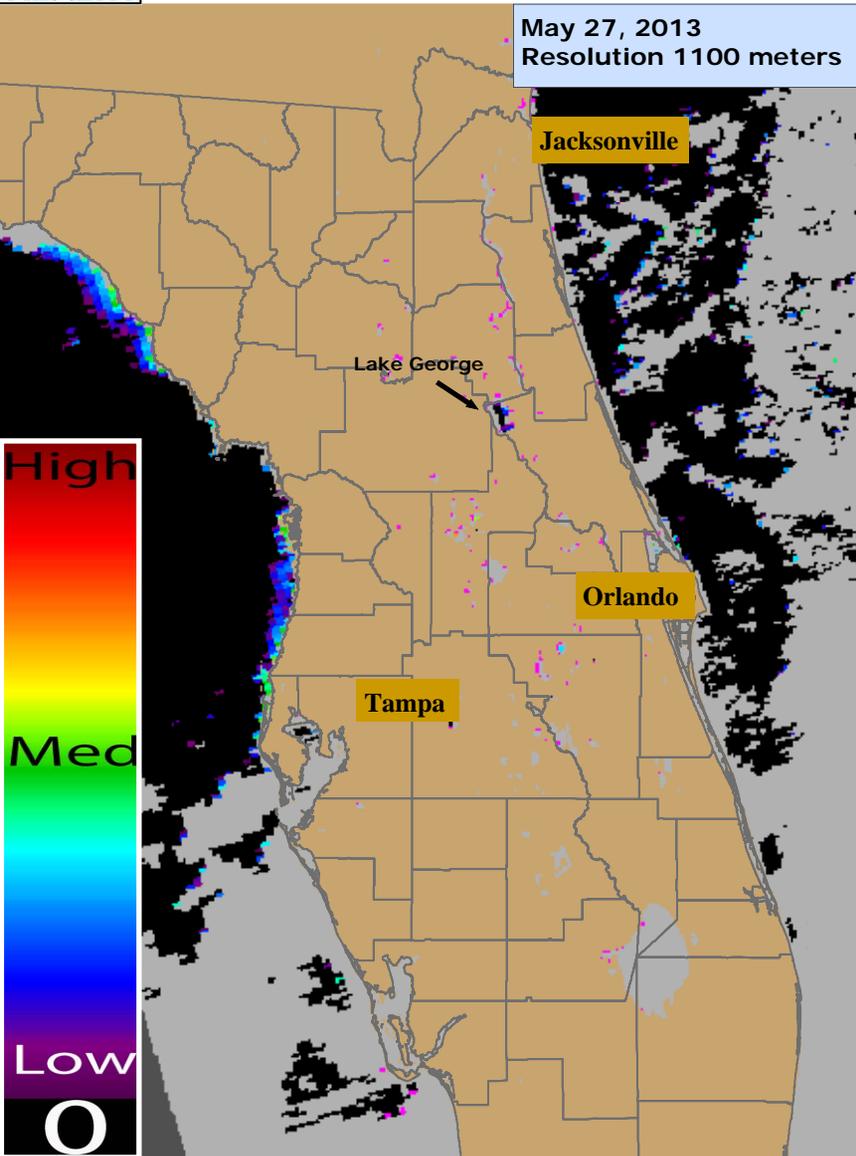


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222. Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National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



Inland HABs Conditions Report: May 30, 2013

- Lake George (Putnam/ Volusia Counties) displayed low estimated elevated chlorophyll-a concentrations and is prominent in the MODIS image. Hopefully, some subsequent clear images of Lake George will be available and can perhaps relate it to the feature in this image
- Other large water features in Florida were unremarkable on the 1100 meter resolution MODIS image.

Ohio officials issue toxic algae warning for Grand Lake St. Marys

State officials are warning some people to stay out of Grand Lake St. Marys in western Ohio because of high levels of toxic algae. "Seniors, children and those with compromised immune systems should stay out of the water," Ohio Department of Natural Resources spokesman Matt Eiselstein wrote in an email statement. The 13,000-acre lake and state park, and a local tourism economy that relies on the lake have been plagued with toxic algae problems since high levels were first discovered in 2010.



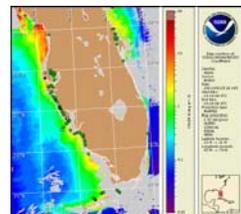
Blue-green algae, also called cyanobacteria, are common in most lakes, but in Grand Lake St. Marys they grow thick feeding on phosphorus from manure that rains washed off nearby farms. The algae produce liver and nerve toxins that can sicken people and kill pets and fish. A similar warning was posted last year at this time. The state and local officials and businesses are involved in a years-long effort to reduce the flow of phosphorus from farms that has contaminated sediment at the bottom of the lake. "Like everyone else, we're frustrated by this news," Eiselstein wrote. "It's a reminder of the challenges that continue to face the lake and the need for continued cooperation and coordination to address them." *Columbus Dispatch* 5/24/13

<http://www.dispatch.com/content/stories/local/2013/05/24/State-warns-swimmers-to-avoid-Grand-Lake-St.-Marys.html>

K. brevis background to low concentrations off Southwest FL

Red Tide Update - FWRI/FWC (May 29): *K. brevis* was detected at background concentrations in one sample collected alongshore of Manatee County and one alongshore of Sarasota County so far this week. Other samples analyzed in southwest Florida did not contain *K. brevis*.

See: <http://myfwc.com/research/redtide/events/status/statewide/>



NOAA Conditions Report - (May 28): Background to very low concentrations of *K. brevis* are present along and offshore southwest Florida. No respiratory impacts are expected alongshore southwest Florida, including the Florida Keys, today through Monday, June 3. To read the full NOAA conditions report, visit: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

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.

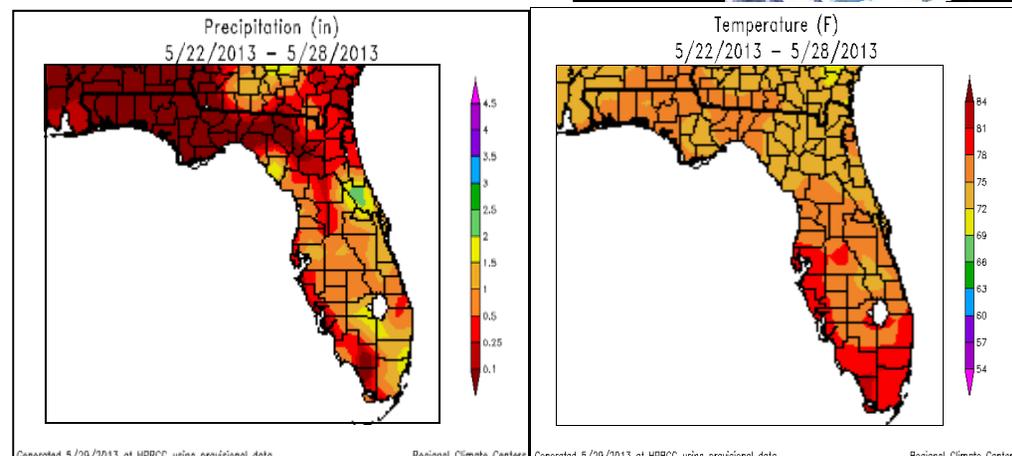
Weather Conditions: 5/22/2013 to 5/28/2013 Temperature and Precipitation



May 27, 2013
MODIS True Color Image



- 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.



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/>



For Individual Weather Station Data-Visit:
<http://www.sercc.com/perspectives>

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