



Experimental Lake Erie Harmful Algal Bloom Bulletin

2010-016

17 September 2010

National Ocean Service

Great Lakes Environmental Research Laboratory

Last bulletin: 13 September 2010

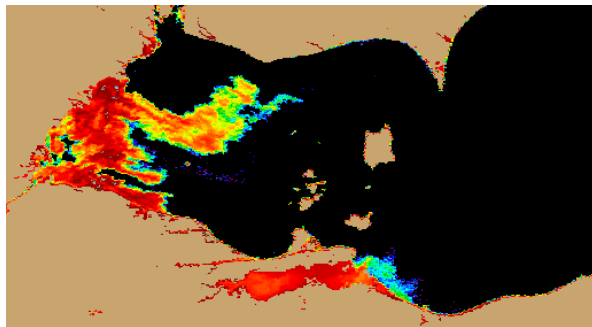


Figure 1. MERIS image from the European Space Agency. Imagery shows the spectral shape at 681 nm from September 13, where colored pixels indicate the likelihood of the last known position of the *Microcystis* spp. bloom (with red being the highest concentration). *Microcystis* spp. abundance data from shown as white squares (very high), circles (high), diamonds (medium), triangles (low), + (very low) and X (not present).

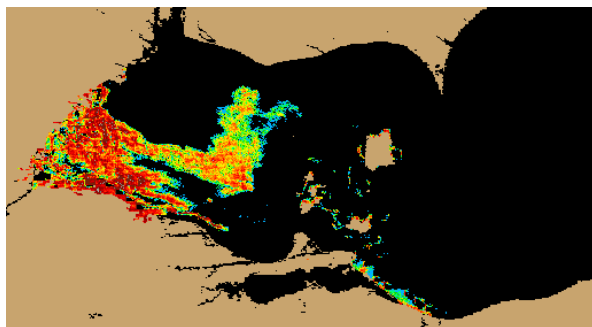


Figure 2. Nowcast position of *Microcystis* spp. bloom for September 17 using GLCFS modeled currents to move the bloom from the September 13 image.

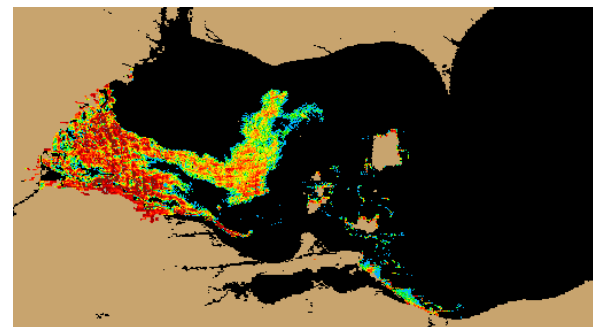


Figure 3. Forecast position of *Microcystis* spp. for September 20 using GLCFS modeled currents to move the bloom from September 13 image.

Conditions: A *Microcystis* bloom has been identified in Maumee Bay and extends north into Brest Bay.

Analysis: Imagery indicates that a bloom still exists in a large portion of western Lake Erie and northward into Brest Bay. A 2nd bloom is also observed just outside of Sandusky Bay. Field samples indicate that *Microcystis* concentrations range from medium to very low with the highest concentrations right to the Maumee River mouth. In addition it appears that the bloom is mixed and dominated by *Anabaena*. As the imagery cannot distinguish between 2 species of cyanobacteria, highlighted regions most likely indicate the presence of both. Transport through September 19 indicates that overall the bloom may move southward and to the east. In particular, the southern portion may extend offshore and east of Locust Point by Sunday. Projected low wind stress should keep concentrations at the surface. Water temperatures are not expected to decrease and are warm enough to support increased concentration levels.

-Tomlinson, Wynne

Please note:

- MERIS imagery was distributed by the NOAA CoastWatch Program and provided by the European Space Agency
- http://www.glerl.noaa.gov/res/Centers/HABS/lake_erie_hab/lake_erie_hab.html
- Cell counts were collected by the Great Lakes Environmental Research Laboratory
- The wind data is available through the National Data Buoy Center and the National Weather Service
- Modeled currents were provided through the Great Lakes Coastal Forecasting System

