Experimental Lake Erie Harmful Algal Bloom Bulletin

National Centers for Coastal Ocean Science and Great Lakes Environmnetal Research Laboratory

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Over two days of 20-30 knot northeast winds last weekend caused extensive mixing and stirred up large amounts of sediment in western Lake Erie. The sediment is slowly settling out, but much still remains in the water. This large concentration of sediment has obscured most methods for determining bloom presence in the lake. On Monday, water samples did not show toxin at most stations, except for one midway between West Sister and Davis-Bresse, which also had a quite localized scum patch. Satellite (which can identify scum in the presence of sediment) shows that this was extremely localized, less than ½ mile. No other scum patches have appeared this week. While water temperatures in the western basin dropped last week, they are still just above 60 degrees (15 C) (Marblehead is among the warmest sites), below which growth is suppressed.

Moderately strong winds (about 15 knots) will occur tonight through early Saturday; they will diminish somewhat on the weekend and may increase early next week. These winds will tend to keep sediment in the water, and maintain mixing. The water temperature will slowly decrease. The combination will continue to discourage the cyanobacteria that remains in Lake Erie.

The persistent bloom in Sandusky Bay continues, although somewhat lower in concentration. No other blooms are evident in the central and eastern basins.

Please check for updates on parks at Ohio State Parks at Ohio EPA's site, http://epa.ohio.gov/habalgae.aspx. Be careful boating.
-Dupuy, Stumpf

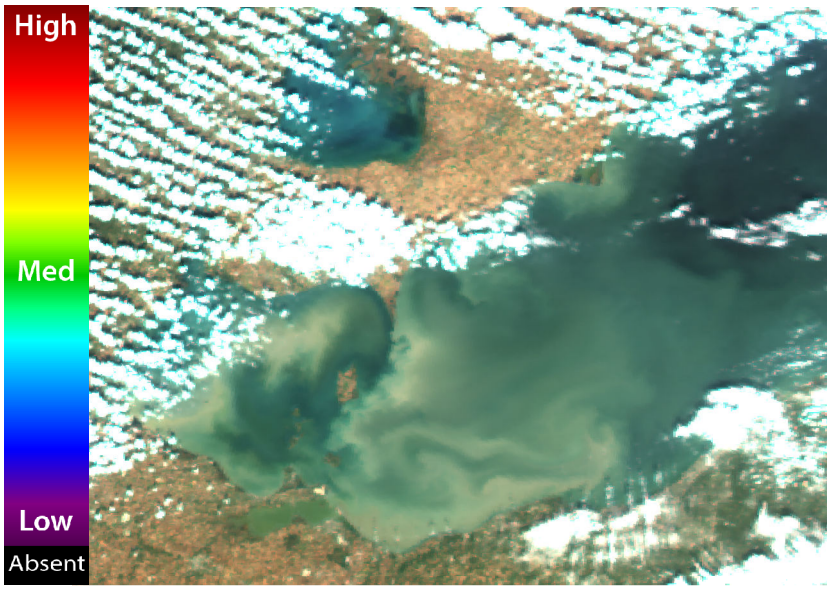
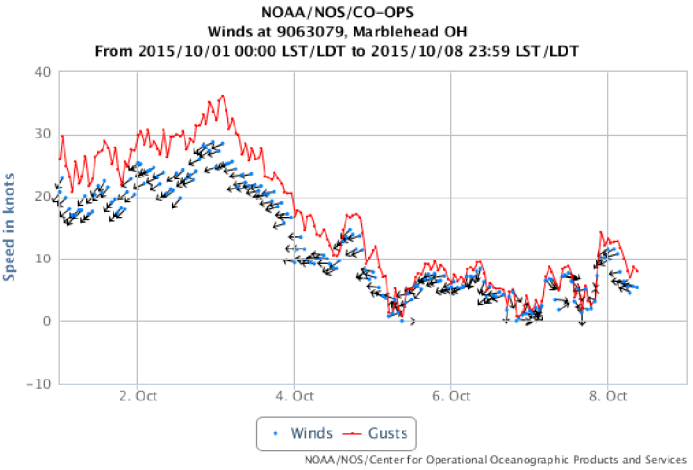
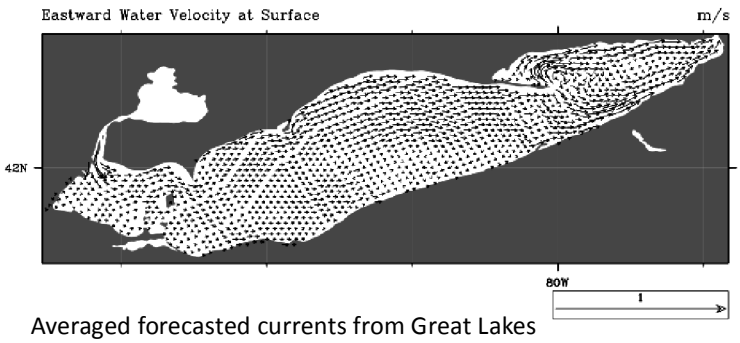


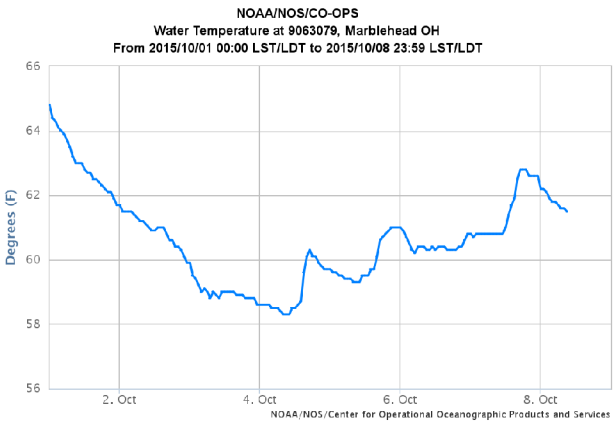
Figure 1. Cyanobacterial Index from NASA's MODIS- Aqua data collected 07 October, 2015 at 13:25 EST. Grey indicates clouds or missing data. Black represents no cyanobacteria detected. Colored pixels indicate the presence of cyanobacteria. Cooler colors (blue and purple) indicate low concentrations and warmer colors (red, orange, and yellow) indicate high concentrations. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.



Wind Speed, Gusts and Direction from Marblehead, OH. From: NOAA/Center for Operational Oceanographic Products and Services (CO-OPS). Note: 1 knot = 0.51444 m/s. Blooms mix through the water column at wind speeds greater than 7.7 m/sec (~ 15 knots).



Averaged forecasted currents from Great Lakes Coastal Forecasting System over the next 72 hours.



Water Temperature from Marblehead, OH. From: NOAA/Center for Operational Oceanographic Products and Services (CO-OPS).

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