

Experimental Lake Erie Harmful Algal Bloom Bulletin

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

29 September 2014, Bulletin 27

The area of highest concentration remains in the western basin. Low winds (<10 knots) over the weekend allowed the bloom to concentrate near surface.

Calm winds throughout the week will favor localized scum formation, especially in medium to high concentration areas in the southwest part of the lake. The bloom is forecasted to maintain position 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

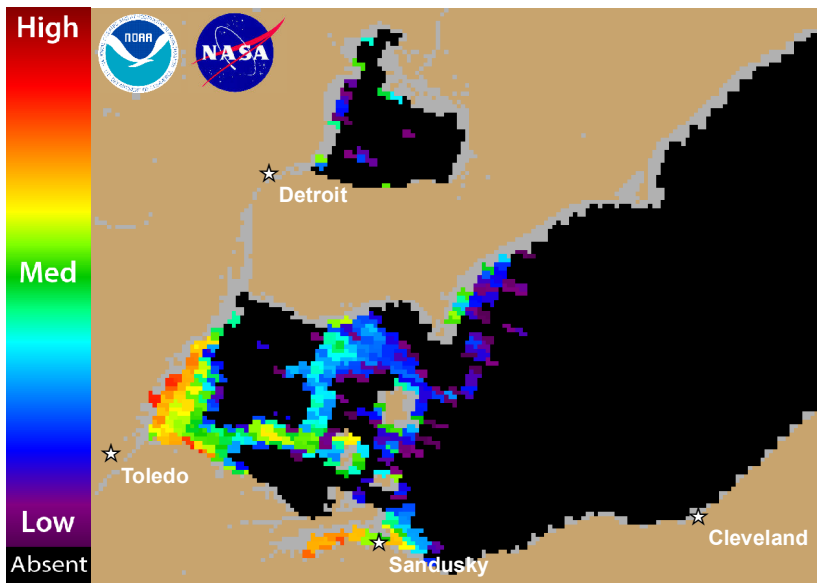


Figure 1. Cyanobacterial Index from NASA's MODIS-Terra data collected 27 September 2014 at 11:35 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.

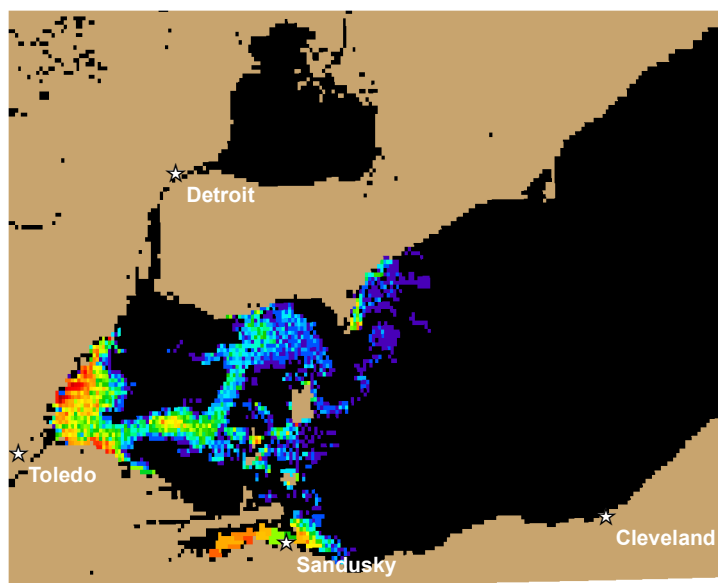


Figure 2. Nowcast position of bloom for 29 September 2014 using GLCFS modeled currents to move the bloom from the 27 September 2014 image.

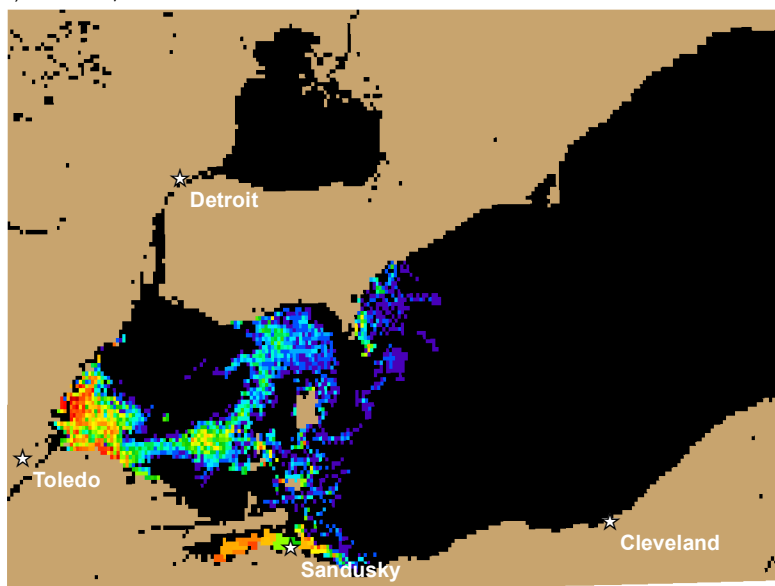
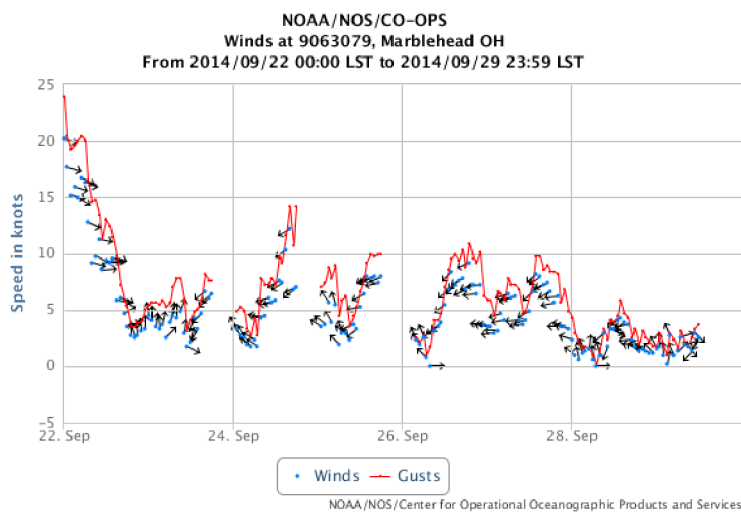
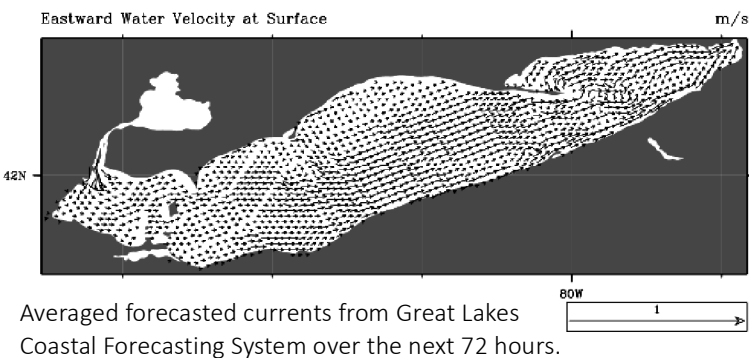


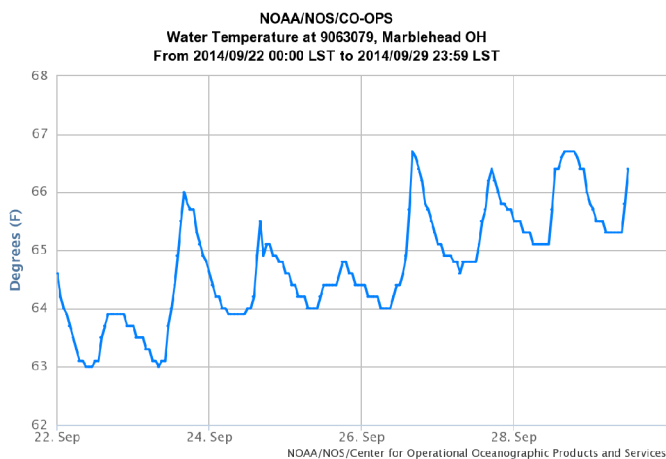
Figure 3. Forecast position of bloom for 2 October 2014 using GLCFS modeled currents to move the bloom from the 27 September 2014 image.



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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