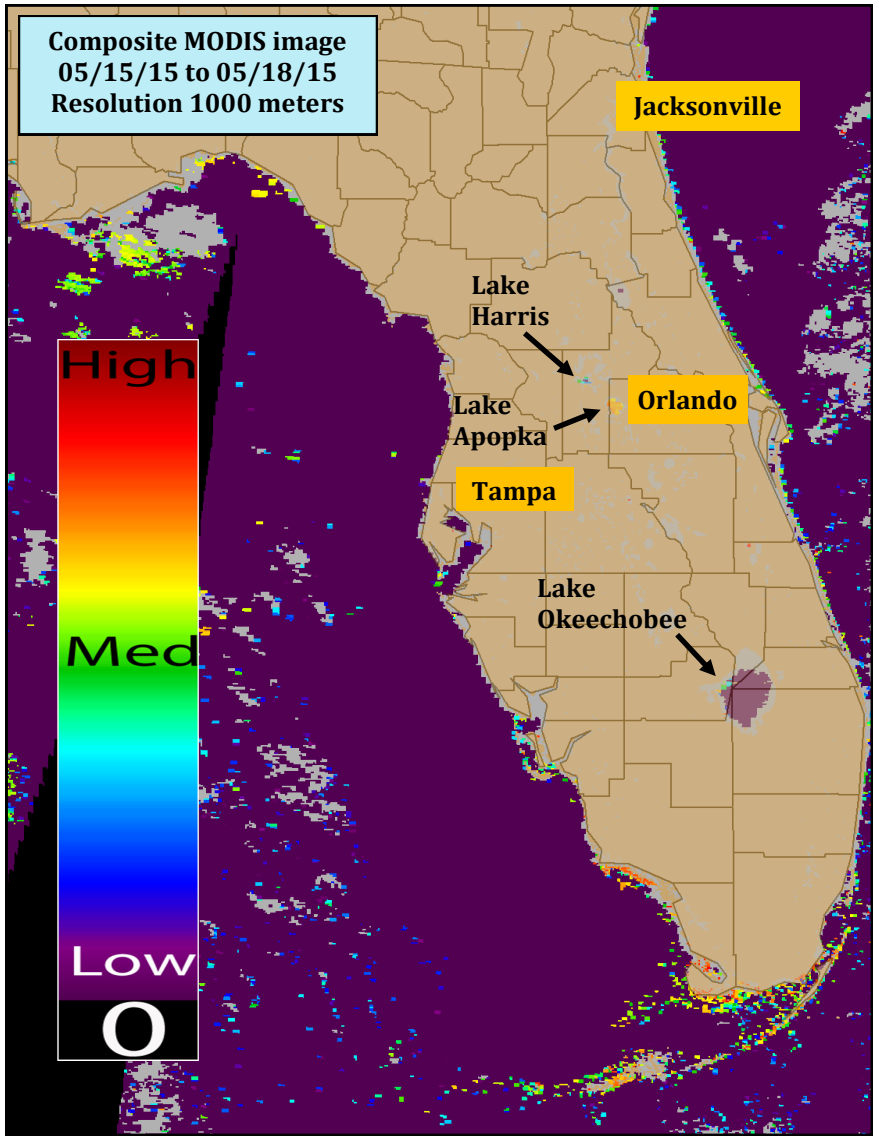
Inland Harmful Algal Blooms Health Bulletin: May 22, 2015

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 are 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. This report was produced through a collaboration between the Florida Department of Health Water Toxins Program (WTP) and the NOAA Center for Coastal Monitoring and Assessment.



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

CyanoHAB Conditions Report

- As shown in the true color image on page 2, cloud cover and glint were present around various areas of the state throughout the imagery period.
- Lake Harris (Lake County) displayed medium estimated elevated chlorophyll-a concentrations.
- Lake Apopka (Orange/Lake Counties) displayed medium to high estimated elevated chlorophyll-a concentrations.
- Lake Okeechobee (Okeechobee/Glades/Hendry/Palm Beach/Martin Counties) displayed medium estimated elevated chlorophyll-a concentrations on the western side of the lake.

Eighth Symposium on Harmful Algae in the U.S.

The Eighth Symposium on Harmful Algae in the U.S. will be held in Long Beach, California, **November 15-19, 2015**. This is the eighth in a series of biannual meetings intended to provide a forum for scientific exchange and technical communication on all aspects of HAB research in the United States.

We encourage everyone who works on HAB issues to attend the only national conference focused exclusively on HABs whether your focus is freshwater or saltwater, microalgae or macroalgae, basic research and monitoring, or policy and management. Students, established HAB folks, managers and scientists from NGOs, academic institutions, and local, state and federal agencies are invited to join us in Long Beach.

The event will begin with a reception on Sunday evening, November 15th.

Registration and abstract submission will open April 1, 2015.

The deadline for abstract submission is May 31, 2015.

Registration remains open until November 1, 2015; Early-bird registration is through May 31, 2015.

Further information is available at ***http://www.whoi.edu/habsymposia/***.

Marine Update: *Karenia brevis*

Red Tide Status – FWC/FWRI 5/22/2015: *Karenia brevis*, the Florida red tide organism, was not detected in samples collected throughout Florida this week. For additional information, see ***http://myfwc.com/research/redtide/statewide/***.

Red Tide Health Effects – NOAA 5/18/2015: There is currently no indication of *Karenia brevis* along the coast of southwest Florida, including the Florida Keys. No respiratory irritation is expected alongshore southwest Florida Monday, May 18 through Tuesday, May 26. Check ***http://tidesandcurrents.noaa.gov/hab/beach_conditions.html*** for recent, local observations.

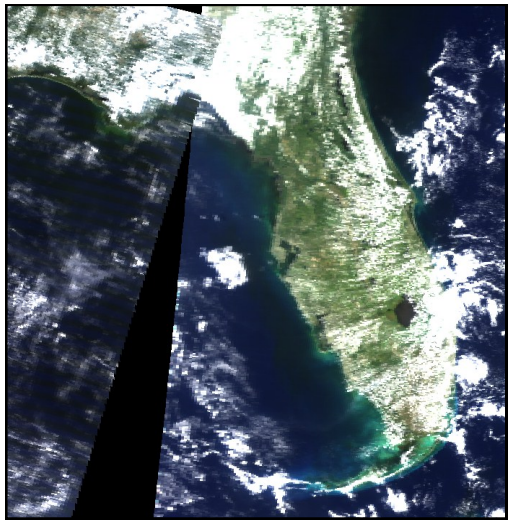
Interpreting Moderate Resolution Imaging Spectroradiometer Data

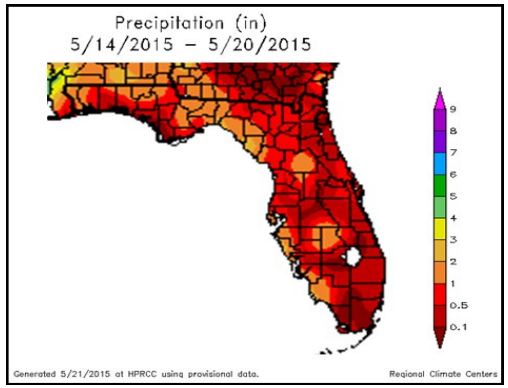
- The Moderate Resolution Imaging Spectroradiometer (MODIS) is deployed by NASA onboard the Terra (EOS AM) and Aqua (EOS PM) satellite. It passes over the Earth, collecting new imagery every 1-2 days.
- This imagery is used as a surveillance tool. Data collected by the MODIS sensor are used to generate 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 that 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. 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. However, 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 chlorophyll-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.

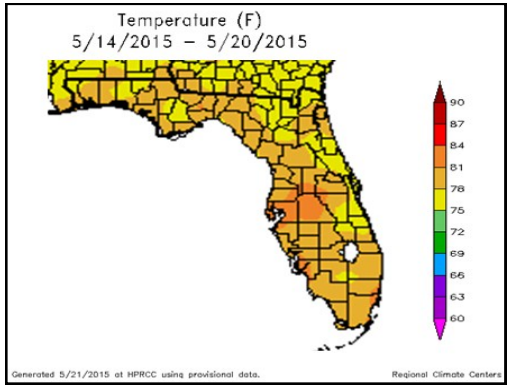
Weather Conditions: Precipitation and Temperature - 05/14/15 to 05/20/15

- 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.

MODIS True Color Image
May 18, 2015







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/climate

For information, please contact: Laura Morse, Public Health Toxicology Program, at 850.245.4444 x 2080 or laura.morse@flhealth.gov