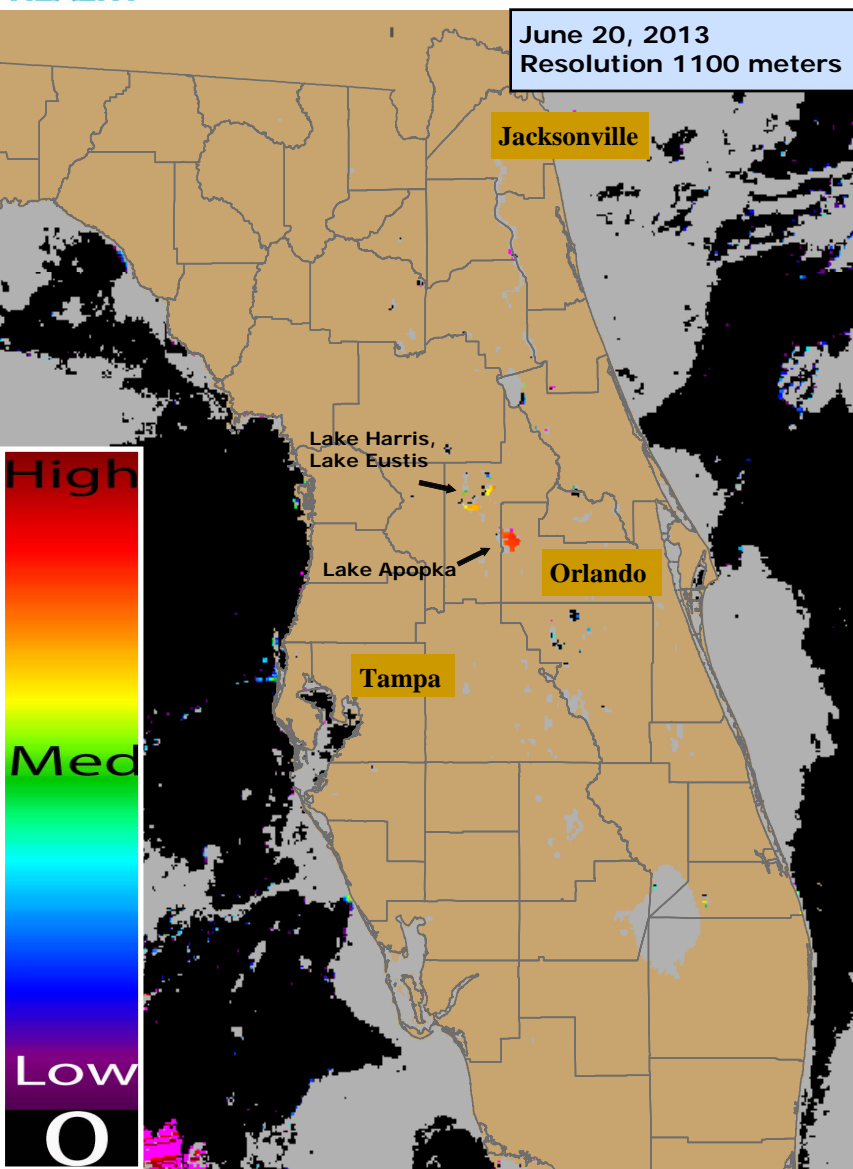


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222.  
 Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National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



June 20, 2013  
 Resolution 1100 meters

## Inland HABs Conditions Report

- Lake Apopka (Orange and Lake Counties) displayed high estimated elevated chlorophyll-a concentrations.
- Lake Harris and Lake Eustis (Lake County) displayed medium/high estimated elevated chlorophyll-a concentrations.

## Workshop on Chemical Methods for the Study of Toxic Algae



Biscayne Bay, Campus  
 North Miami Beach, Florida  
 March 8—12, 2014

The focus of this workshop will be on chemical methods with a short session on culturing methods including large scale culture methods. Includes hands on experiments related to detection of toxins and organisms. We will work on brevetoxins, microcystins and okadaic acid. Graduate level college credit will be awarded upon completion of the workshop. The workshop will be offered with a minimum of six students and a maximum of ten. The workshop will be appropriate for graduate students and technicians.



Please contact Kathleen Rein at [reink@fiu.edu](mailto:reink@fiu.edu) for more information.

## Trichodesmium spp. bloom off Southwest FL \*\*

Florida Fish and Wildlife Conservation Commission and Mote Marine Laboratory have received a lot of inquiries about the *Trichodesmium* bloom along Florida's gulf coast. When dense, blooms can look a lot like oil spills or pollution. At lower concentrations, the blooms look like sawdust.



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

For additional information on this marine cyanobacteria, please see <http://myfwc.com/research/redtide/information/general/trichodesmium/>. FWC along with Mote also maintain a Facebook page for general audiences at [Facebook.com/FLHABs](https://www.facebook.com/FLHABs).

\*\* Due to background levels of *K. brevis* off Florida's SW coast, status reports for red tide will be suspended until bloom concentrations re-occur.

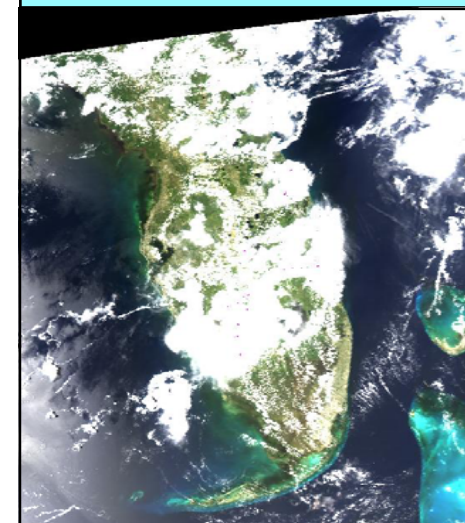
# Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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.

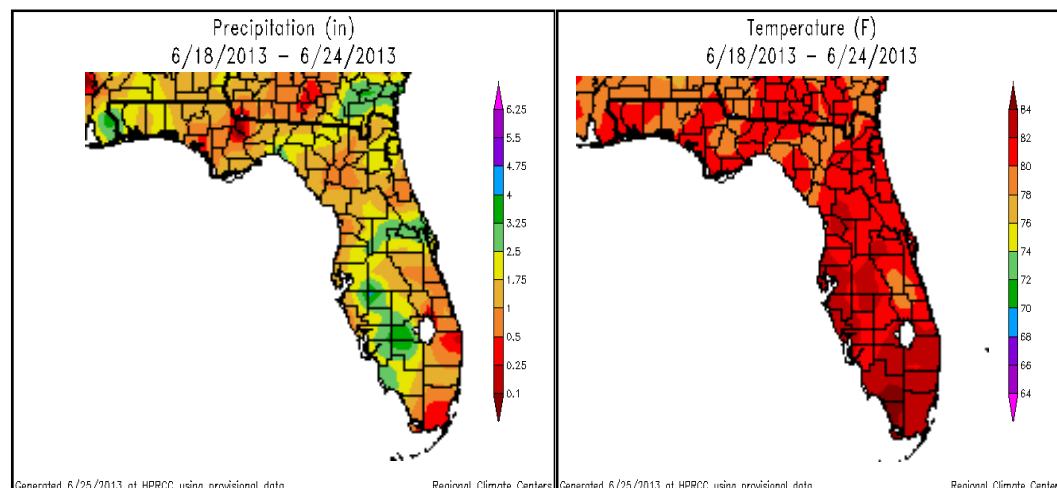
# Weather Conditions: 6/18/2013 to 6/24/2013 Temperature and Precipitation



June 20, 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>

**Questions about the bulletin or suggestions- Contact**  
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850.245.4187  
andy\_reich@doh.state.fl.us