

To report an illness related to a freshwater, estuarine, marine toxin or harmful algal bloom, please contact the Florida Poison Information Center at 1-800-222-1222. Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National Climatic Data Centers and National Weather Centers. Support to produce this report from NOAA/NASA Contract NNH08ZDA001N.

February 10, 2014
MODIS Aqua
Resolution 1100 meters

Jacksonville

Harris Chain of Lakes

Orlando

Lake Apopka

Tampa



CyanoHAB Conditions Report

- Lake Apopka (Orange/Lake Counties) displayed a high estimated elevated chlorophyll-a concentration.
- Harris Chain of Lakes (Lake County) displayed medium estimated elevated chlorophyll-a concentrations.

Toxic algae in Hoover Reservoir cost city \$723,000

The Columbus Dispatch

Feb 12, 2014



Columbus has spent \$723,000 to get rid of the rotten taste and smell in drinking water caused by toxic algae at Hoover Reservoir. Toledo spent \$3 million last summer to keep Lake Erie's toxic algae out of the city's drinking water. Dozens of water-treatment plants along Erie are in the same boat. And in western Ohio, the city of Celina spends about \$450,000 a year on problems at Grand Lake St. Marys, which has become the poster child for the state's algae problems Columbus is just the most-recent city to have to battle the issue with dollars The city has received more than 1,700 complaints about the smell and taste of its drinking water In 2012, algae toxins were detected in the raw water at 13 treatment plants, including those in Toledo, Celina, Lake County, Findlay, Lima and Clermont County. None of the toxins contaminated treated drinking water In September, Lake Erie algae toxins overloaded the Carroll Water and Sewer District treatment plant in Ottawa County. The plant was the first in Ohio to post an algae-related "do not drink or cook" warning. The ban, which affected 2,000 customers, lasted two days.

Carroll Township paid \$125,000 for a treatment system. Henry Biggert, water-district superintendent, said the new system will destroy all toxins and other compounds that create odor and taste problems. Celina's system was installed in 1995 to eliminate toxic algae. Water superintendent Mike Sudman said that before the system was in place, drinking water tasted like "licking a carp straight out of the tap." Columbus officials expect any future odor and toxin issues to be eliminated when a similar, but much bigger, \$70 million treatment system is installed in 2016. In Columbus, the water in Hoover Reservoir was treated with powdered carbon. Steele said city and state tests showed no detectable amounts of toxins. Toledo uses the same method, said Andrew McClure, that city's water-treatment plant administrator. Carbon can't eliminate odor and taste-changing compounds. Meantime, the Ohio Environmental Protection Agency has a guidance standard for toxins of 1 part per billion in drinking water. On Nov. 13, officials measured more than 100 parts per billion in Grand Lake St. Marys. On Nov. 20, there was 0.15 part per billion in Celina's treated water.

See: [http://www.dispatch.com/content/stories/local/2014/02/03/toxic-algae-in-hoover-cost-city-723000.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+GLINnews+\(GLIN+Daily+News\)](http://www.dispatch.com/content/stories/local/2014/02/03/toxic-algae-in-hoover-cost-city-723000.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+GLINnews+(GLIN+Daily+News))

**** Due to background levels of *K. brevis* off Florida's SW coast, status reports for Florida red tide will be suspended until bloom conditions reoccur.**

MODIS Images display a chlorophyll-a index generated with a Moderate Resolution Imaging Spectroradiometer provided by the National Aeronautics and Space Administration (NASA)

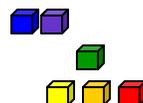
Very low likelihood of a bloom

May indicate clouds or missing data

Low estimated chlorophyll-a concentrations

Medium estimated chlorophyll-a concentrations

Higher estimated chlorophyll-a concentrations



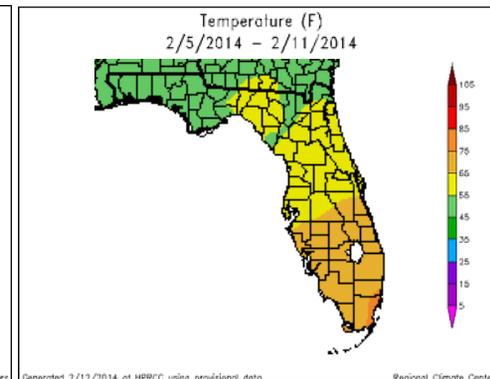
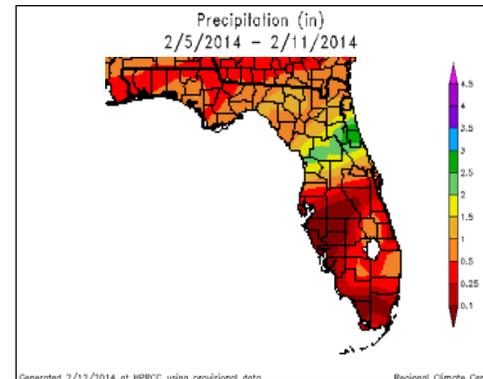
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- The Moderate Resolution Imaging Spectroradiometer (MODIS) is deployed by NASA onboard the Terra (EOS AM) and Aqua (EOS PM) satellite. It passes over the earth, collecting new imagery every 1-2 days.
- This imagery is used as a surveillance tool. Data collected by the MODIS sensor are used to generate a chlorophyll-a index which is used to forecast harmful algal blooms. The results are not specific to any one HABs species and should be followed-up with onsite field observations. Data is only suggestive of a potential HAB event.
- MODIS uses a spectral band which is much coarser than MERIS, therefore only select larger water bodies in FL are visible using this technology.
- MODIS is better at depicting low to medium chlorophyll-a concentrations so once a potential bloom is depicted, a switch in algorithms may be used to improve the visibility. MODIS has a few spectral bands which have higher resolution that are more comparable to MERIS although these bands do not cover all of FL.
- Several environmental factors may affect how results can be interpreted. For example, areas with abundant aquatic vegetation may present with a high Chl-a index resulting in a false positive bloom reading.
- The sensor identifies biomass near the surface (in the upper few feet of water). As a result, it may underestimate the total biomass for blooms that are mixed or dispersed through the water column.
- While patches of red or warm colors may indicate higher chlorophyll-a concentrations, these data have not been verified in most cases using ground-truth methods.

Weather Conditions: Precipitation and Temperature - 02/05/14 to 02/11/14

- Weather conditions can impact the duration and location of blooms and the satellite imagery shown in this report may no longer be relevant.
- Images represent the last image taken with a realization that blooms may have moved, dissipated or intensified.
- Cloud coverage can obscure imagery and create patches or gray areas on map and obscure bloom detection.

February 10, 2014 MODIS Aqua True Color Images



To review HABs satellite reports in the Gulf of Mexico and marine waters visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive at: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>



For Individual Weather Station Data, visit: <http://www.sercc.com/perspectives>

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