Experimental Lake Erie Harmful Algal Bloom Bulletin

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

12 September 2014, Bulletin 22

The bloom has weakened, and harmless diatoms are starting to appear. The most intense area of the bloom remains in Maumee Bay and along the Michigan shore. High winds yesterday (10-30 knots) kept the bloom mixed in the water column reducing surface concentrations.

Sunday will be calm with the potential for more discolored water. There is a slight chance of scum formation in the areas of the far western basin which may still have medium concentrations of cyanobacteria. The bloom will continue an eastern transport over the next few days. The eastern edge will continue to move east along the Canadian coast.

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

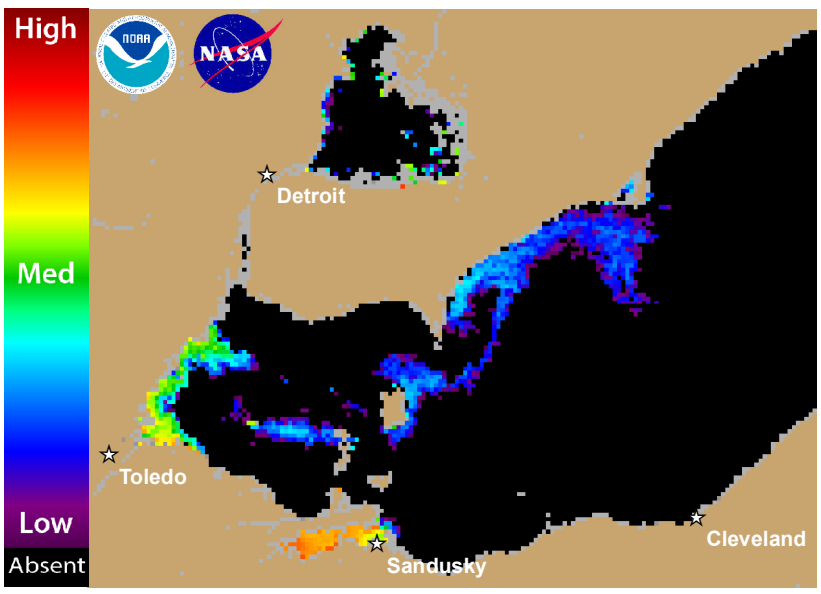


Figure 1. Cyanobacterial Index from NASA's MODIS-Terra data collected 9 September 2014 at 12 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

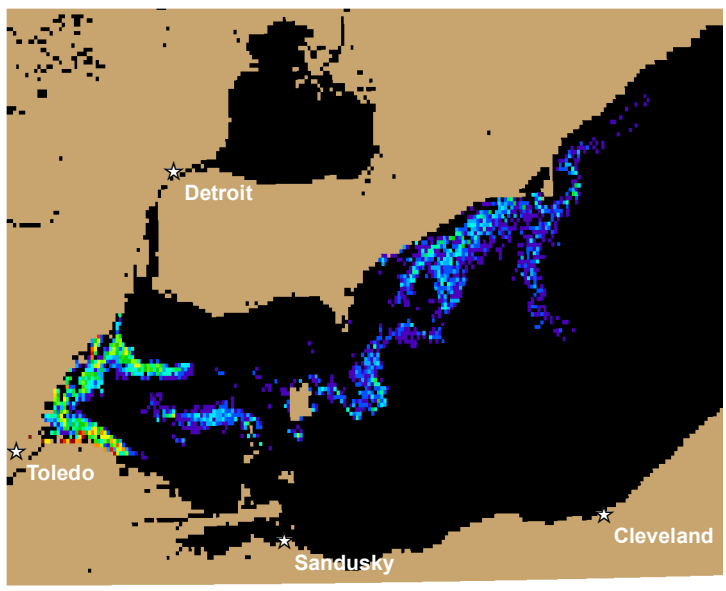


Figure 2. Nowcast position of bloom for 12 September 2014 using GLCFS modeled currents to move the bloom from the 9 September 2014 image.

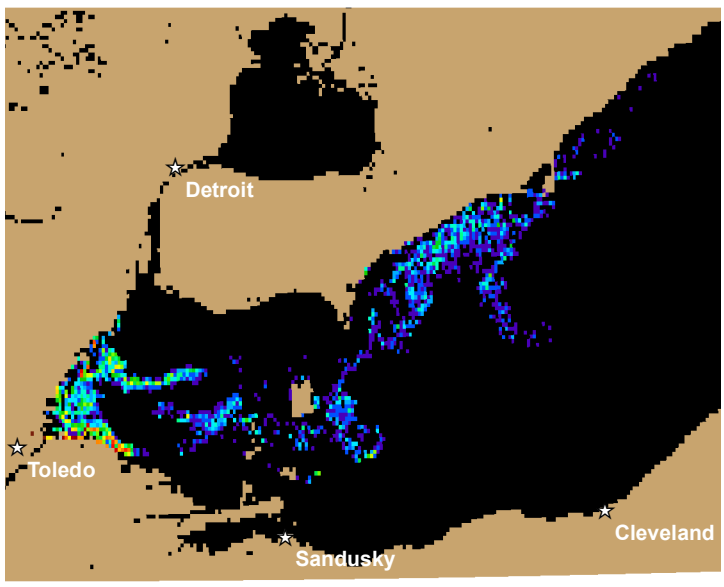
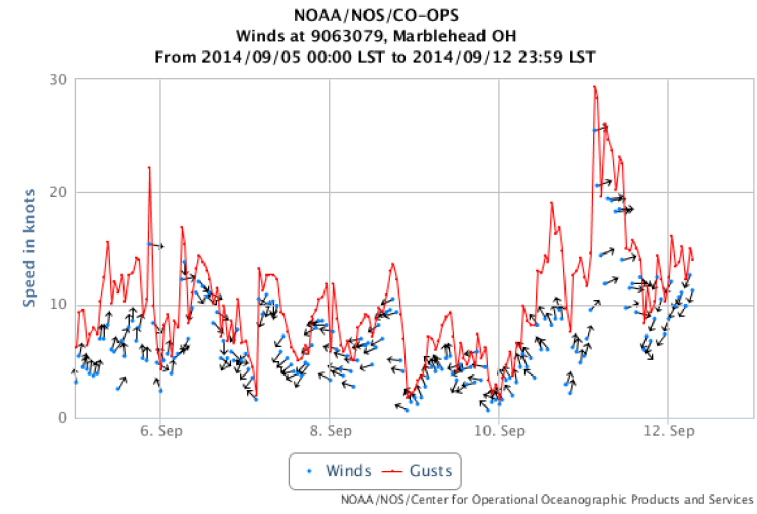
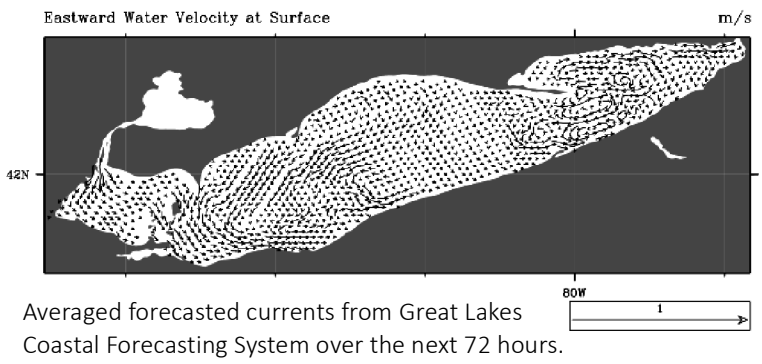


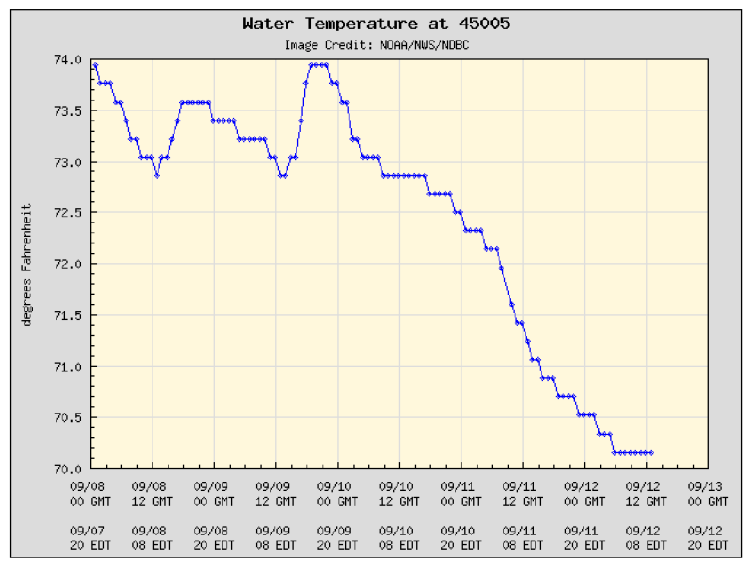
Figure 3. Forecast position of bloom for 15 September 2014 using GLCFS modeled currents to move the bloom from the 8 September 2014 image.



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.
Wind forecasts derived from NOAA/National Weather Service in Cleveland.

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