



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

06 August, 2015, Bulletin 08

The *Microcystis* cyanobacteria bloom has intensified in the western part of the western basin. Yesterday extensive severe scum was present west and south of West Sister Island to both the Ohio and Michigan shorelines. All areas in dark red in the satellite image (Figure 1) had scum. The bloom also continues to extend eastward, although with only patchy scum areas, through the islands to the northeast offshore of Point Pelee. Microcystin is present in this bloom, with toxin levels especially high in scums.

High winds (10-20 knots) today and tomorrow may cause mixing, reducing the area of scum offshore. Mixing should decrease on over the weekend, which may lead to renewed scum formation in areas of high concentration (shown in orange and red) when winds diminish. Easterly winds over the next few days will favor westward transport toward the Michigan and 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.

- Stumpf, Dupuy

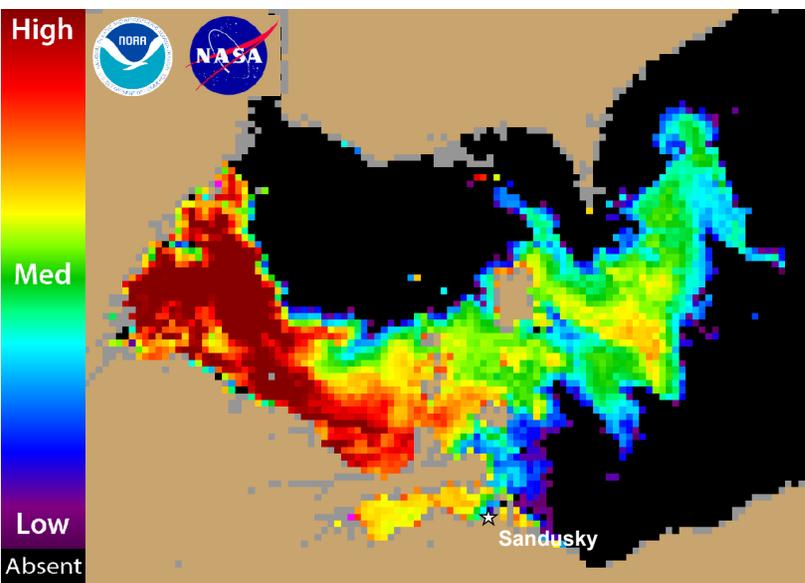


Figure 1. Cyanobacterial Index from NASA's MODIS- Terra data collected 05 August, 2015 at 12:25 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

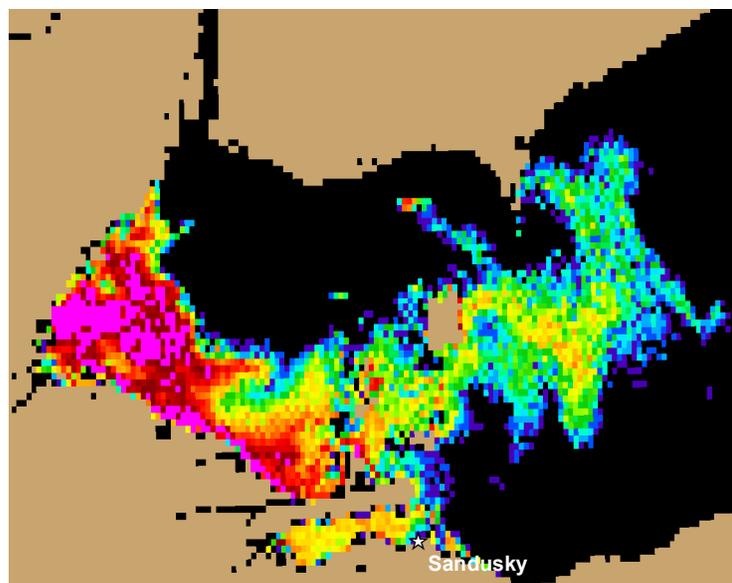


Figure 2. Nowcast position of bloom for 06 August, 2015 using GLCFS modeled currents to move the bloom from the 05 August, 2015 image.

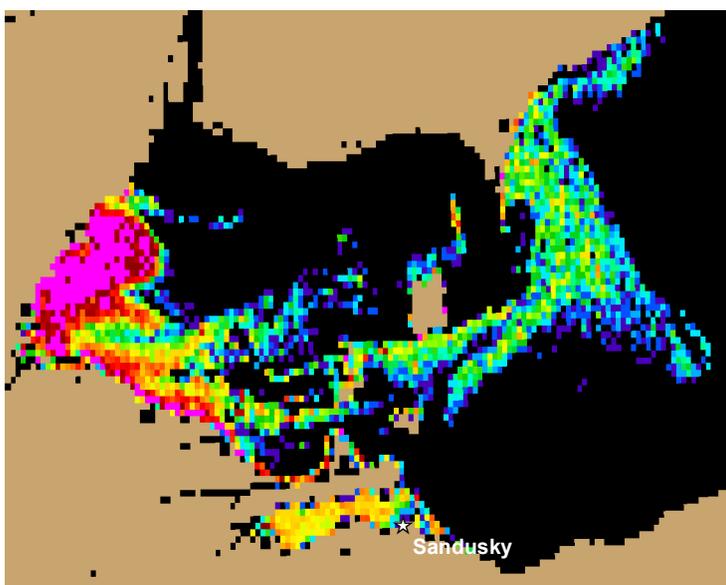
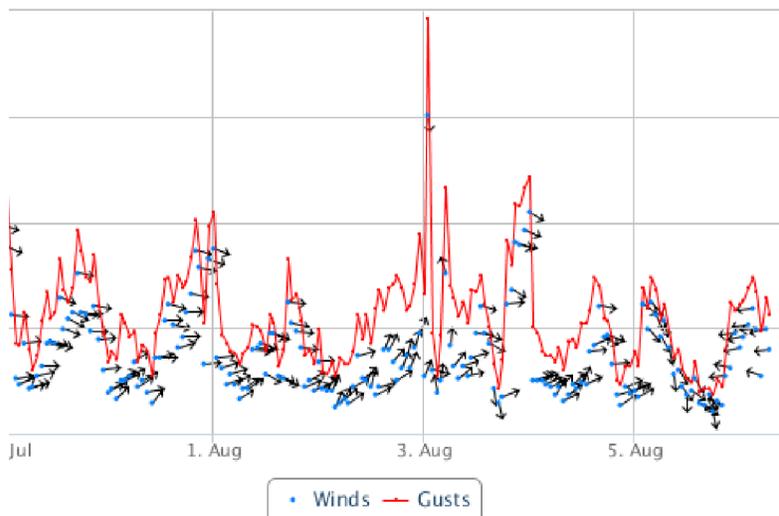


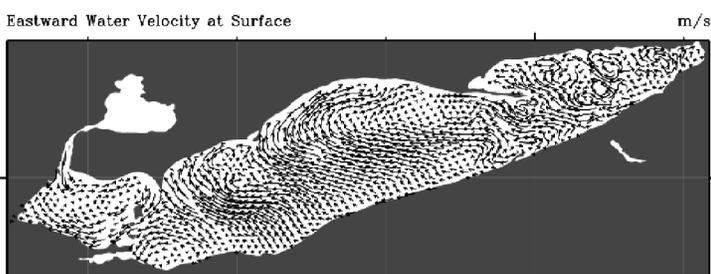
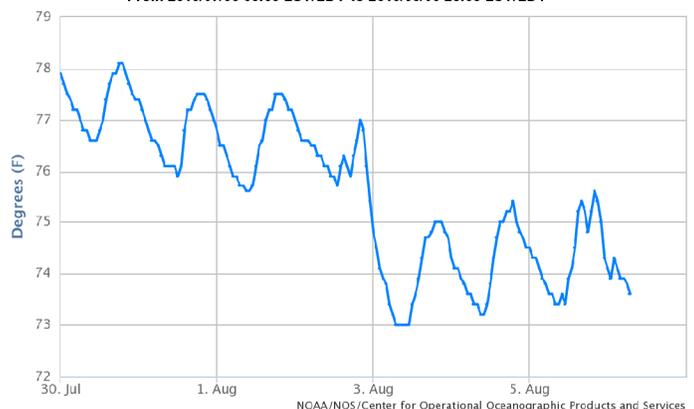
Figure 3. Forecast position of bloom for 09 August, 2015 using GLCFS modeled currents to move the bloom from the 05 August, 2015 image.

Winds at 9063079, Marblehead OH
From 2015/07/30 00:00 LST/LDT to 2015/08/06 23:59 LST/LDT



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).

NOAA/NOS/CO-OPS
Water Temperature at 9063079, Marblehead OH
From 2015/07/30 00:00 LST/LDT to 2015/08/06 23:59 LST/LDT



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.

For more information and to subscribe to this bulletin, go to: <http://www.glerl.noaa.gov/res/waterQuality/?targetTab=habs>

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