



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

15 August 2013; Bulletin 13

Clouds (shown in grey) in this weeks imagery mask the blooms extent, though the bloom could reach as far north as the Detroit River Mouth. Microcystins remain present in the bloom area with some locations having concentrations of 25 ug/L. High winds on Wednesday may have caused mixing, resulting in a reduction of the bloom presence at the surface and decreased scum.

The model forecasts for a slight NW transport over the next few days. Low winds (<8 knots) are expected over the next few days which could cause the bloom to intensify at the surface and produce patchy areas of scum.

- Dupuy, Tomlinson

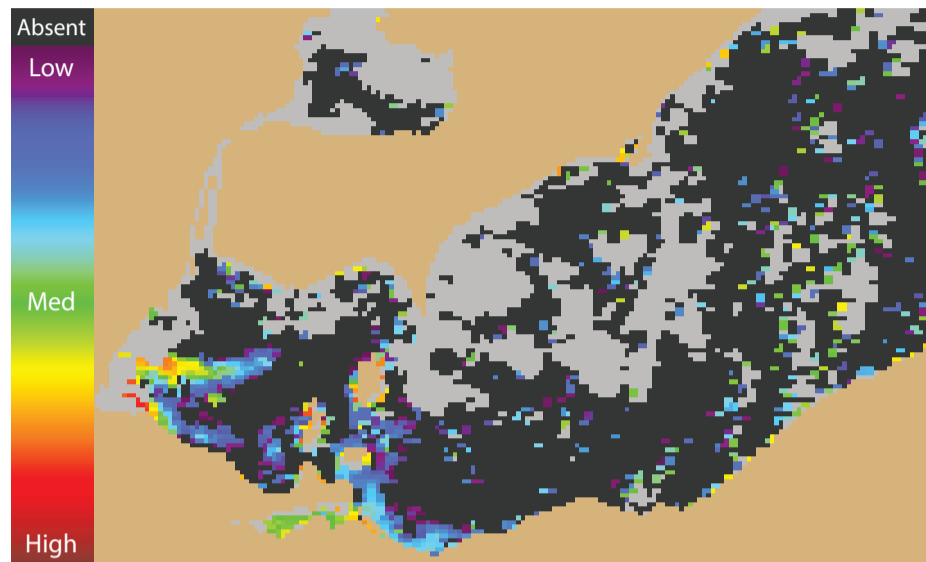


Figure 1. MODIS Cyanobacterial Index from 14 August 2013. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

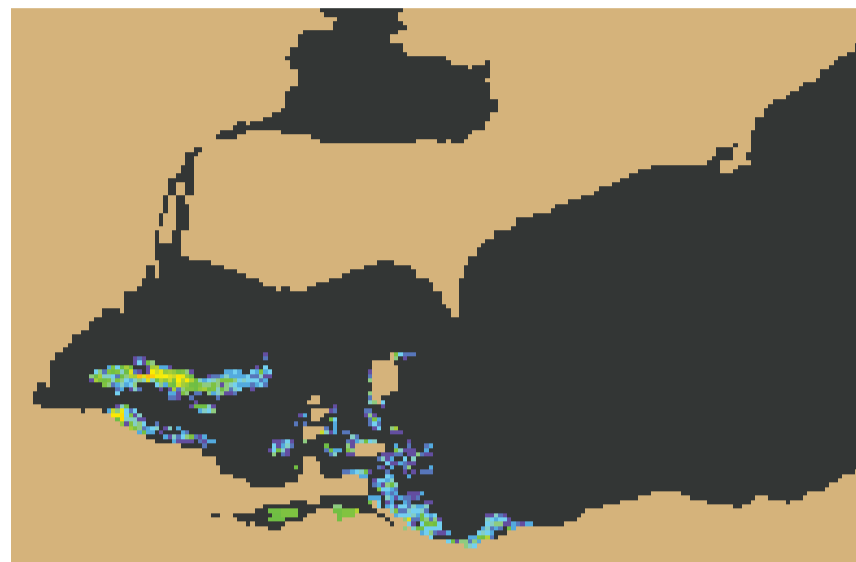


Figure 2. Nowcast position of bloom for 15 August 2013 using GLCFS modeled currents to move the bloom from the 14 August 2013 image.

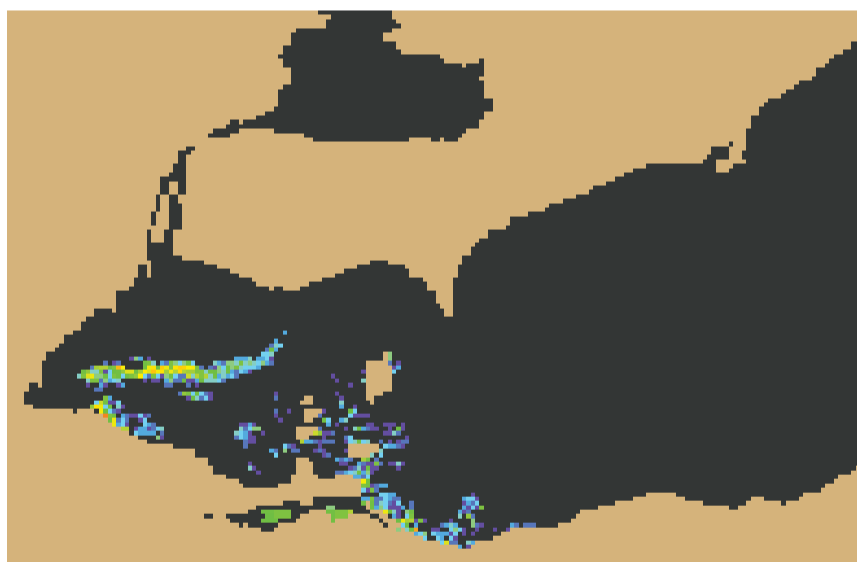
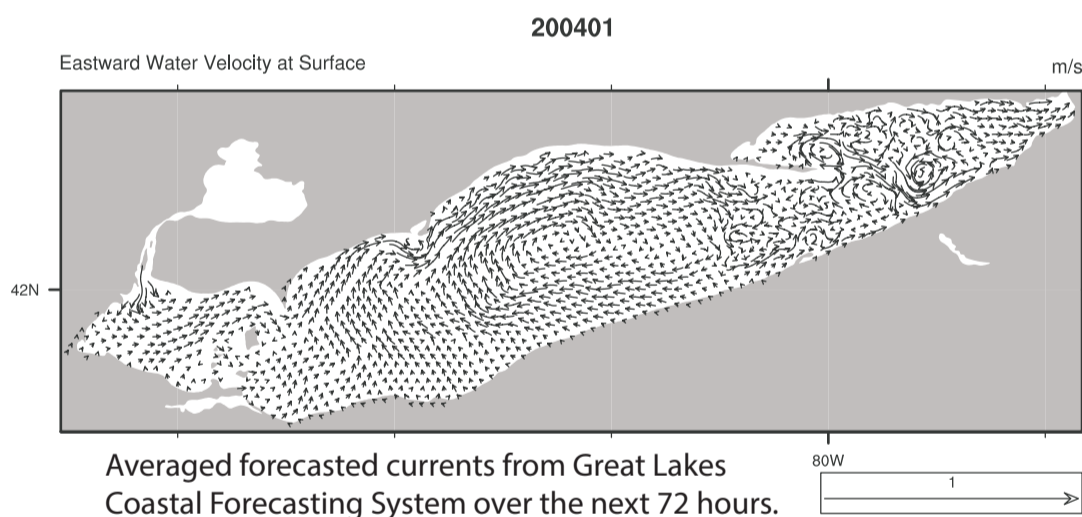
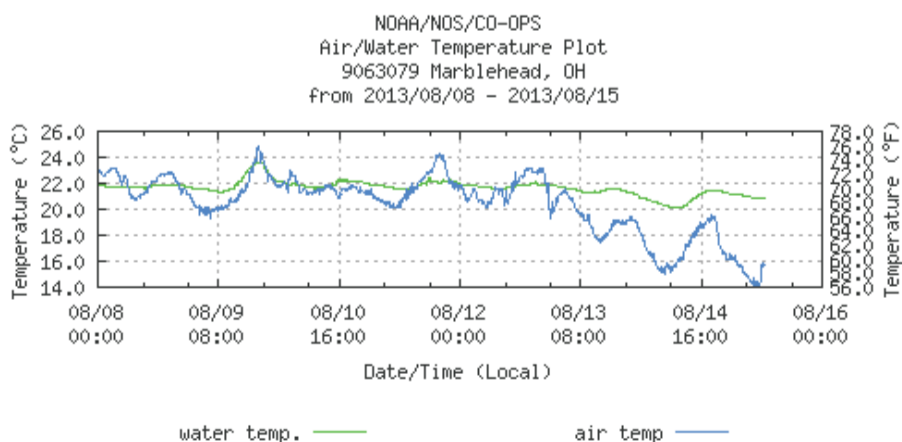


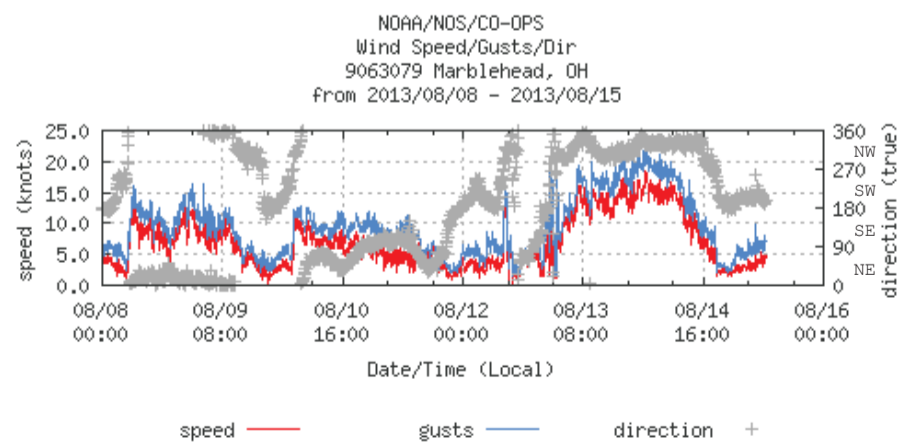
Figure 3. Forecast position of bloom for 18 August 2013 using GLCFS modeled currents to move the bloom from the 15 August 2013 image.



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).