



# Experimental Lake Erie Harmful Algal Bloom Bulletin

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

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While there is still sediment in the water, calm winds over the weekend allowed enough to settle to capture an accurate picture of the conditions. No bloom was evident in the western basin in imagery from 10/10 or 10/11 (figure 2). Water temperatures in the western basin continued to drop last week, to just below 60 degrees (15 C) (Marblehead is among the warmest sites), below which growth is suppressed.

Moderately strong winds (15-25 knots) are forecasted for the remainder of the week. These winds will tend to keep sediment in the water, and maintain mixing. The water temperature will continue to decrease. The combination will continue to discourage any cyanobacteria that remain in Lake Erie.

The bloom in Sandusky Bay has also diminished, dropping below medium concentration for the first time this season. No other blooms are evident in the central and eastern basins.

We do not expect that the bloom will reappear, but we will track conditions into next week and will produce a bulletin then. Be careful boating.

-Dupuy, Stumpf



Figure 1. Truecolor from NASA's Modis Aqua on 11 October, 2015 at 13:00 EST.

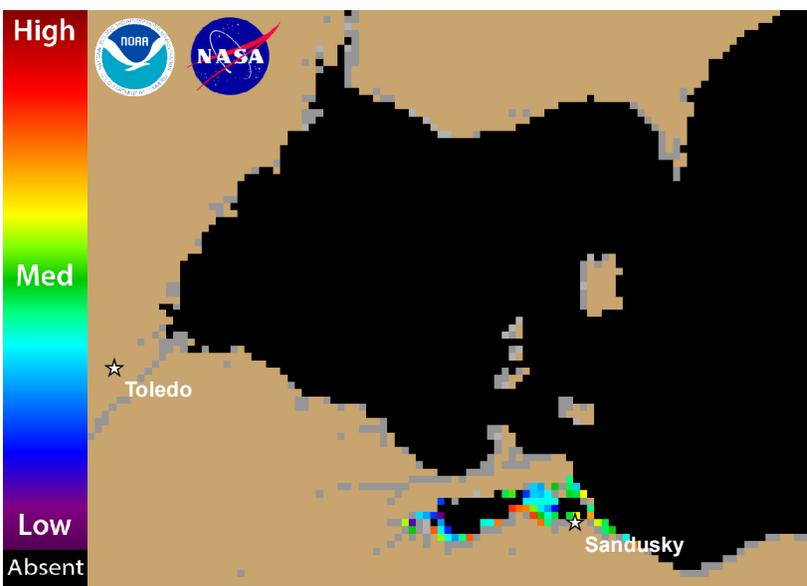
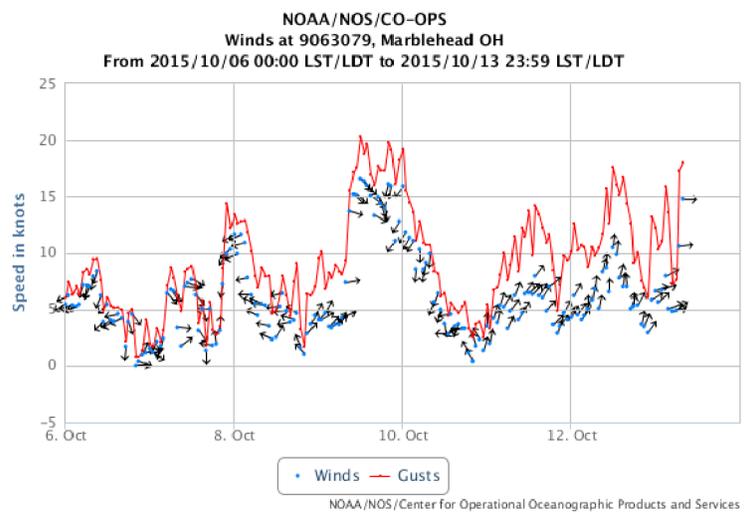


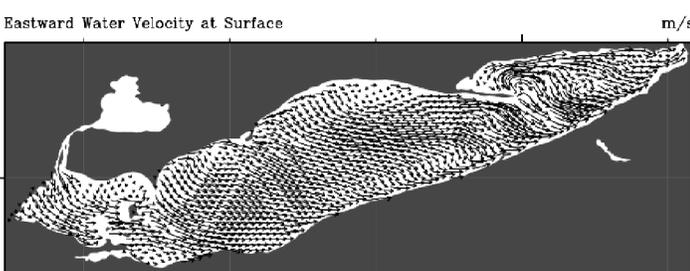
Figure 2. Cyanobacterial Index from NASA's MODIS- Aqua data collected 11 October, 2015 at 13:00 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.



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).



Water Temperature from Marblehead, OH. From: NOAA/Center for Operational Oceanographic Products and Services (CO-OPS).



Averaged forecasted currents from Great Lakes Coastal Forecasting System over the next 72 hours.

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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