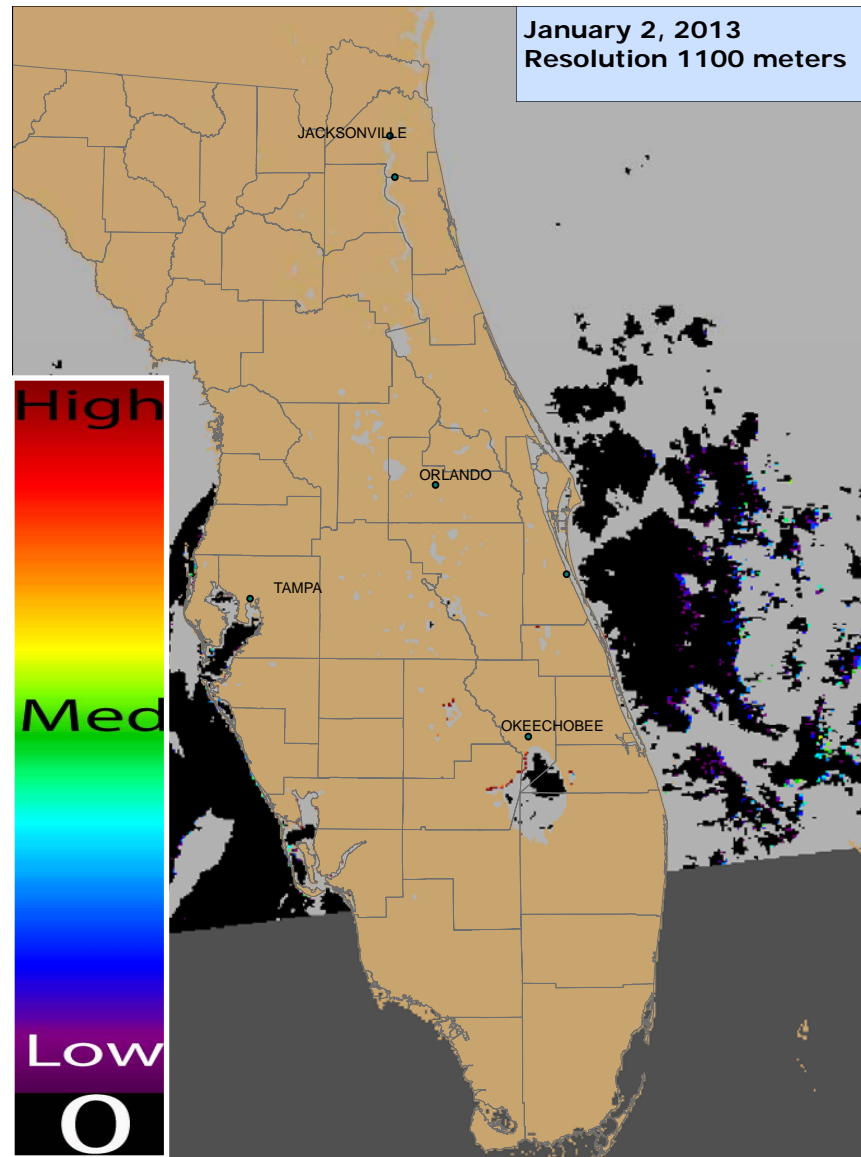
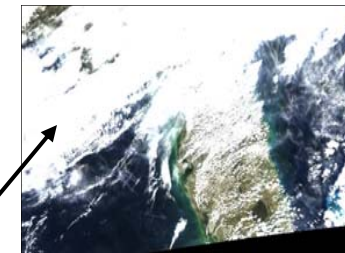


To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-800-222-1222. For questions about the report: contact Andrew Reich, FL-DOH, at 850.245.4187. Images/data were obtained from Florida Water Management Districts, The National Oceanic and Atmospheric Administration (NOAA), NOAA National Climatic Data Centers and National Weather Centers. Support to produce this report was received through a NOAA/NASA Agreement (Number: NNH08ZDA001N)



Inland HABs Conditions Report: January 2, 2013

- Due to an abundance of cloud coverage across the state, many of the water bodies shown in the satellite imagery appear gray in this week's image. When grey appears in the satellite image, it is there because clouds blocked the satellite's sensor from collecting data.
- This true color image shows the extensive cloud coverage over Florida which obscured data collection efforts.



A Remote Sensing Manual is Available for Data Interpretation

A technical guide, developed by The North American Lake Management Society, is available for use in interpreting remote sensing data including the NOAA/NASA satellite imagery. The guide titled "Remote Sensing Methods for Lake Management: A Guide For Resource Managers and Decision-Makers" is available for use at your agency.

Contact Andy Reich, Aquatic Toxins Program Coordinator, at: Andy_Reich@doh.state.fl.us if you would like to receive a copy of this guide.

Remote sensing methods for lake management: A guide for resource managers and decision-makers

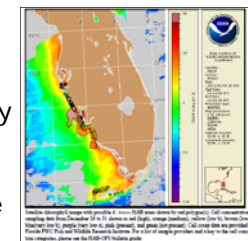
Developed by
The North American Lake Management Society
Madison, Wisconsin

In collaboration with:
University of Minnesota
University of Nebraska
University of Wisconsin

For the United States Environmental Protection Agency

Marine Update: *K. brevis* bloom SW FL and the FL Keys: Jan. 4

NOAA Conditions Report - (Jan. 4, 2012): Very low to high *K. brevis* concentrations are present along- & offshore from S. Pinellas to Collier counties & offshore the gulfside of the lower Florida Keys. In S. Pinellas, Manatee & N. Sarasota counties (bay regions), patchy very low respiratory impacts are possible through Mon. Alongshore Sarasota & N. Charlotte County, patchy low respiratory impacts are possible today, Sat. & and Monday, w/ patchy high respiratory impacts Sunday. In Charlotte and Lee counties (bay regions), patchy moderate respiratory impacts are possible through Monday, w/ patchy high impacts possible in central Lee County on Sunday. Alongshore S. Lee and N. Collier counties, patchy moderate respiratory impacts are possible Sunday, w/ patchy low respiratory impacts today, Sat. and Mon. In the bay regions of central Collier County, patchy moderate respiratory impacts are possible today through Sunday, with patchy high respiratory impacts Monday. No respiratory impacts are expected elsewhere alongshore SW FL, including the Florida Keys, through Mon. Recent reports of respiratory irritation were received from Sarasota, Charlotte, and Collier counties. Reports of dead fish were also received from Sarasota & Charlotte counties, visit: <http://tidesandcurrents.noaa.gov/hab/bulletins.html> for a full report on current conditions.



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

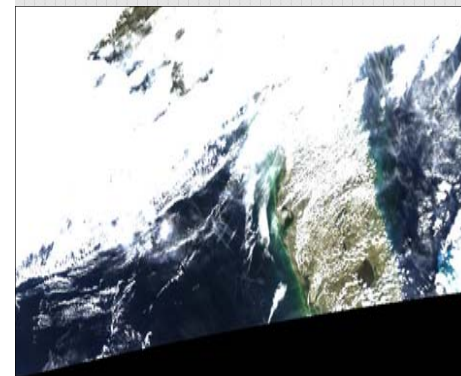
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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 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: 12/28/12 to 1/3/12

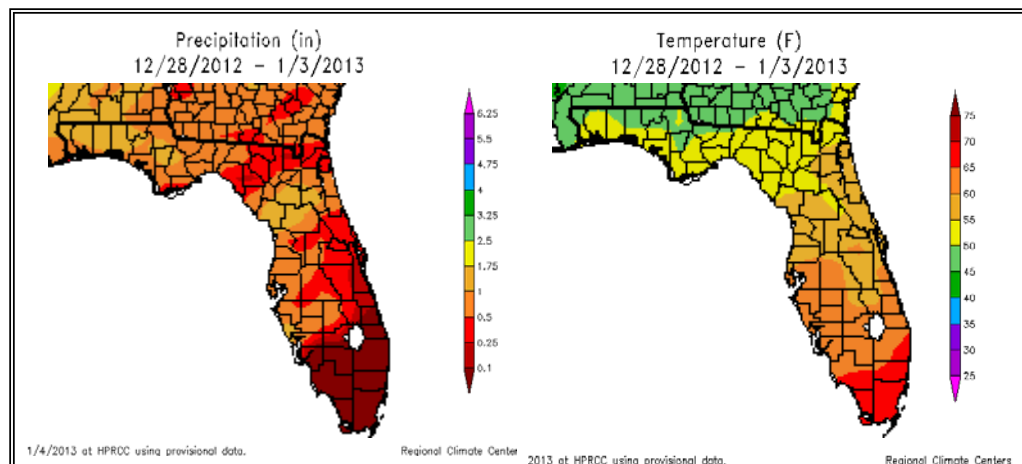


January 2, 2012



Black space on image indicate the sensor's lens did not open fully when capturing the satellite 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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