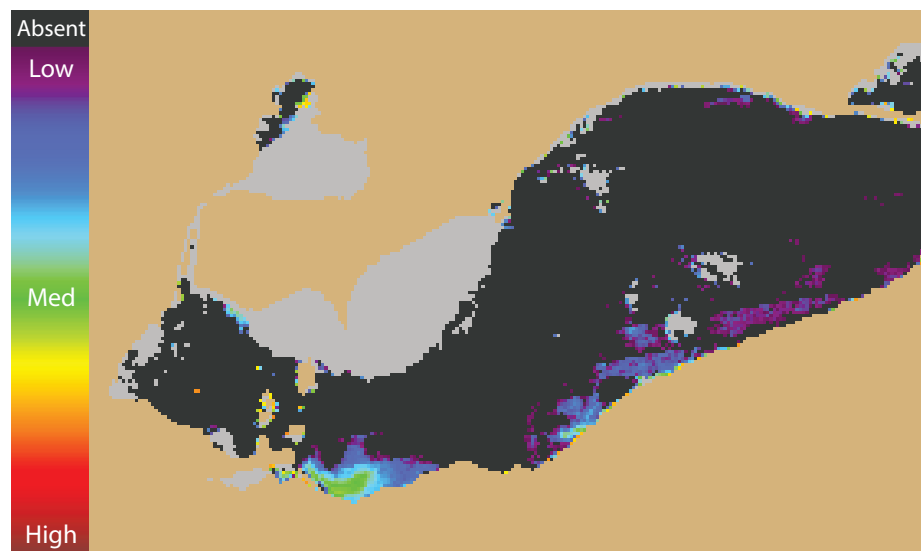


Figure 1. MODIS Cyanobacterial Index from 17 July 2013. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

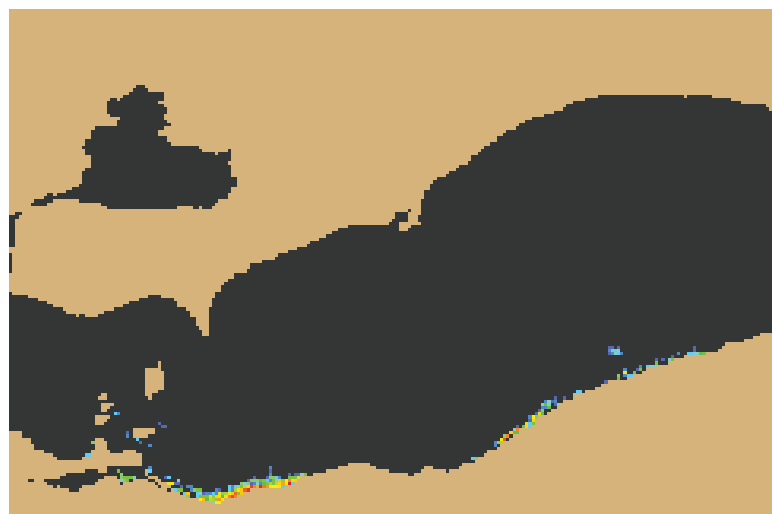


Figure 2. Nowcast position of bloom for 19 July 2013 using GLCFS modeled currents to move the bloom from the 17 July 2013 image.

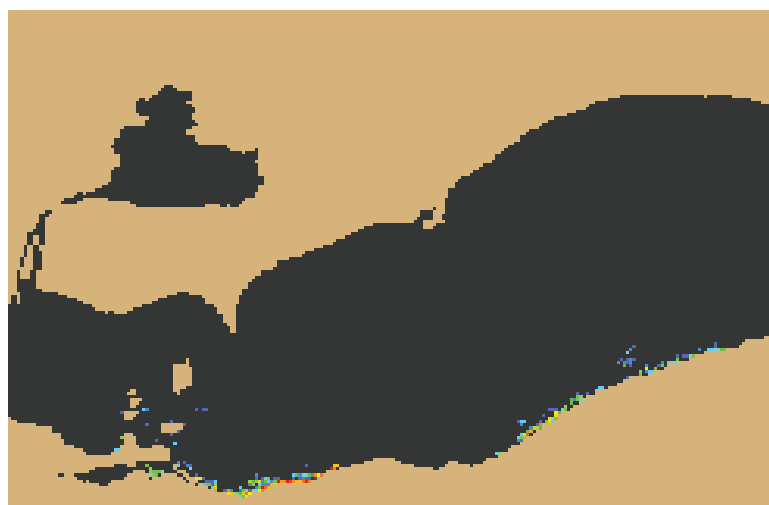
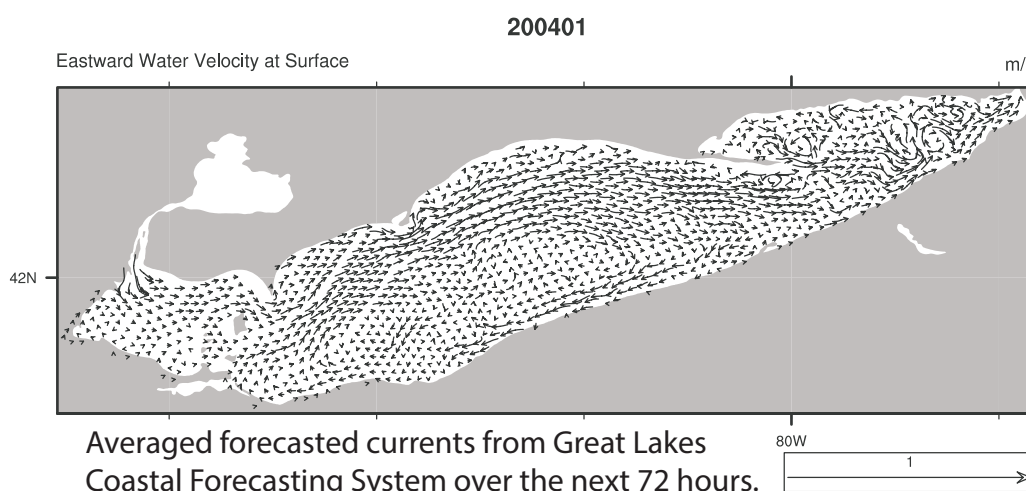
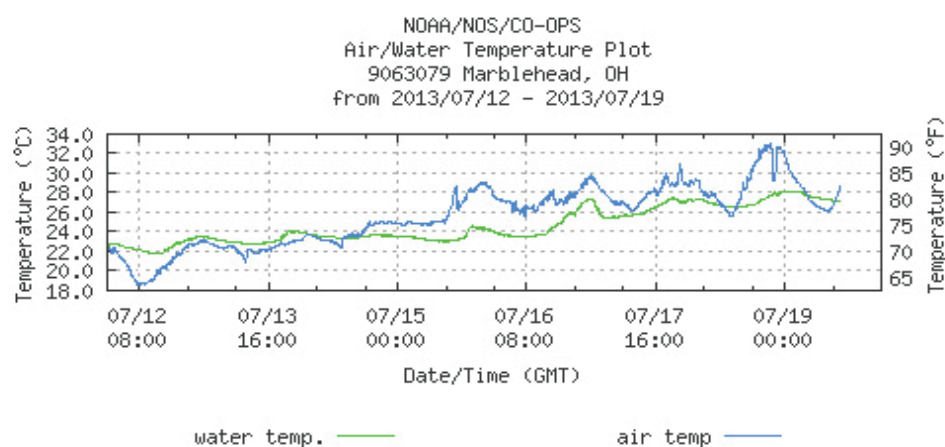


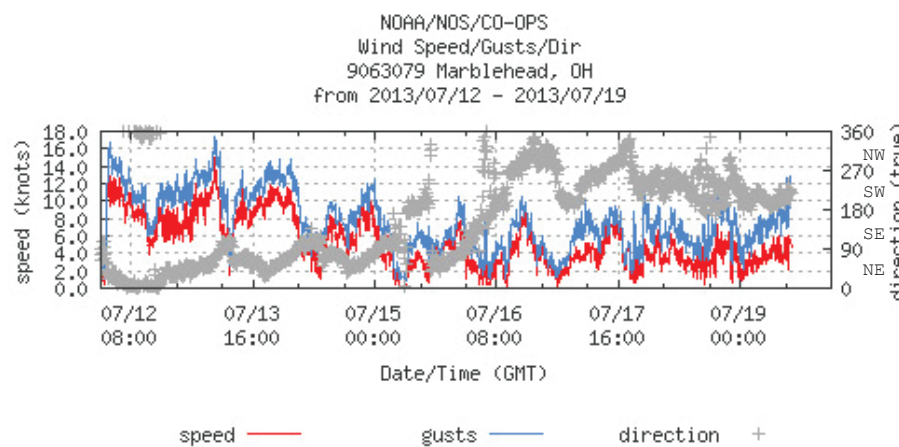
Figure 3. Forecast position of bloom for 22 July 2013 using GLCFS modeled currents to move the bloom from the 17 July 2013 image.



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).