# Experimental Lake Erie Harmful Algal Bloom Bulletin

## National Centers for Coastal Ocean Science and Great Lakes Environmental Research Laboratory
## 14 August 2014, Bulletin 13

The bloom moved slightly eastward from Sunday (10 Aug) to yesterday (13 Aug). High winds (> 15 knots) kept the bloom mixed in the water column yesterday, reducing the surface concentration seen by satellite. Some mixing is expected again today. GLERL reported microcystin Monday from 29 ug/L just outside of Maumee Bay to 37 ug/L inside the Bay; 9 ug/L was observed southeast of Monroe.

A shift to southwesterly winds is expected Friday into the weekend, with possibility of scum formation Late Sunday, northerly winds will return with the possibility of mixing. We forecast southeasterly transport by the end of the weekend.

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.

As a reminder, the images below are "GeoPDF". Selecting "Tools, Analyze, Geospatial Location Tool", will allow you to view longitude and latitude under your cursor.

-Dupuy, Stumpf

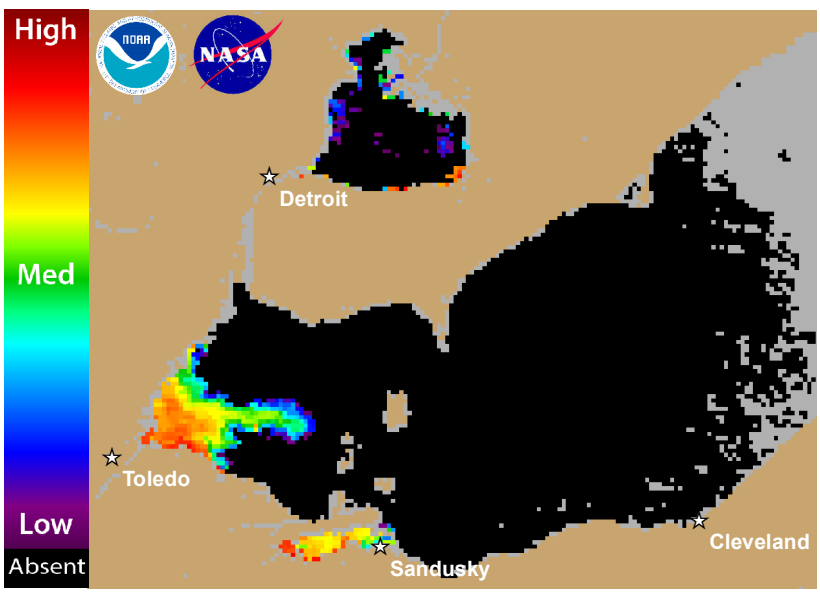



**Figure 1. Cyanobacterial Index from NASA's MODIS-Terra data collected 13 August 2014 at 1:10 pm. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 35,000 cells/mL.**

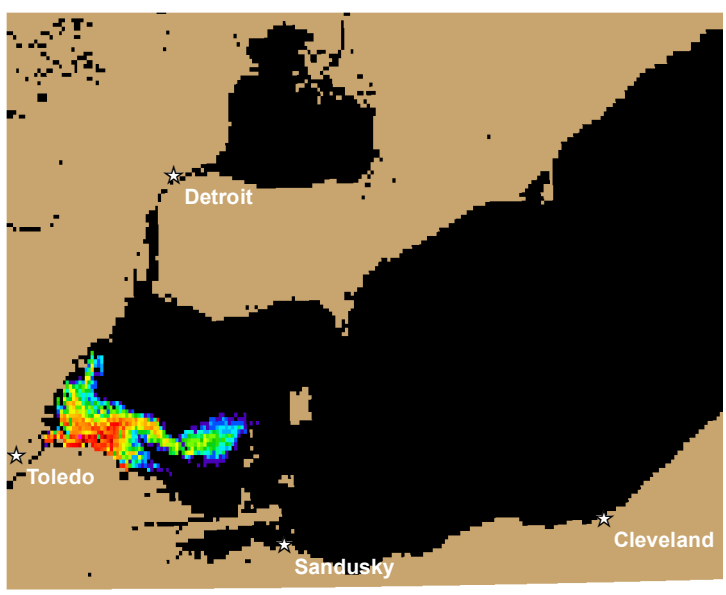



**Figure 2. Nowcast position of bloom for 14 August 2014 using GLCFS modeled currents to move the bloom from the 13 August 2014 image.**

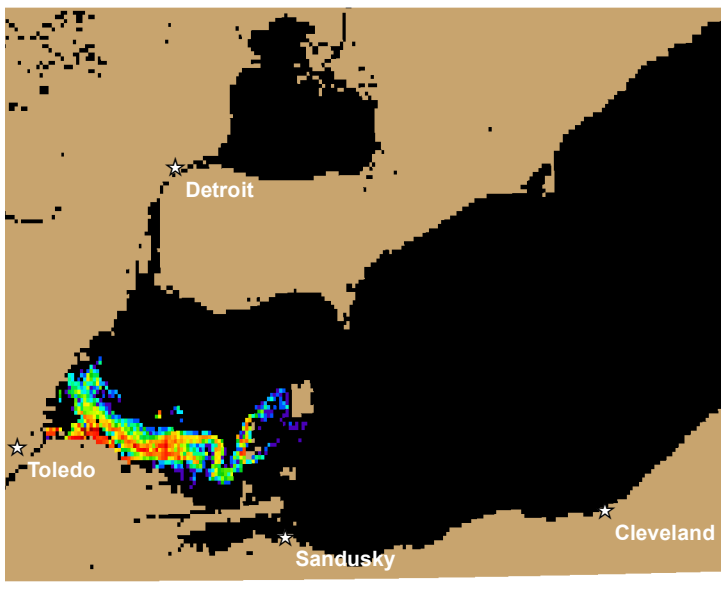
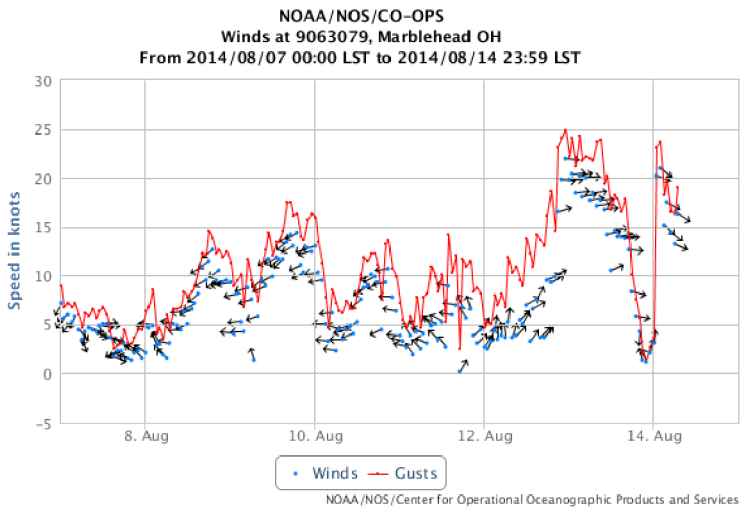
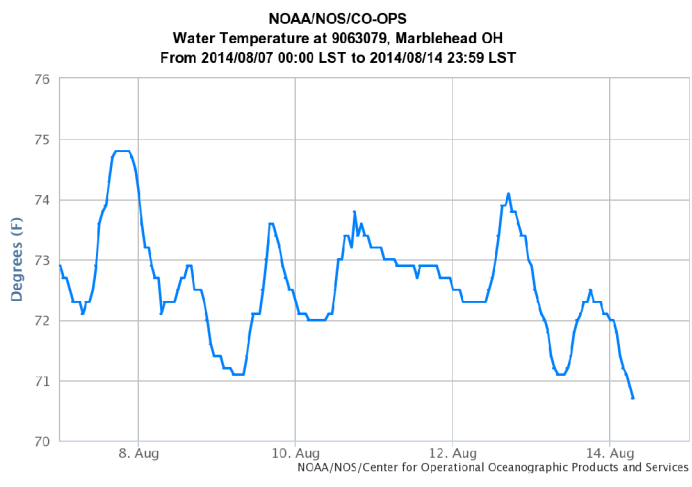



**Figure 3. Forecast position of bloom for 17 August 2014 using GLCFS modeled currents to move the bloom from the 13 August 2014 image.**




**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.**

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