

## Experimental Lake Erie Harmful Algal Bloom Bulletin

2011-008

08 September 2011

National Ocean Service

Great Lakes Environmental Research Laboratory

Last bulletin: 22 July 2011

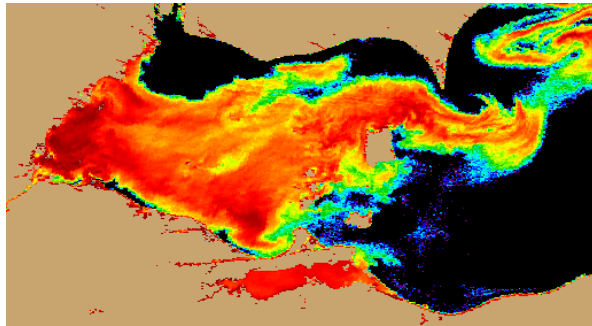


Figure 1. MERIS image from the European Space Agency. Imagery shows the spectral shape at 681 nm from September 03, where colored pixels indicate the likelihood of the last known position of the *Microcystis* spp. bloom (with red being the highest concentration). *Microcystis* spp. abundance data from shown as white squares (very high), circles (high), diamonds (medium), triangles (low), + (very low) and X (not present).

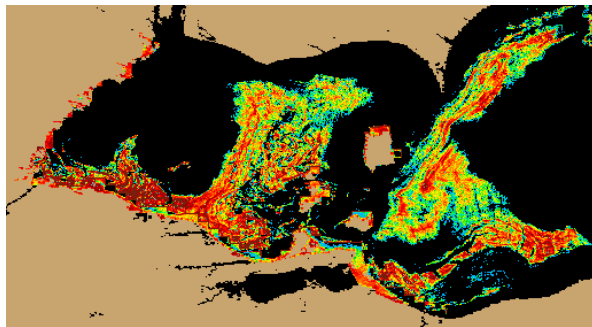


Figure 2. Nowcast position of *Microcystis* spp. bloom for September 08 using GLCFS modeled currents to move the bloom from the September 03 image.

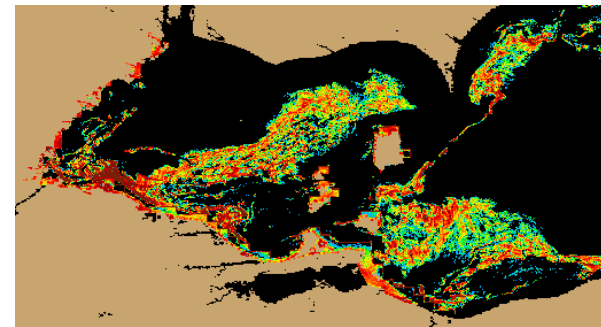


Figure 3. Forecast position of *Microcystis* spp. for September 11 using GLCFS modeled currents to move the bloom from September 03 image.

*Conditions:* A massive *Microcystis* bloom persists throughout most of Lake Erie's Western Basin.

*Analysis:* As indicated in satellite imagery from Saturday (9/3/2011), an enormous *Microcystis* bloom was present in western Lake Erie. The southern extent of the bloom was remotely observed along the coast of Ohio from Maumee Bay to Catawba Island. The northern extent of the bloom was observed to be consistent along the Michigan coast from Northern Maumee Bay to the mouth of the Detroit River. The eastern-most portion of the bloom was observed past Point Pelee and to the northeast up in to Rondeau Provincial Park.

At the mouth of the Detroit River, a five day nowcast shows a southward suppression of the western-most portions of the bloom. However, the bloom is likely to still persist in much of the Western Basin. The nowcast also suggest the bloom has spread to the east of Sandusky and into the Cleveland area. **(Note: Due to a lack of clear imagery the bloom has not been remotely observed in the Cleveland area.)** A three day forecast also suggests that the bloom will persist to the north of Cleveland through the weekend. Water temperatures remain above 20 degrees Celsius and are forecast to decrease into the weekend; however, conditions remain favorable for bloom growth.

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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](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

