Experimental Lake Erie Harmful Algal Bloom Bulletin

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

10 October 2014, Bulletin 30

The bloom has weakened since the last bulletin. The bloom may be partially mixed due to intense mixing earlier in the week. Highest and measurable concentration is found in the far western part of the western basin. GLERL reported that microcystin levels have dropped at all stations. Cooling water temperatures will favor further bloom reduction.

Moderate winds over the weekend may partially mix the bloom. A slight eastern transport is expected over the next few days.

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

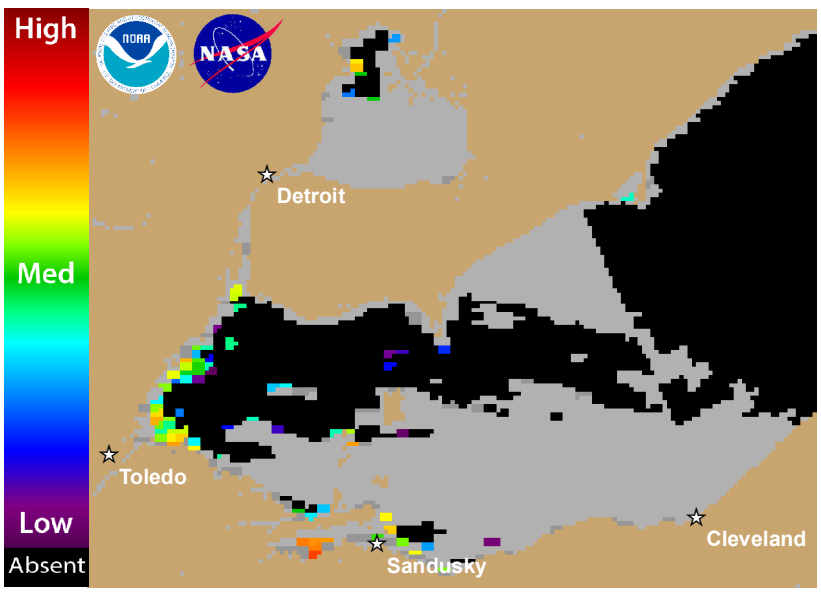


Figure 1. Cyanobacterial Index from NASA's MODIS-Aqua data collected 09 October 2014 at 1:40 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

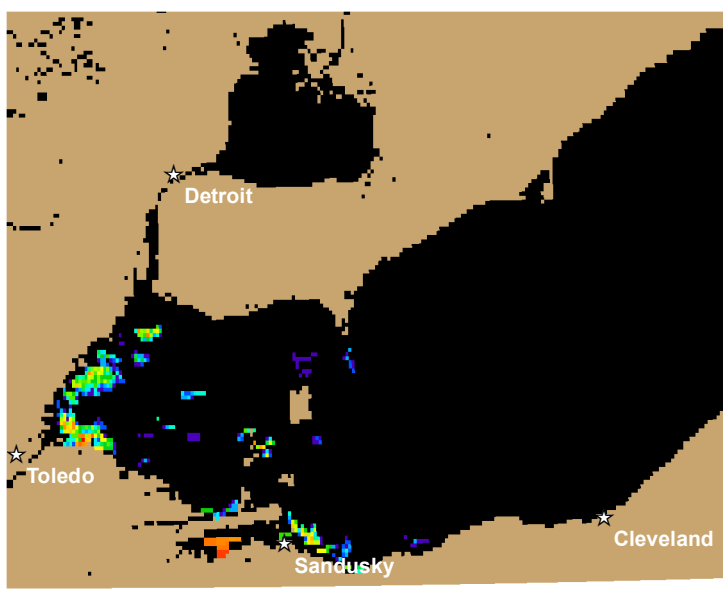


Figure 2. Nowcast position of bloom for 10 October 2014 using GLCFS modeled currents to move the bloom from the 09 October 2014 image.

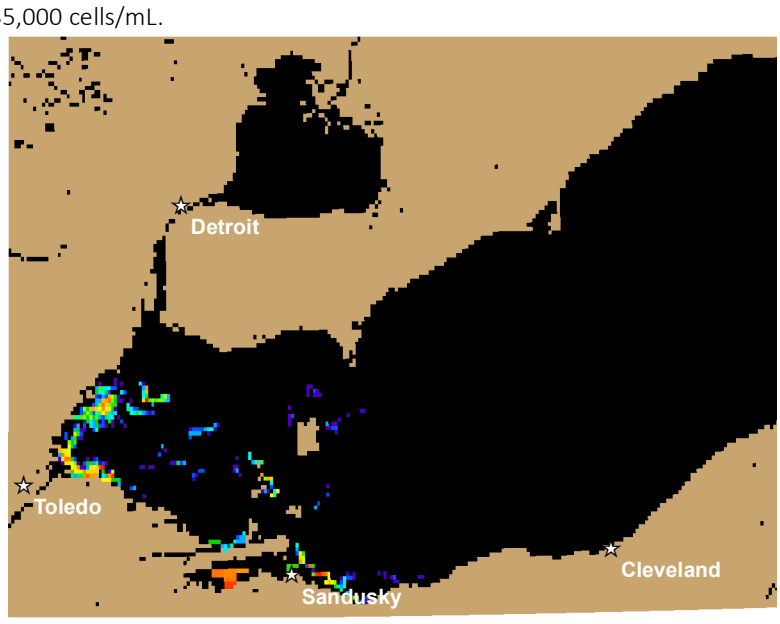
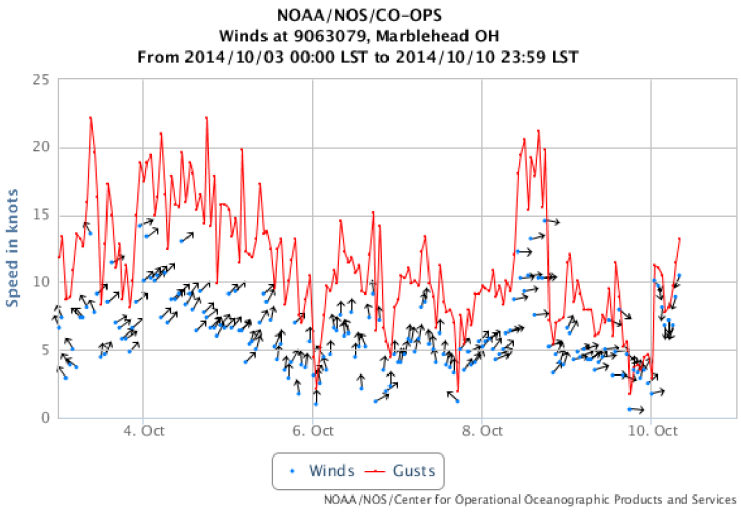
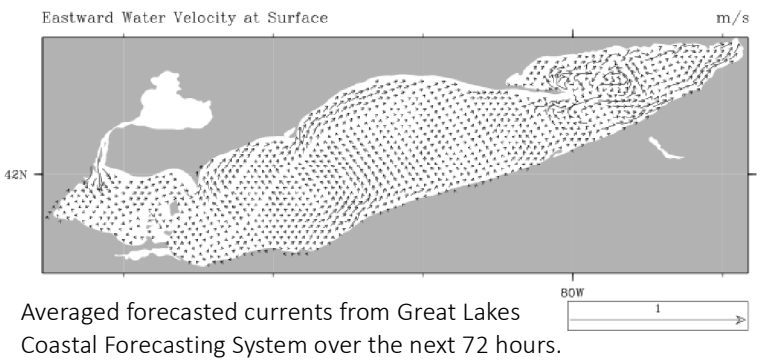


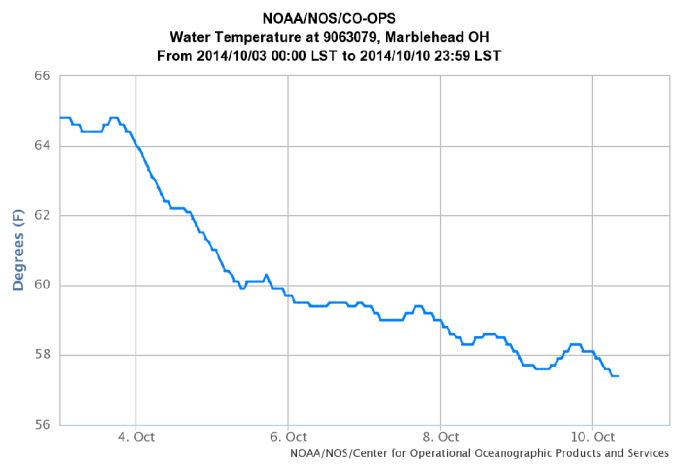
Figure 3. Forecast position of bloom for 10 October 2014 using GLCFS modeled currents to move the bloom from the 9 October 2014 image.



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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