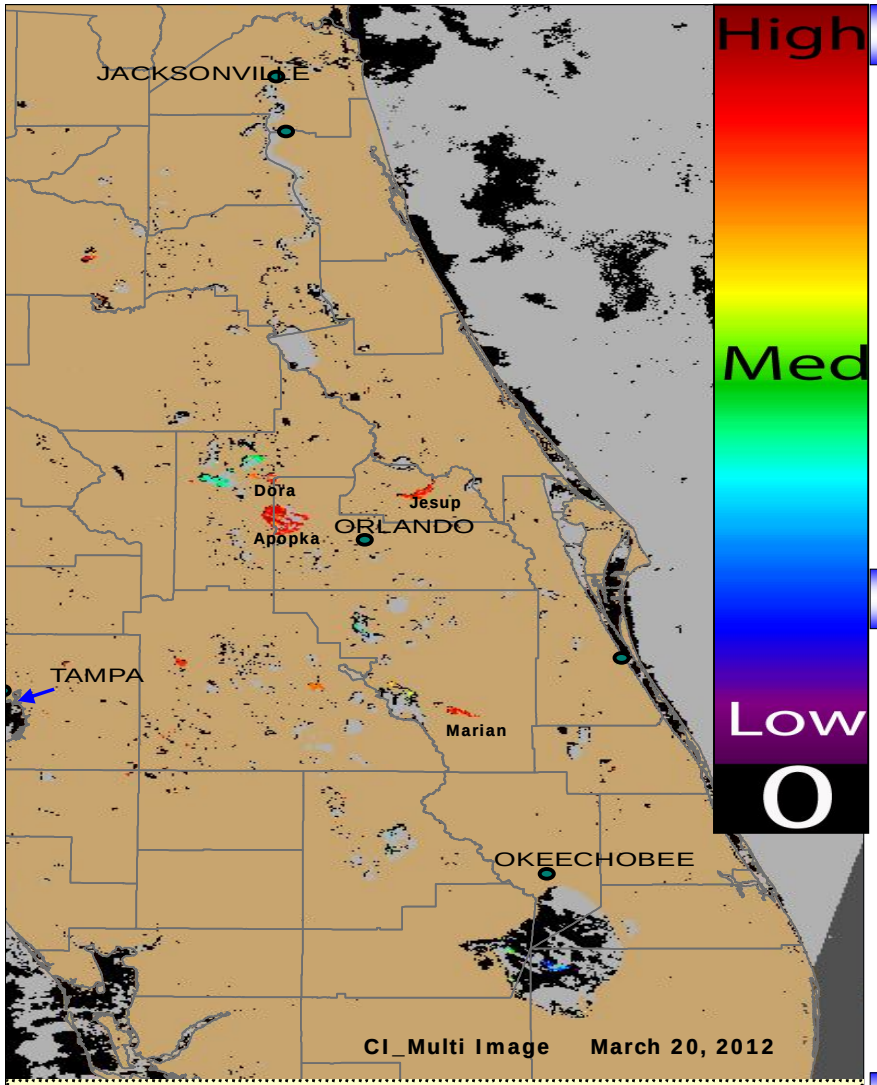
Experimental Cyanobacteria Health Bulletin: Mar 20, 2012

To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-888-232-8635.
For questions about the report: contact Becky Lazensky, FL-DOH, at 352-955-1900. 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)



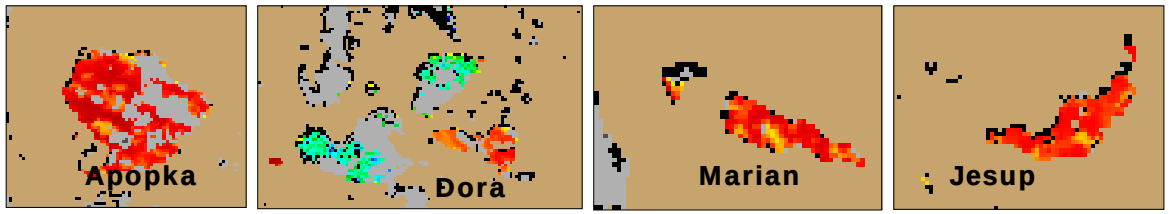
If your agency has field sampling data on the regions shown in red, these data can be used to help validate the MERIS imagery. Contact Becky Lazensky at: 352-955-1900 to participate in future FDOH validation efforts.

MERIS Satellite Images display a cyanobacteria index generated with a Medium Resolution Imaging Spectrometer satellite provided by the European Space Agency & NOAA.

Very low likelihood of a bloom
May indicate clouds or missing data
Low estimated cyanobacteria concentrations
Medium estimated cyanobacteria concentrations
Probable bloom or higher est. cyano. concentrations

Cyanobacteria HABs Conditions Report: March 20

- Lakes Apopka and Dora (Orange and Lake Counties) both displayed high estimated cyanobacteria concentrations.
- Lake Marian (Highlands County) displayed high estimated cyanobacteria concentrations.
- Lake Jesup (Seminole County) displayed high estimated cyanobacteria concentrations.



Frequently Asked Questions about MERIS Satellite Imagery

Satellite data are useful for developing forecasting capabilities to detect Cyanobacterial Harmful Algal Blooms (CyanoHABs). NOAA satellite images of Florida are available from 2009-present.

1. To view achieved images visit:
http://www2.nccos.noaa.gov/COAST/Florida/Archive/

2. On the image title, the red part (see example) is the date the satellite image was taken. This image was taken on March 15th:
envisat-1.2012075.0315.154824.D.L3.hmeris.EF3.v05.300m_CImulti.tif

3. For questions about the satellite images or to request images from a specific date, you may contact Becky Lazensky at: (352) 955-1900.

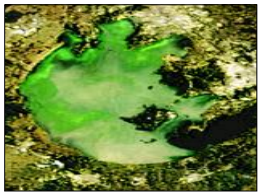


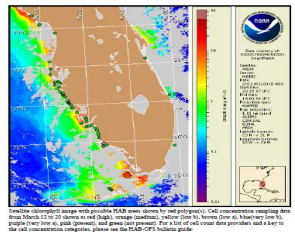
Photo credits: Top right-Lake Taihu, China (photographed by H. Paerl); (Lower Right) MODIS remote sensing satellite image of the same area (May, 2007) (Courtesy NASA). Credit: Paerl, et al. Controlling harmful cyanobacterial blooms in a world experiencing anthropogenic and climatic-induced change. Science of the Total Environment, 409 (2011) 1739–1745.

Non Cyano HABs & Health Report: March 23, 2012 Update

FWRI/FWC Update: *K. brevis* was not present in most water samples collected in coastal Florida waters this week. Background concentrations were detected in single samples collected alongshore of Lee, Collier and St. Johns counties.

Health Complaints: None reported

To Report a Fish Kill: Call the FWRI/FWC Fish Kill Hotline at: 1-800-636-0511; Visit FWRI/FWC for updates:
http://myfwc.com/research/redtide/events/status/



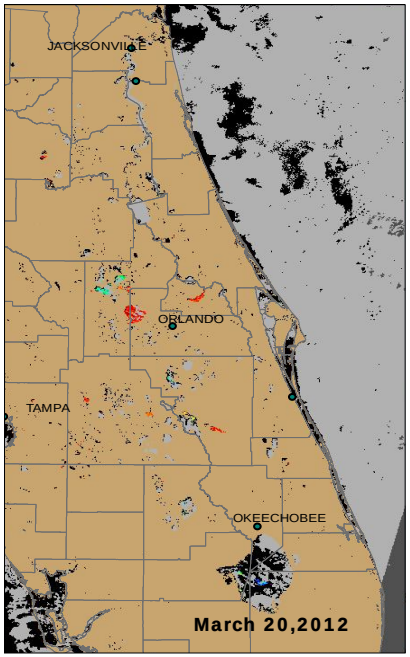
GOM HAB Bulletin Region: SW FL
Date: March 22, 2012
NOAA Ocean Service, Satellite and Information Service, NWS

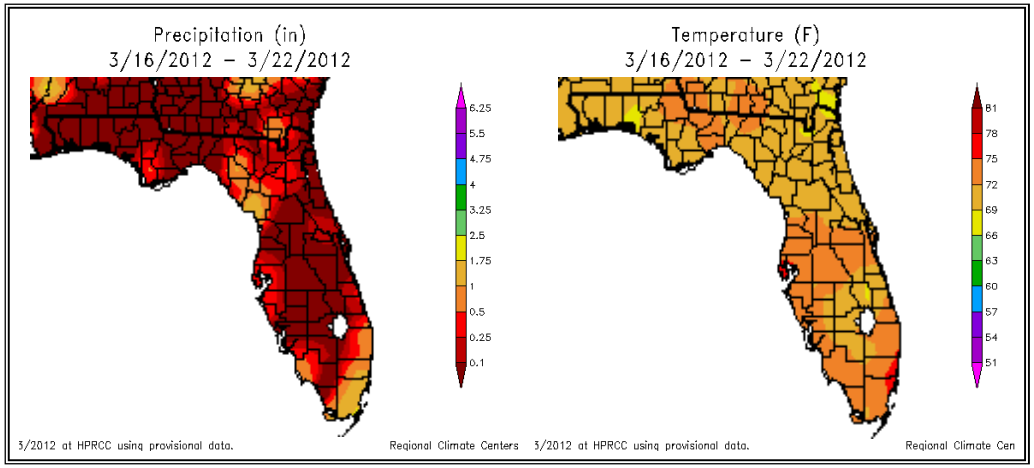
Interpreting Medium Resolution Imaging Spectrometer Satellite Imagery

- The medium resolution imaging spectrometer (MERIS) is located on the Envisat satellite deployed by the European Space Agency.
- The cyanobacterial index algorithm is designed to identify high biomass algal blooms caused by cyanobacteria. However, the current algorithm tends to have false positives, so other blooms may be "flagged". NOAA is currently testing new algorithms that are more specific to cyanobacteria.
- Data can be used to estimate near surface cyanobacteria concentrations which are an indication that algal blooms may be present.
- The algorithms used to generate the satellite images can vary, resulting in some models having a higher likelihood of detecting surface blooms. The satellite identifies the 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. Turbidity does not otherwise influence the algorithms.
- The satellite imagery does not display the species of algae present.
- While patches of red or warm colors may indicate a bloom, these data have not been verified in most cases using ground-truth methods. Data collected by the satellite is considered experimental.
- Only part of FL is in the satellite's coverage area.
- Several environmental factors may affect how results can be interpreted. For example, areas with abundant aquatic vegetation may present with a high cyanobacteria index on the color spectrum, resulting in a false positive bloom reading.

Weather Conditions-March 20 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 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/bulletins.html

For Individual Weather Station Data Visit:
http://www.sercc.com/climateinfo/historical/historical_fl.html

Questions about the report or suggestions: You can contact
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