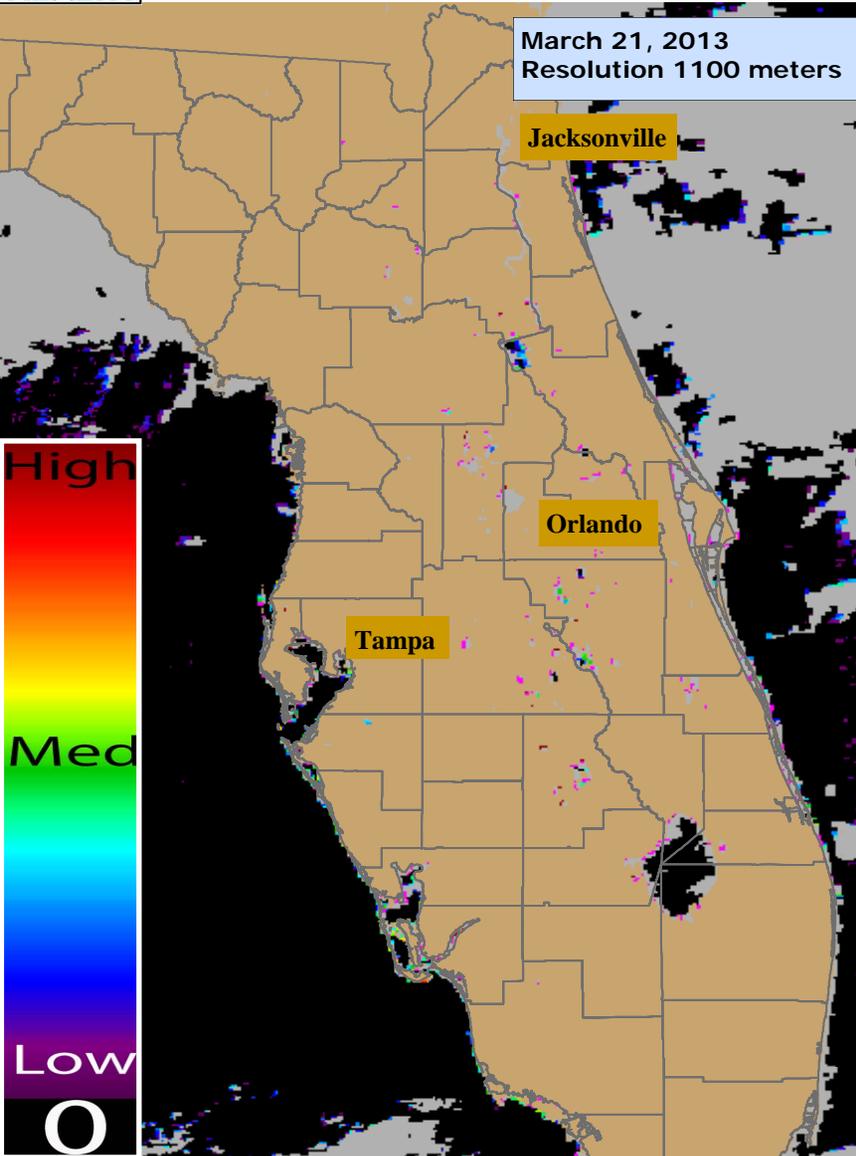


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222.  
 Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National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



March 21, 2013  
 Resolution 1100 meters

Jacksonville

Orlando

Tampa

High  
 Med  
 Low  
 0

## Inland HABs Conditions Report: March 28, 2013

- Lake Apopka (Orange and Lake Counties), the Harris Chain of Lakes (Lake County) and other large water features in Florida were unremarkable on the 1100 meter resolution MODIS image for this week.

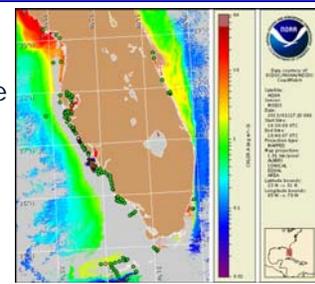
### *toxins* – Open Access Journal: Special Issue "Cyanotoxins"

This special issue will present up-to-date findings on "cyanotoxins" particularly focusing on their chemistry and toxicology, as well as aspects (e.g., monitoring strategies) related to mitigating their potential health effects, and understanding of the ecological dynamics related to the toxins and their production. Instructions for submissions are found online at [http://www.mdpi.com/journal/toxins/special\\_issues/cyanotoxins](http://www.mdpi.com/journal/toxins/special_issues/cyanotoxins) for the "soft" deadline of March 31, 2013. Papers will be published continuously and listed together on the special issue website. Research articles, review articles as well as communications are invited. For planned papers, a title and short abstract (about 100 words) can be sent to the Editorial Office for announcement on this website. For additional information, contact Guest Editor: Dr. John P. Berry, Department of Chemistry and Biochemistry, Florida International University, [john.berry@fiu.edu](mailto:john.berry@fiu.edu) ; 1.305.919.4569.



### Marine Update: *K. brevis* bloom lessening off Southwest Florida

**Red Tide Update - FWRI/FWC (March 27):** The *Karenia brevis* bloom that has previously been present in southwest Florida, was not detected in samples analyzed so far this week. A water sample collected from the Indian River Lagoon (Brevard County) also contained no *K. brevis*. Sampling will continue this week, and complete results will be available in the next scheduled status report on Friday, March 29. See: <http://myfwc.com/research/redtide/events/status/statewide/>



**NOAA Conditions Report - (March 28):** In southwest Florida, the most recent ten days of samples indicate *Karenia brevis* concentrations continue to decrease, ranging from 'background' to 'medium' along- and offshore from Charlotte to southern Lee counties, with 'background' concentrations also identified last week alongshore Sarasota and Collier County and offshore the lower Florida Keys. No respiratory irritation or fish kills have been reported along southwest Florida in the past ten days. Variable winds forecasted today through Monday (4/1) may minimize further net transport of *K. brevis* concentrations. 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.

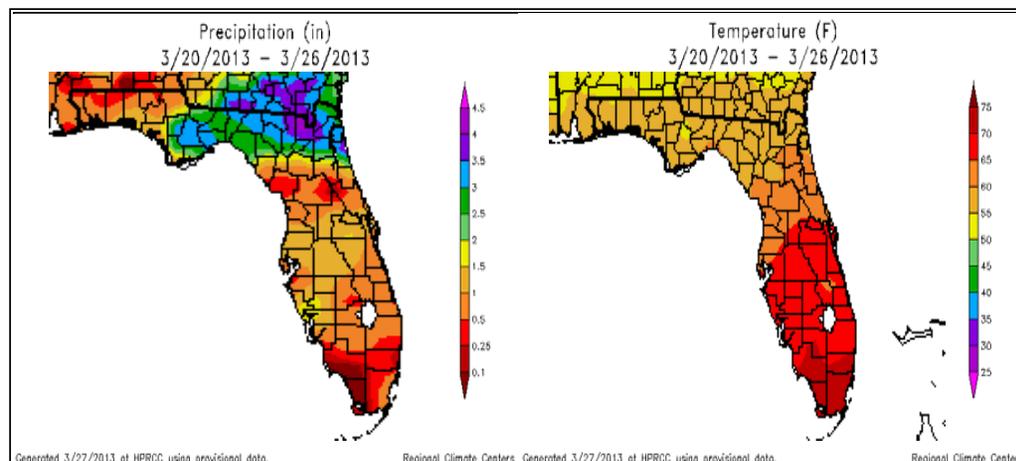
# Weather Conditions: 3/20/26 to 3/26/13 Temperature and Precipitation



March 21, 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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