



Experimental Lake Erie Harmful Algal Bloom Bulletin

2009-005

20 August 2009

National Ocean Service

Great Lakes Environmental Research Laboratory

Last bulletin: 13 August 2009

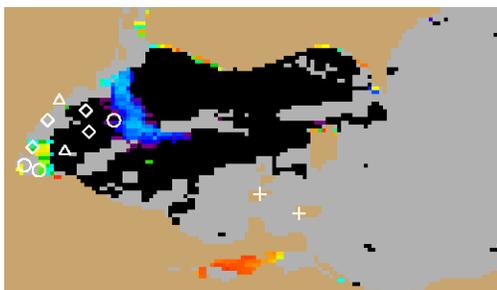


Figure 1. MERIS image from the European Space Agency. Imagery shows the spectral shape at 681 nm from August 18, where colored pixels indicate the likelihood of the last known position of the *Microcystis* spp. bloom (with red being the highest concentration). *Microcystis* spp. abundance data from August 19 shown as white squares (very high), circles (high), diamonds (medium), triangles (low), + (very low) and X (not present). Please note: Colored pixels in Sandusky Bay are due to a mixed bloom dominated by *Planktothrix* spp.

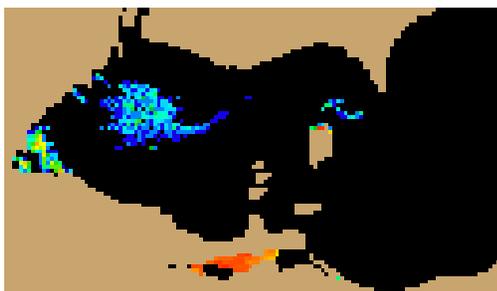


Figure 2. Nowcast position of *Microcystis* spp. bloom for August 20 using GLCFS modeled currents to move the bloom from the August 18 image. Please note: Colored pixels in Sandusky Bay are due to a mixed bloom dominated by *Planktothrix* spp.

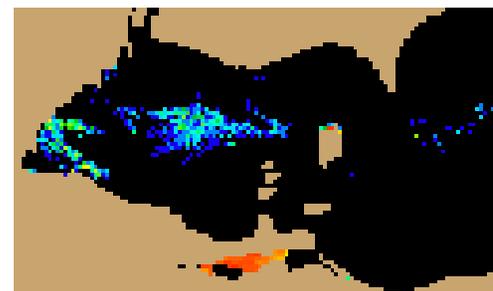


Figure 3. Forecast position of *Microcystis* spp. for August 23 using GLCFS modeled currents to move the bloom from August 18 image. Please note: Colored pixels in Sandusky Bay are due to a mixed bloom dominated by *Planktothrix* spp.

Conditions: A *Microcystis* spp. bloom has been identified in the western basin of Lake Erie, Maumee Bay and the adjacent waters to the northeast. The bloom may be visible from the shore, or nearshore areas outside of Maumee Bay and to the north, where cell abundances are high. A mixed cyanobacterial bloom is also present in Sandusky. Moderate taste and odor issues have been observed and may continue in Sandusky Bay as a result of the bloom.

Analysis: The *Microcystis* spp. bloom in the western basin is still prevalent in the western basin of Lake Erie, and to the north. Cell abundances are high. Although satellite imagery indicates the bloom may be decreasing, high wind gusts (not apparent on wind stress plot due to daily averaging) and storms most likely mixed the bloom subsurface preventing satellite detection. High winds over the next few days will likely continue to mix the bloom, however, due to warm water temperatures it is unlikely to subside. The forecast indicates transport of the bloom eastward, to the north of the Bass Islands.

-Tomlinson, Wynne

Please note:

- MERIS imagery was distributed by the NOAA CoastWatch Program and provided by the European Space Agency
- 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

