



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

10 August, 2015, Bulletin 09

The *Microcystis* cyanobacteria bloom is present across a large part of the western basin south of West Sister Island from Michigan to the islands. It extends through the islands to the NE reaching the Ontario coast east of Point Pelee. Concentrations are greatest in the western basin, decreasing somewhat through the islands to moderate levels on the Ontario coast. Scum areas were thin and patchy on Friday. Microcystin is present in this bloom, with toxin levels especially high in scums. A Recreational Public Health Advisory has been posted for Maumee Bay State Park by Ohio EPA.

Winds will be mild today, favoring some scum development, although this may be modulated by mostly overcast conditions. Winds up to 10 knots may lead to patchy scums over the next few days. Winds will be mostly northerly Tuesday and Wednesday, favoring southern transport toward the Ohio coast. The persistent bloom in Sandusky Bay continues. No other blooms are evident in the central basin and eastern basins.

Please check Ohio EPA's site on harmful algal blooms for safety information. <http://epa.ohio.gov/habalgae.aspx>
Keep your pets and yourself out of the water in areas where scum is forming.

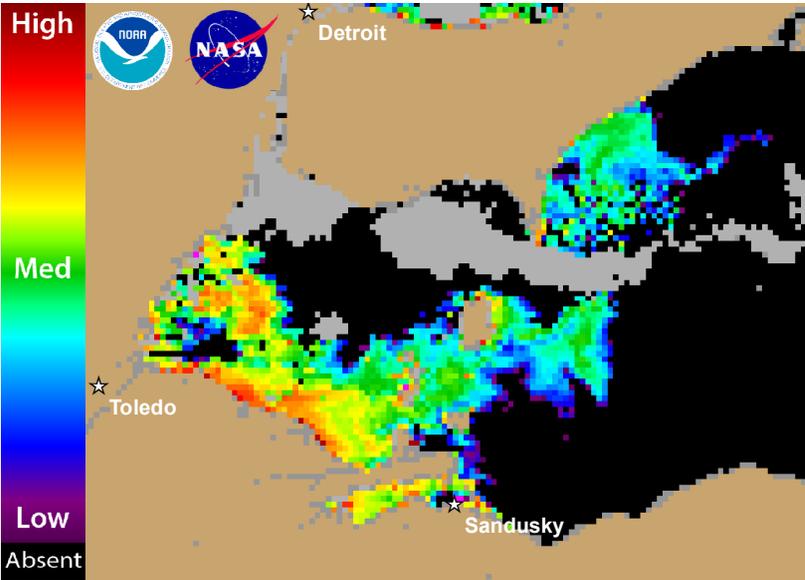


Figure 1. Cyanobacterial Index from NASA's MODIS- Terra data collected 07 August, 2015 at 12:10 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

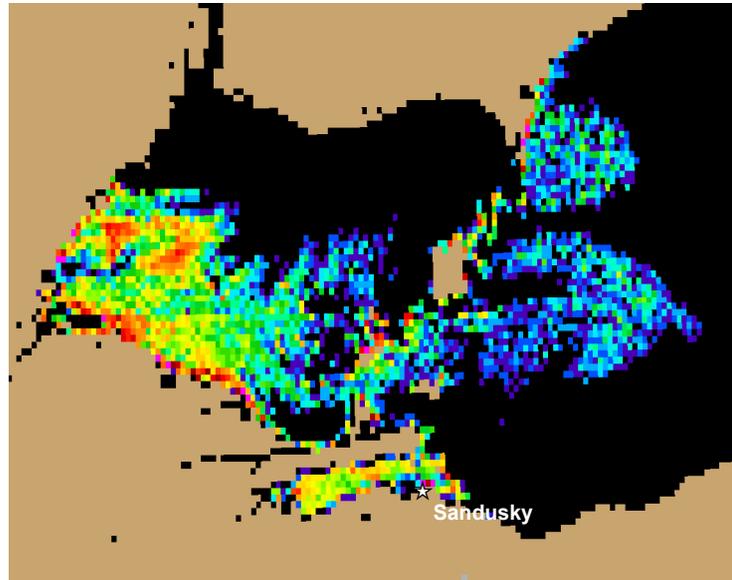


Figure 2. Nowcast position of bloom for 10 August, 2015 using GLCFS modeled currents to move the bloom from the 07 August, 2015 image.

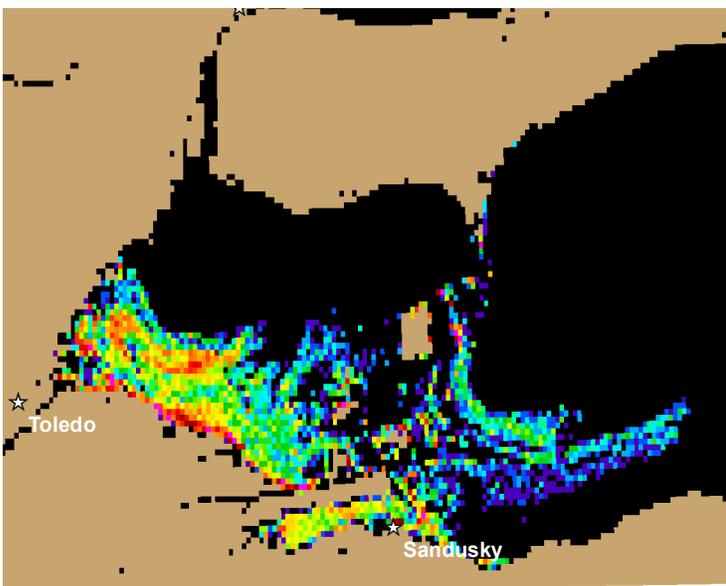
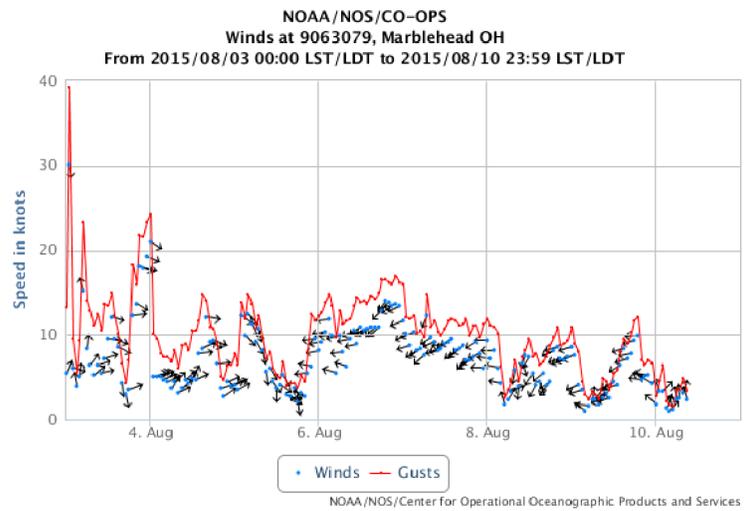
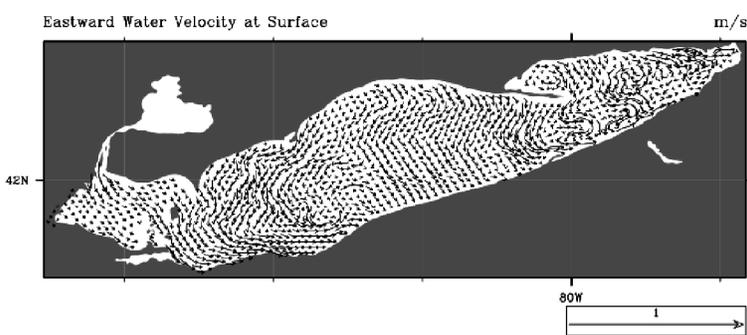


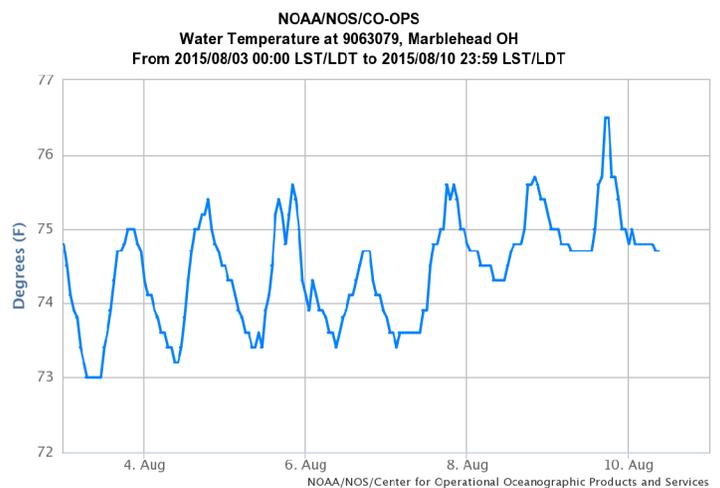
Figure 3. Forecast position of bloom for 13 August, 2015 using GLCFS modeled currents to move the bloom from the 07 August, 2015 image.



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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