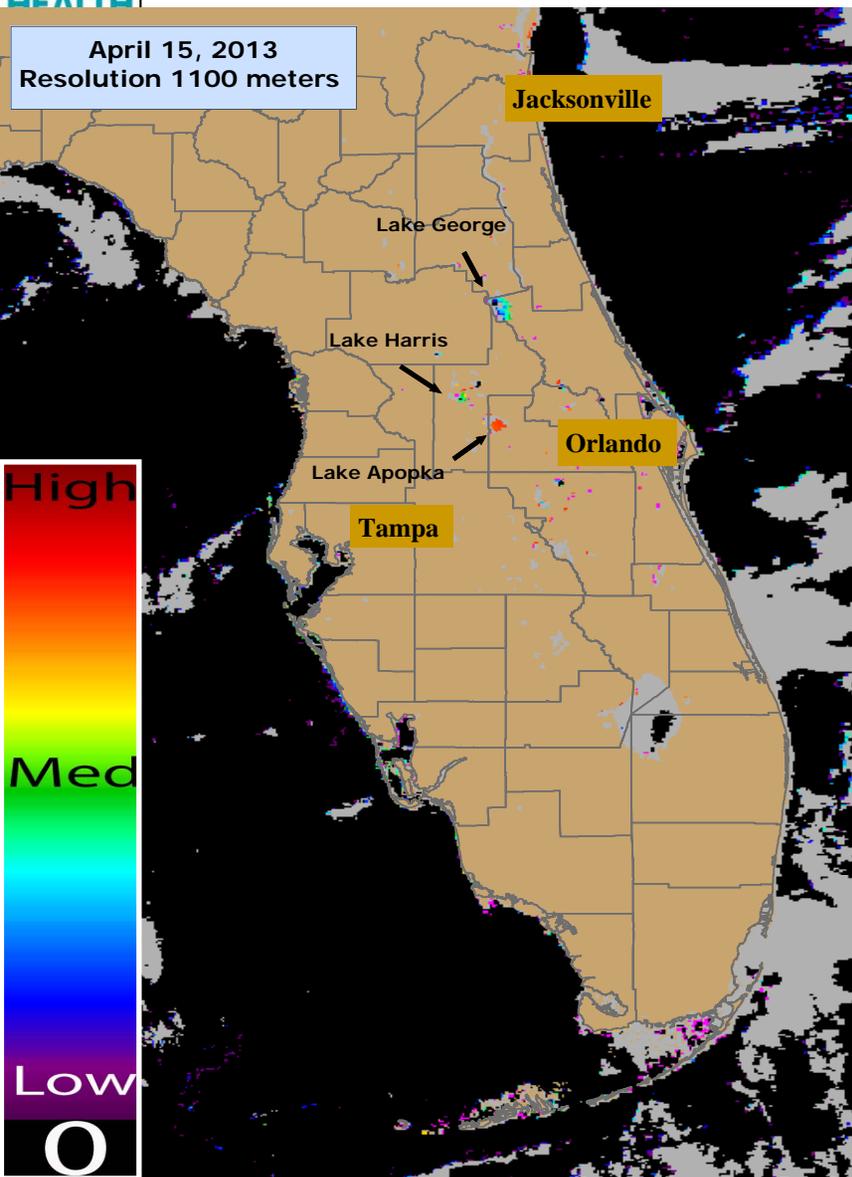


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222.
 Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National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

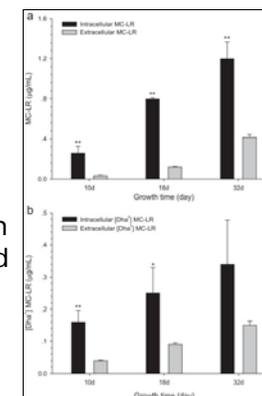


Inland HABs Conditions Report: April 18, 2013

- Lake George (Volusia and Putnam Counties), displayed low-medium estimated elevated chlorophyll-a concentrations.
- Lake Harris (Lake County) displayed medium estimated elevated chlorophyll-a concentrations.
- Lake Apopka (Orange and Lake Counties) displayed high estimated elevated chlorophyll-a concentrations.

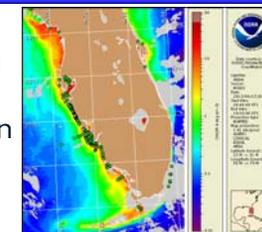
Solid Phase Adsorption Toxin Traction (SPATT) Application

The production of toxic microcystins by cyanobacteria is an important safety issue in terms of ecological food chains and drinking water supplies. Studies were carried out to demonstrate the applicability of solid phase adsorption toxin tracking (SPATT) to the monitoring of microcystins in fresh water. Work focused on the distribution of the intra- and extra-cellular toxins MC-LR and [Dha⁷] MC-LR produced by *Microcystis aeruginosa*. The dynamic adsorption and desorption behavior of both toxins on aromatic resins HP20 and SP700 was examined, and the use of SPATT bags for monitoring microcystins in cyanobacterial cultures is discussed. (<http://www.sciencedirect.com/science/article/pii/S0021967313003555>)



Marine Update: SW Fla. *K. brevis* conc. dissipating

Red Tide Update - FWRI/FWC (April 17): *Karenia brevis*, was detected in several samples analyzed so far this week in background to very low concentrations in the Pine Island Sound system (Lee County). Other samples collected in southwest Florida did not contain *K. brevis*. In other parts of Florida, *K. brevis* was not detected in samples collected inshore of Brevard and St. Johns counties or alongshore of Wakulla, Dixie, Levy and Dade counties. See: <http://myfwc.com/research/redtide/events/status/statewide/>



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

NOAA Conditions Report - (April 18): Recent sampling throughout southwest Florida continues to indicate that *Karenia brevis* concentrations are dissipating. Background to low concentrations are present along- and offshore southwest Florida. In the bay regions of central Lee County, patchy very low respiratory impacts are possible today through Monday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Monday, April 22. To read the full NOAA conditions report, visit: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

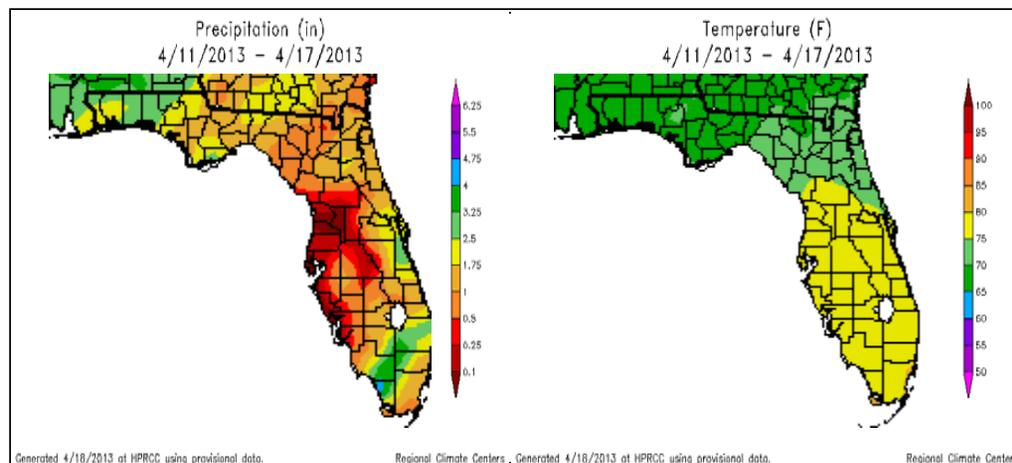
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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: 4/11/13 to 4/17/13 Temperature and Precipitation



- 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



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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