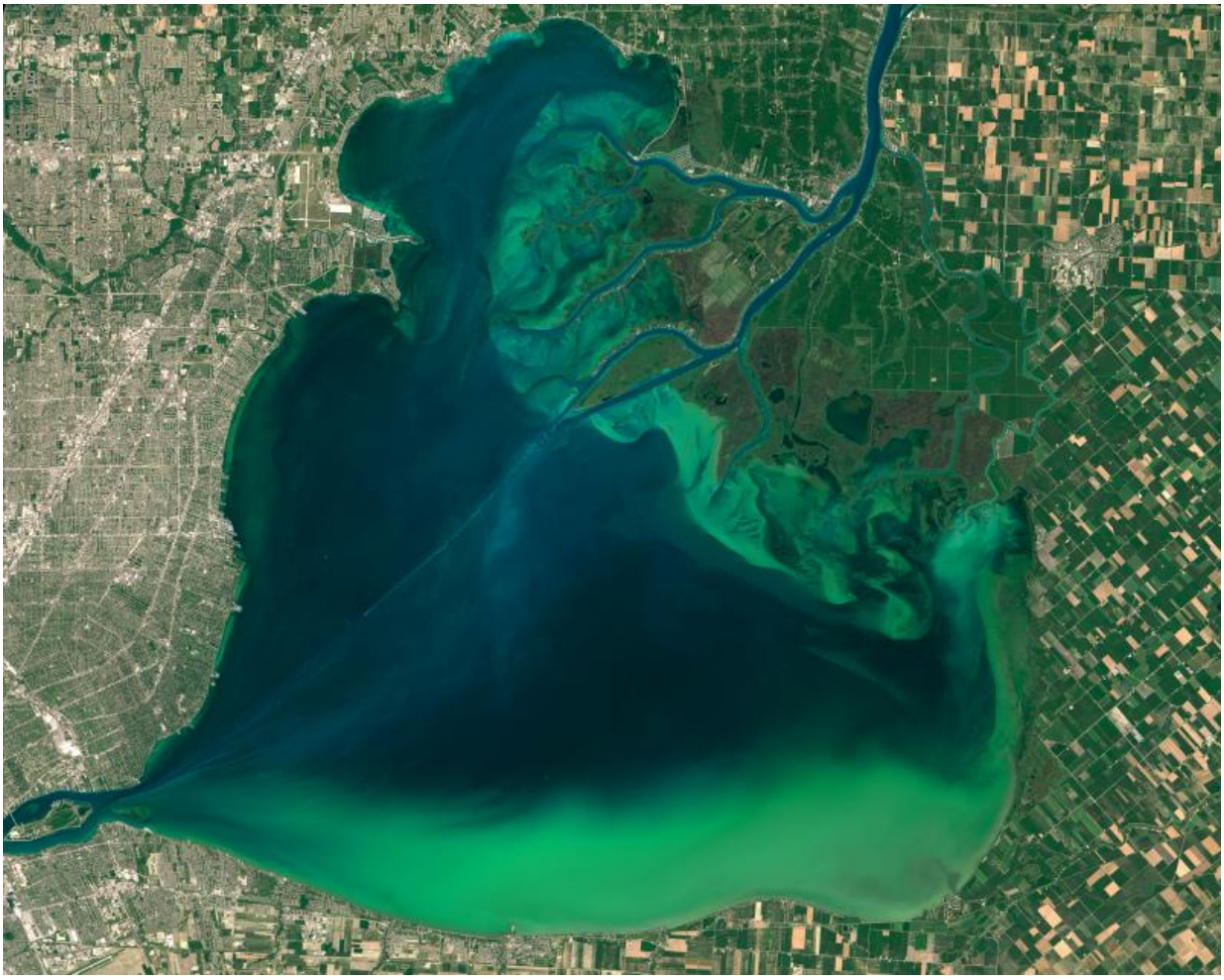
Image: Algae bloom in Lake St. Clair

August 5 2015, by Kathryn Hansen



Credit: NASA Earth Observatory images by Joshua Stevens, using Landsat data from the U.S. Geological Survey

On July 28, 2015, the Operational Land Imager (OLI) on the Landsat 8

satellite captured images of algal blooms around the Great Lakes, visible as swirls of green in this image of Lake St. Clair and in western Lake Erie.

Earlier in July, NOAA scientists predicted that the 2015 season for harmful algal blooms would be severe in western Lake Erie. They suggest that algae growth in western Lake Erie could rival the blooms of 2011. Algae in this basin thrive when there is an abundance of nutrients (many from agricultural runoff) and sunlight, as well as warm water temperatures. The season runs through summer and peaks in September.

Research confirmed that in 2011, phosphorus from farm runoff combined with favorable weather and lake conditions to produce a bloom three times larger than previously observed. The researchers noted that if land management practices and climate change trends continue, the lake is likely to see more blooms like the 2011 event.

Harmful algal blooms can lead to fish kills. They also can affect the safety of water for recreation and for consumption (as was the case in Toledo, Ohio, and southeast Michigan during a 2014 bloom). As of July 30, 2015, drinking water was reported to be safe in these areas.

In April 2015, NASA and several partners announced a new multi-agency effort to develop an early warning indicator for harmful algal blooms in fresh water. The system is expected to make ocean color satellite imagery more easily available to environmental and water quality managers.

Provided by NASA