



Experimental Lake Erie Harmful Algal Bloom Bulletin

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

23 July 2015, Bulletin 03

The *Microcystis* cyanobacteria bloom continues to extend across the central portion of the western basin, running from west of West Sister Island, veering southward, then curving to the northeast and past Pelee Island. Scum formed yesterday (Wed July 22) in several areas where high concentrations (dark red) are shown in the image, with particularly large areas north of Kelleys island. Microcystin has been detected; toxin levels are high in scums, where the bloom is concentrated. Calm weather over the next few days in to the weekend will favor scum formation, especially during daytime. Some eastward movement is expected over the next few days. Please keep pets out of scums.

The persistent bloom in Sandusky Bay is present. No blooms are evident in the central and eastern basins.

- Stumpf, Dupuy

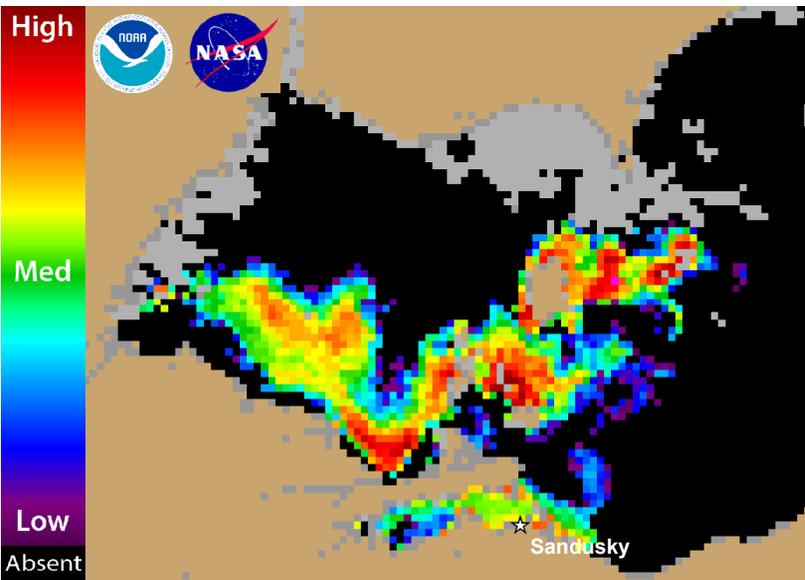


Figure 1. Cyanobacterial Index from NASA's MODIS-Terra data collected 22 July 2015 at 12:15 pm EDT. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

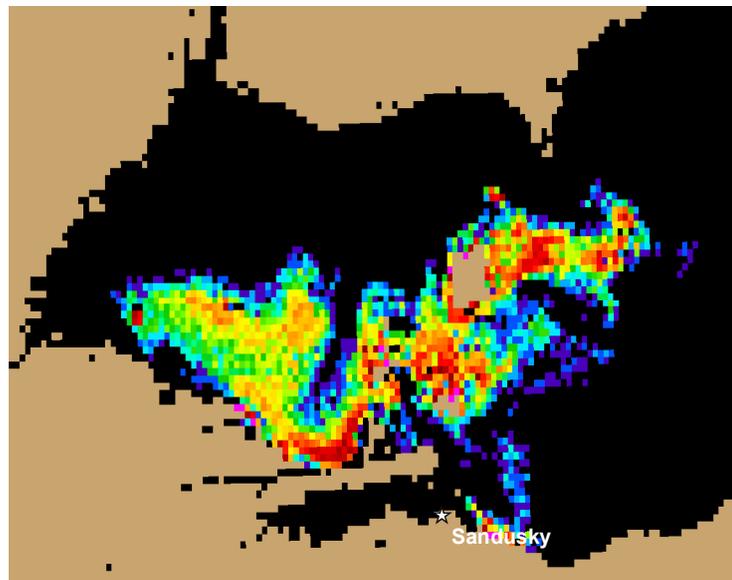


Figure 2. Nowcast position of bloom for 23 July 2015 using GLCFS modeled currents to move the bloom from the 22 July 2015 image.

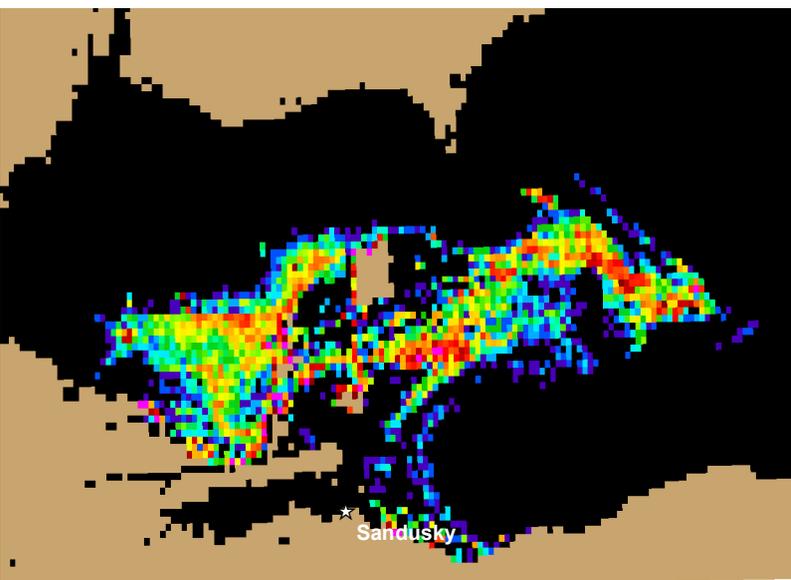
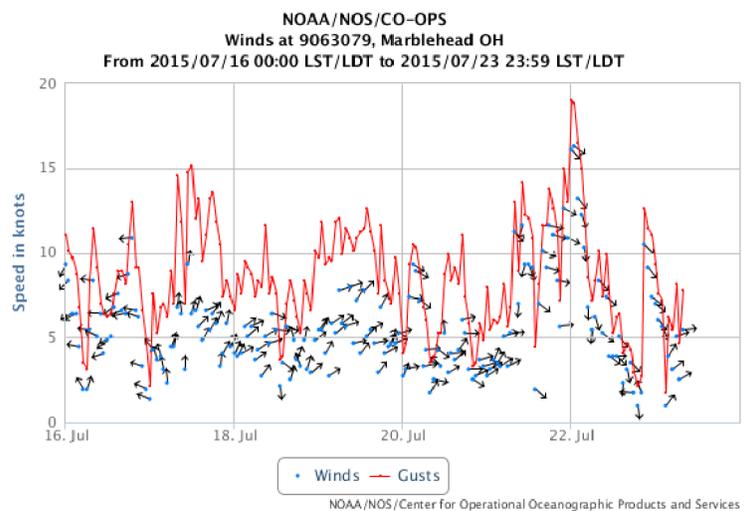
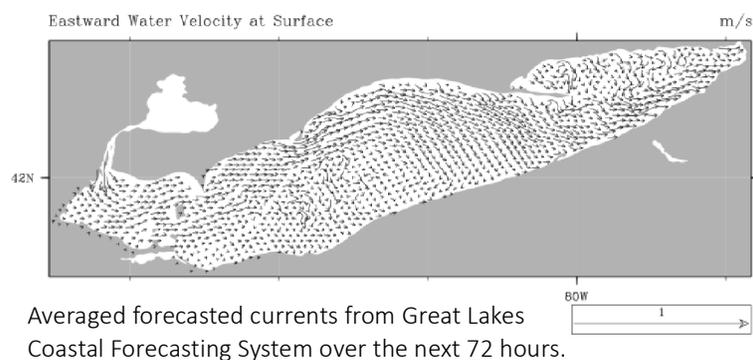


Figure 3. Forecast position of bloom for 26 July 2015 using GLCFS modeled currents to move the bloom from the 22 July 2015 image.



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).



Supported by the NASA Applied Sciences Health and Air Quality Program. Wind forecasts derived from NOAA/National Weather Service in Cleveland.



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

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