Experimental Lake Erie Harmful Algal Bloom Bulletin

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

8 September 2014, Bulletin 21

The eastern edge of bloom has moved east past Point Pelee, along the Canadian coast with moderately low concentrations along the shore. The most intense area of the bloom remains in Maumee Bay and along the Michigan shore. Some mixing kept the surface concentration down yesterday, although concentration increased somewhat through the day.

Winds will turn from east to south overnight. Lighter winds on Tuesday may favor scum formation in some areas. Mixing is likely Wed as winds increase with the approach of a cold front (overnight Wed-Thur). The bloom will continue a slight eastward transport over then next few days. The eatern edge will continue to move along the Canadian coast with the possibiltiy of collecting on the shore.

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

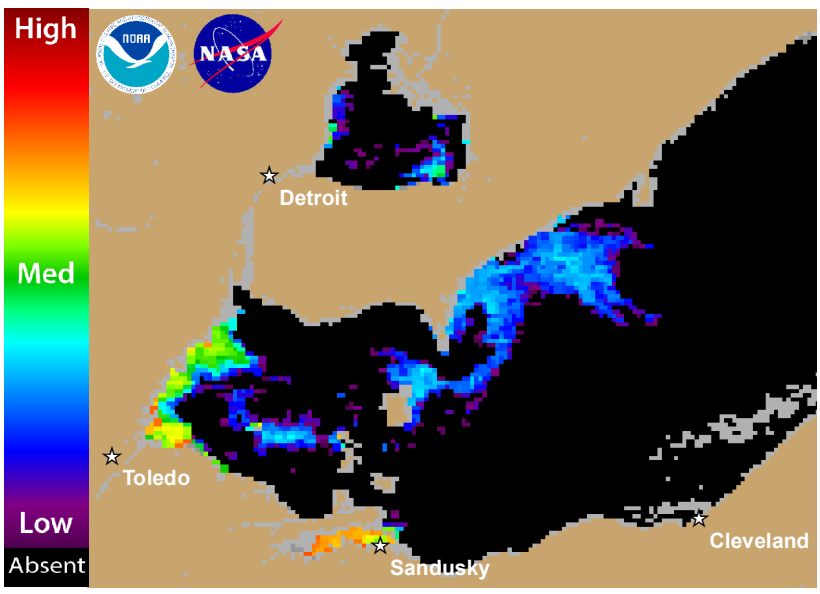


Figure 1. Cyanobacterial Index from NASA's MODIS-Terra data collected 7 September 2014 at 12 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

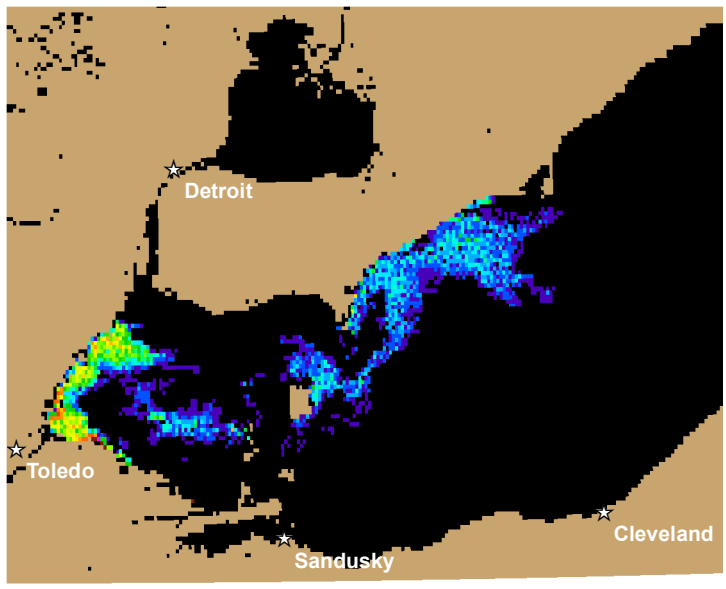


Figure 2. Nowcast position of bloom for 8 September 2014 using GLCFS modeled currents to move the bloom from the 7 September 2014 image.

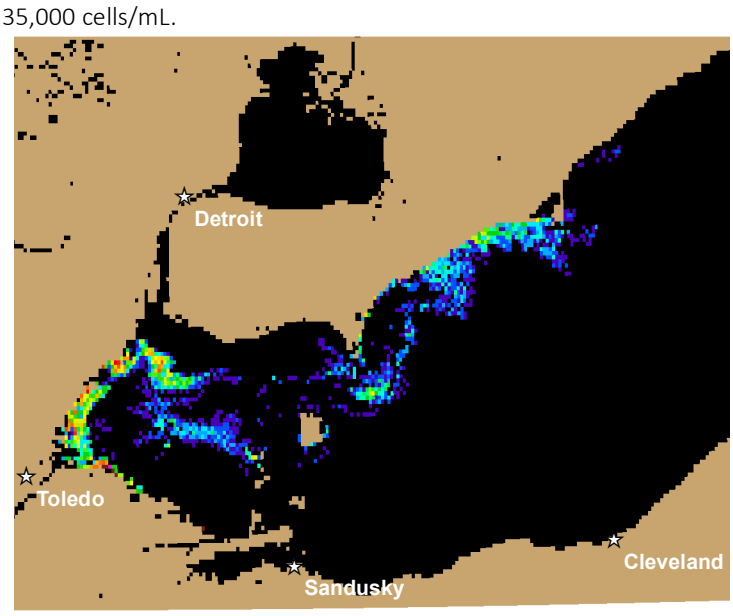
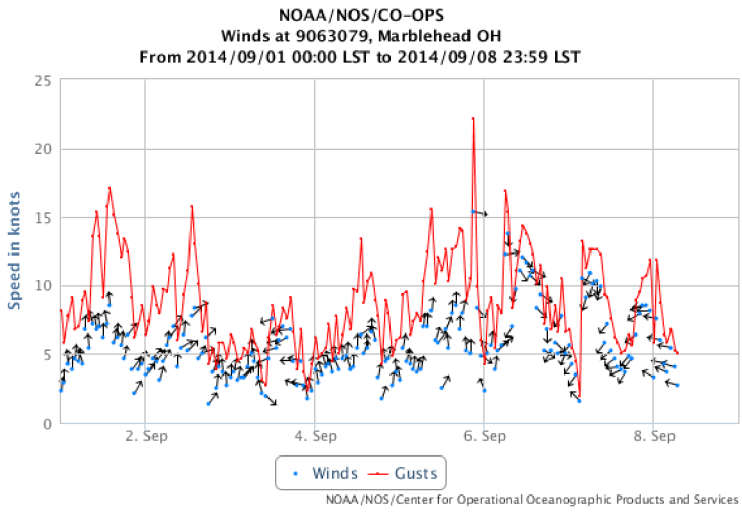
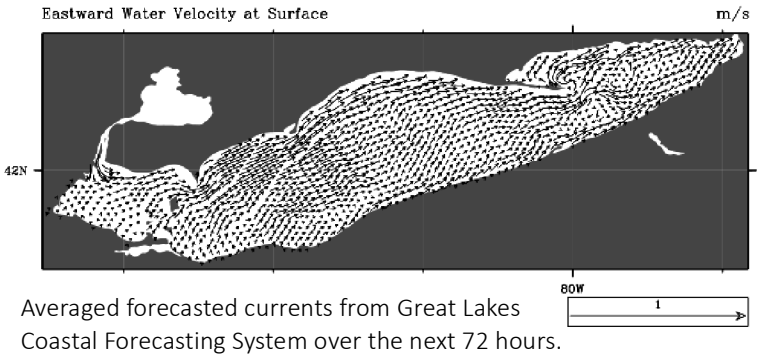


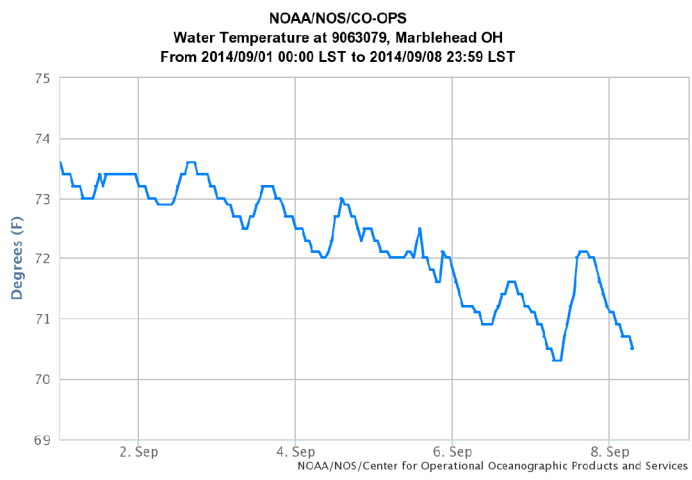
Figure 3. Forecast position of bloom for 11 September 2014 using GLCFS modeled currents to move the bloom from the 7 September 2014 image.



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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