Experimental
Lake Erie Harmful Algal Bloom Bulletin
2010-007
22 July 2010
National Ocean Service
Great Lakes Environmental Research Laboratory
Last bulletin: 08 July 2010

Figure 1. MERIS image from the European Space Agency. Imagery shows the spectral shape at 681 nm from July 20, 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 July 22 using GLCFS modeled currents to move the bloom from the July 20 image.

Figure 3. Forecast position of Microcystis spp. for July 25 using GLCFS modeled currents to move the bloom from July 20 image.

Conditions: There have been recent reports of low-very high concentrations of Microcystis this week in Western Lake Erie.

Analysis: The image shown is from July 20. There were winds causing a wind stress of ~0.1 Pa the previous day. This is the threshold where complete mixing of the lake generally occurs. This very well may have caused the cells to be homogeneously mixed throughout the water column, causing apparently low surface concentrations in the image. It is likely that the bloom will resurface if windstress remains low (>0.05 Pa). Water temperature is high, which may cause increased concentrations of Microcystis. However, forecasted windstress by the NDFD calls for moderate mixing in the lake, which should prevent the formation of surface scum. Continued sampling is recommended.

-Wynne, Briggs