

Using Google Earth & Google Maps to Display GLERL Research and Products: Some Examples

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Google Earth

GLERL has been using Google Earth to display its research and products since 2008 (Figures 1-4). Realtime model output and select data sets are available as KMLs and Network Links. Google Earth allows multiple overlays and time series animations, and is able to display large, complicated data sets. Google Earth also provides zoom/pan/tilt/rotate capabilities.

Figure 1. (Left) Overlays of GLCFS realtime water temperature, currents, observations, and nested grids. (Center) GLCFS realtime wave height. (Right) GLCFS realtime wind speed and direction.

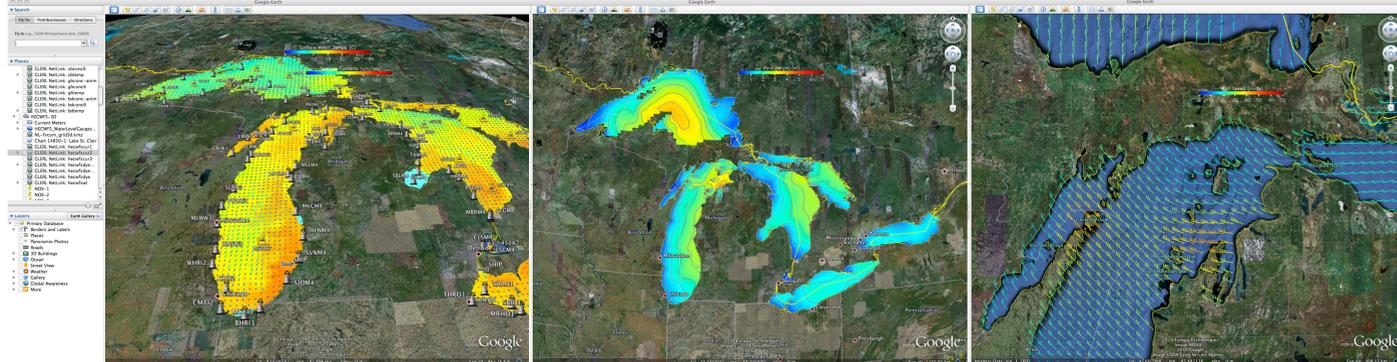


Figure 2. (Top) Saginaw Bay nested grid simulated tracer with shoreline. (Middle) Burns Ditch nested grid simulated tracer with NOS chart overlay and time animation. (Bottom) Grand Haven nested grid simulated tracer with NOS chart overlay.

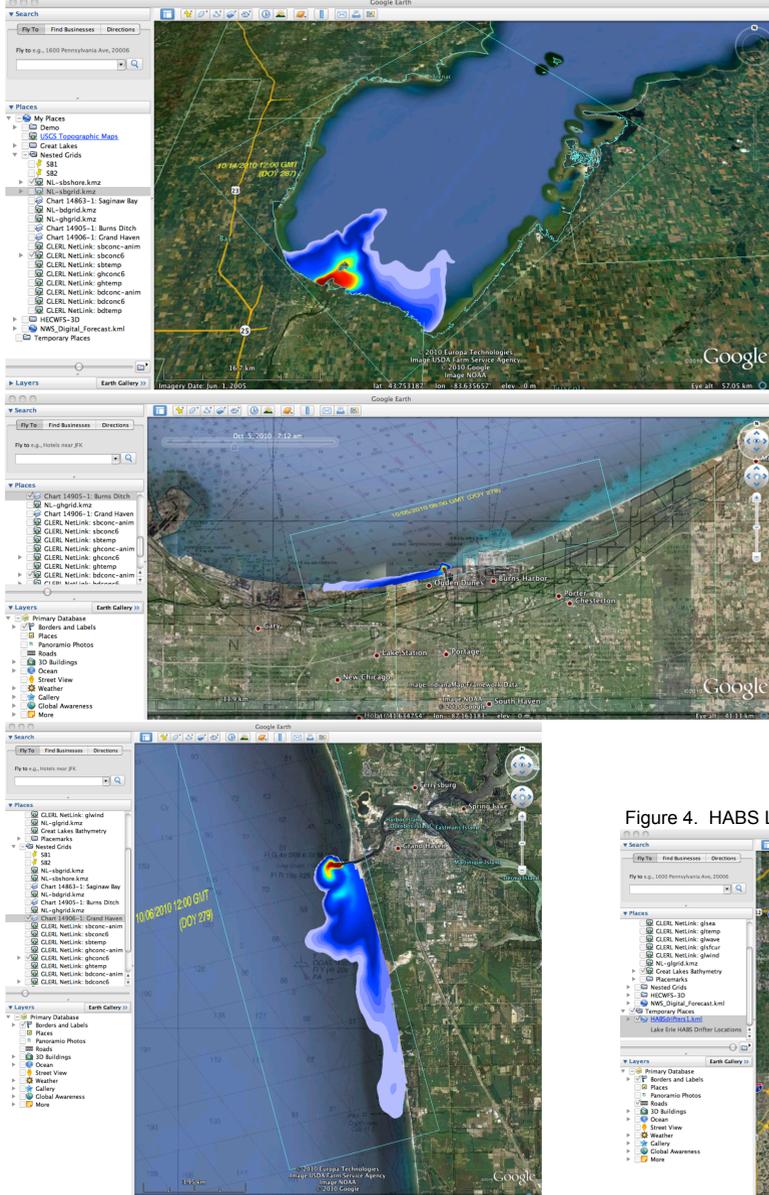


Figure 3. (Top) Lake St. Clair realtime currents. (Bottom) Lake St. Clair simulated tracer with model grid and time animation.

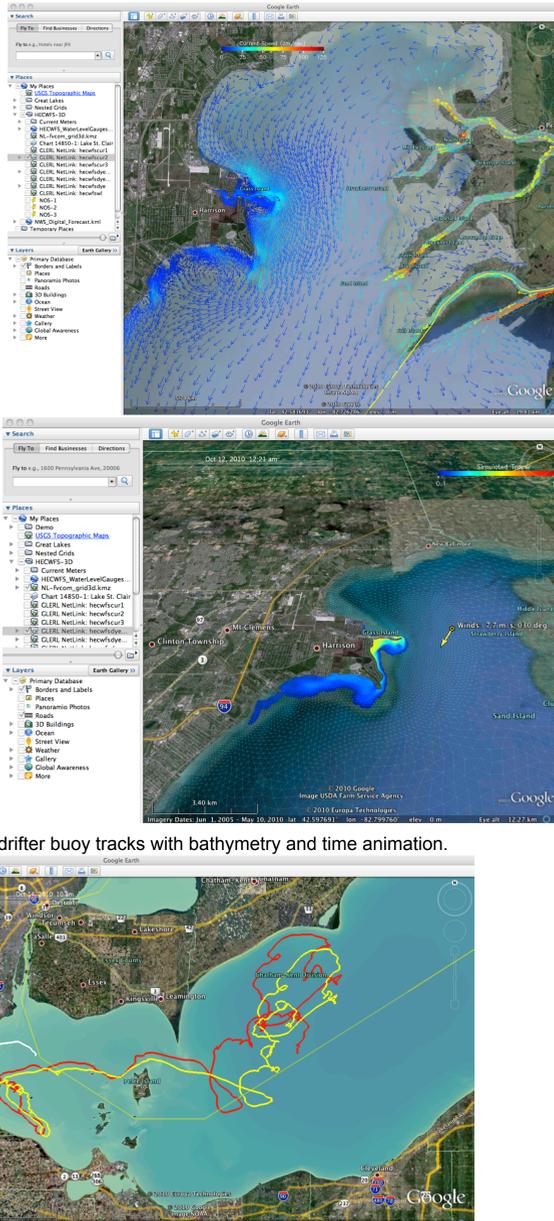
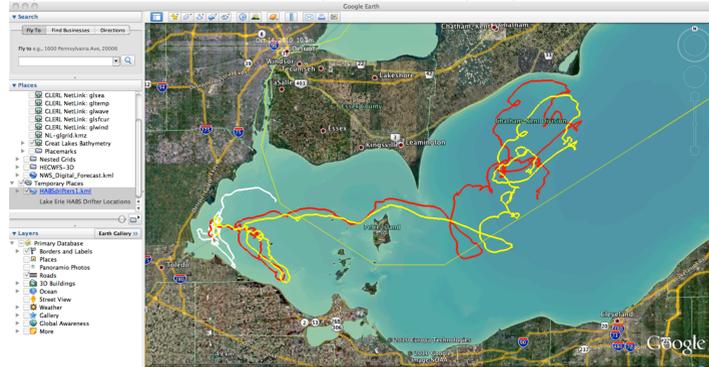


Figure 4. HABS Lake Erie drifter buoy tracks with bathymetry and time animation.



Google Maps

GLERL has been using Google Maps to display its research and products since 2009 (Figures 5-10). Google Maps are viewed directly in a web browser, and as with any web page, are easy to annotate with accompanying text, data, charts and links. Google Earth application is not required. Google Maps also provides zoom/pan capabilities.

Figure 5. NOAAPORT all coastal observations – location and type.

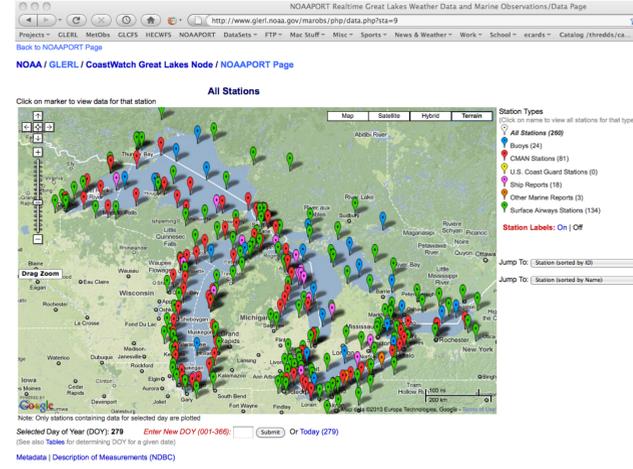


Figure 6. NOAAPORT buoy observations – location and name.

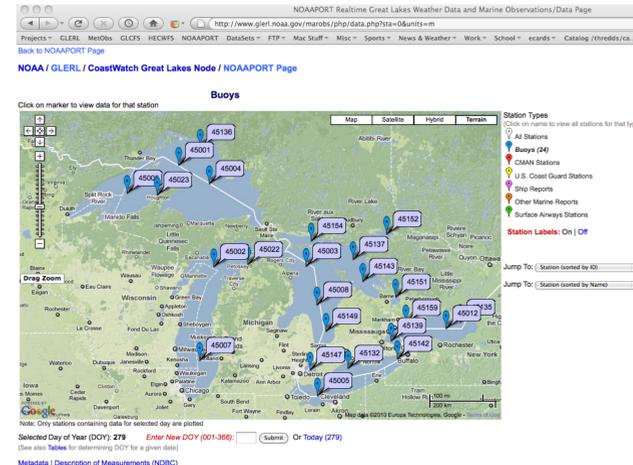


Figure 7. NOAAPORT ship observations with realtime ship track, data and chart.

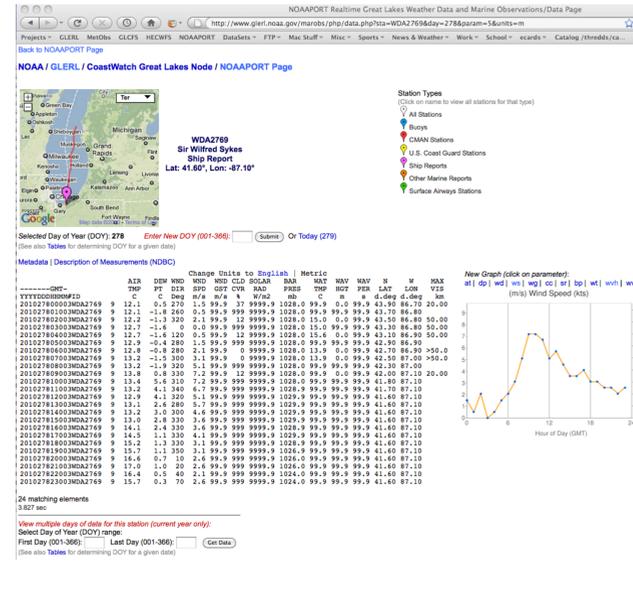


Figure 8. GLCFS realtime surface water temperature.

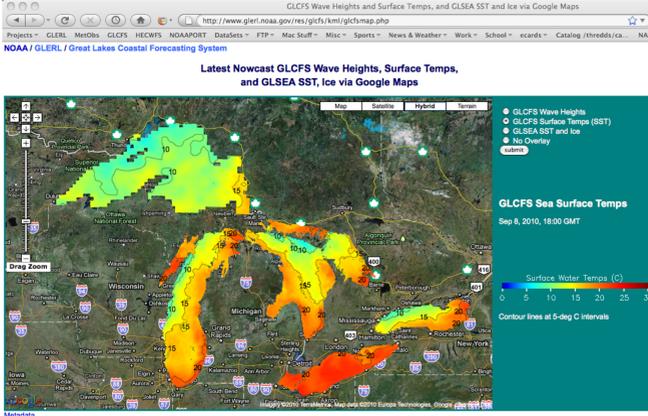


Figure 9. GLCFS realtime wave height.

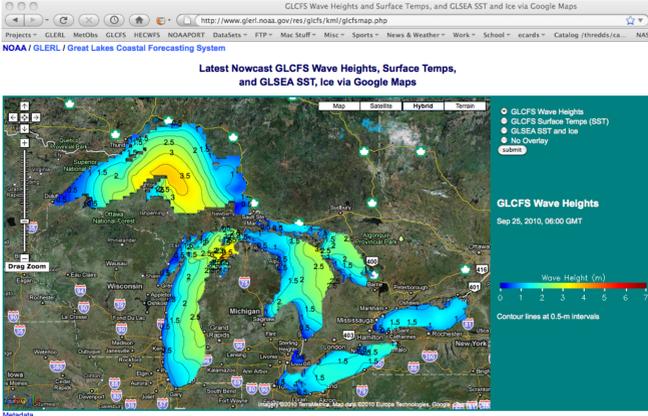


Figure 10. RTMON metadata MKG station location.

