Experimental
Lake Erie Harmful Algal Bloom Bulletin

2010-017
23 September 2010
National Ocean Service
Great Lakes Environmental Research Laboratory
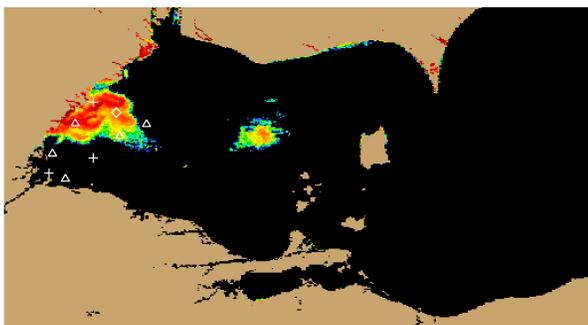Last bulletin: 17 September 2010

Figure 1. MERIS image from the European Space Agency. Imagery shows the spectral shape at 681 nm from September 19, 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).

Conditions: A Microcystis bloom has been identified in Maumee Bay, extending north to Brest Bay.

Analysis: Imagery indicates that a large bloom of cyanobacteria still exists in western Lake Erie. The bloom is dominated by Anabaena, with some Microcystis present. The feature is likely larger, than shown in the image due to the presence of clouds (not shown in image). Forecasts show the bloom will likely be transported to the north. Current conditions will favor continued growth. NDFD wind forecasts show expected high windstress this weekend, which may weaken the bloom, and mix it into the water column.
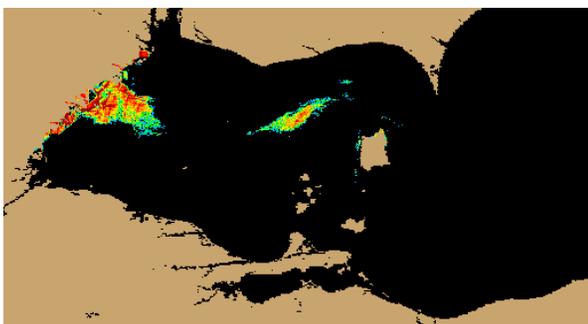
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Figure 2. Nowcast position of *Microcystis* spp. bloom for September 23 using GLCFS modeled currents to move the bloom from the September 19 image.
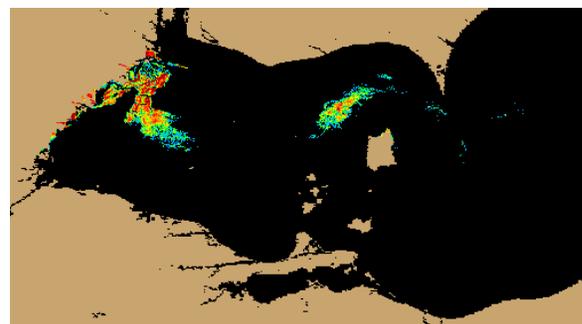

Figure 3. Forecast position of *Microcystis* spp. for September 26 using GLCFS modeled currents to move the bloom from September 19 image.

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

Average wind stress at MRHO1 - Marblehead

Wind Stress (Pa) vs. Date (GMT)

NDBC

Image date

NDFD

Average water temperature at 45005 - W Erie 28NM Northwest of Clevelan

Water temperature (C) vs. Date (GMT)

NDBC

Image date