Experimental
Lake Erie Harmful Algal Bloom Bulletin
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30 September 2010
National Ocean Service
Great Lakes Environmental Research Laboratory
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Conditions: A Microcystis bloom has been identified in Maumee Bay, extending north to Brest Bay.

Analysis: Imagery indicates a large cyanobacterial bloom persists in western Lake Erie. Field counts suggest the bloom is dominated by Anabaena with low to very low concentrations of Microcystis present. Strong winds over the past week may account for subsurface mixing of the bloom and some cells may still be submerged and undetectable by satellite. Winds are forecast to increase into the weekend, which may account for further mixing and possible weakening of the bloom. Forecast currents show the bloom transporting slightly west southwest. Current water temperature conditions favor continued growth.

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Figure 1. MERIS image from the European Space Agency. Imagery shows the spectral shape at 681 nm from September 29, 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 30 using GLCFS modeled currents to move the bloom from the September 29 image.

Figure 3. Forecast position of Microcystis spp. for October 03 using GLCFS modeled currents to move the bloom from September 29 image.

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