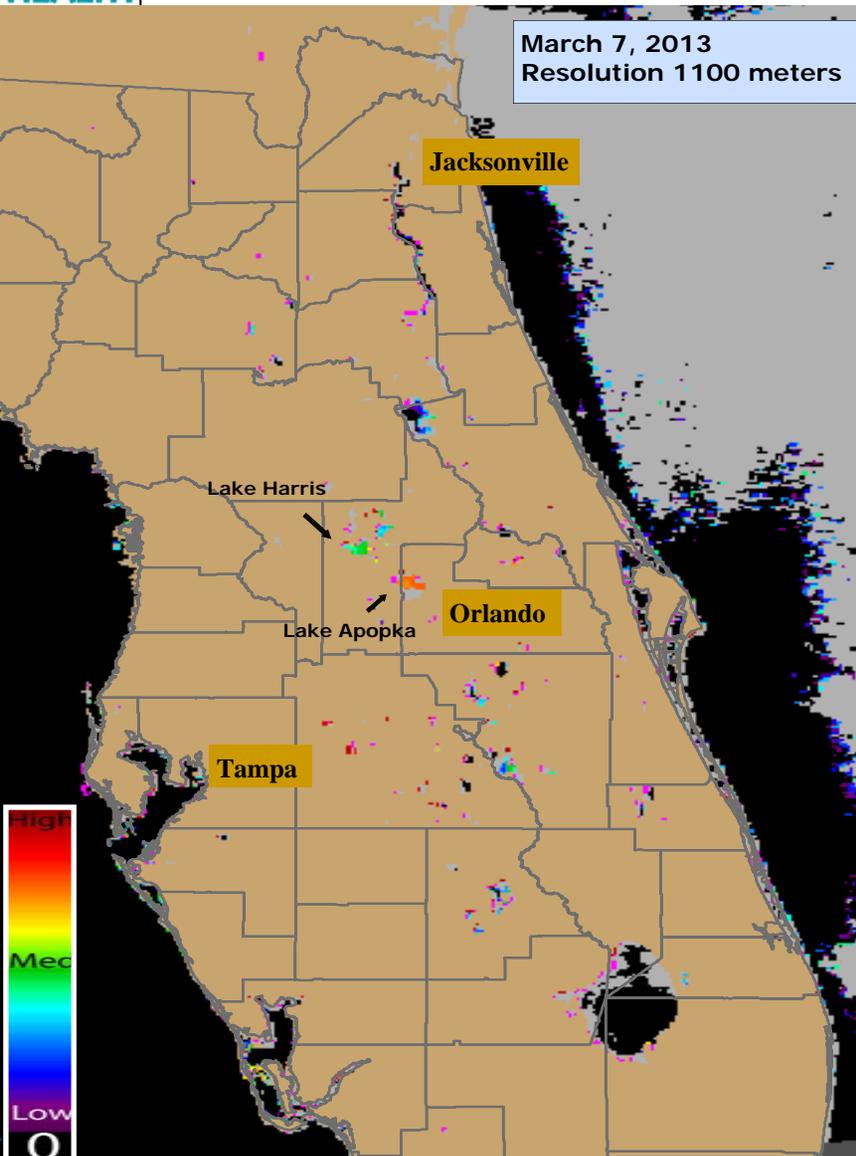
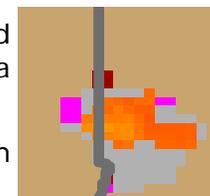


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222.
 Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National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

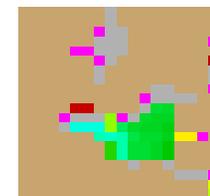


Inland HABs Conditions Report: March 13, 2013

- Lake Apopka (Orange and Lake Counties) displayed high estimated elevated chlorophyll-a concentrations.
- Lake Harris (Lake County) displayed Medium estimated elevated chlorophyll-a concentrations.



Lake Apopka



Lake Harris

US EPA Cyanobacterial Harmful Algal Bloom Web Site

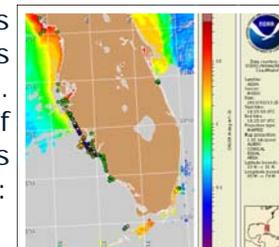
The United States Environmental Protection Agency (EPA) is building federal and state partnerships to assess environmental and health threats from cyanobacteria blooms throughout the US. EPA has developed an integrated web site with quick tabs to find information what causes cyanobacterial toxins, how to prevent, detect, mitigate and treat for them; the health and ecological effects of cyanotoxins; current research activities in the U.S.; and policies and regulations for cyanotoxins at the state and international levels. See: <http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/cyanohabs.cfm> For further information, Please contact Lesley Vázquez-Coriano, DrPH, MEH at Vazquez-Coriano.Lesley@epa.gov or 202-566-1125.



Algal bloom at Grand Lake St. Mary's, Ohio, 2010. Photo by Russ Gibson, Ohio EPA

Marine Update: *K. brevis* bloom lessens off Southwest Florida

Red Tide Update - FWRI/FWC (March 13): *Karenia brevis* was not detected or was present at background concentrations alongshore of Pinellas, Manatee, Sarasota, and Collier counties. Very low to low concentrations were detected alongshore of Charlotte County, and background to very low concentrations were detected inshore and alongshore of Lee County. See: <http://myfwc.com/research/redtide/events/status/statewide/>



NOAA Conditions Report - (March 14): Very low to medium concentrations of *K. brevis* are present alongshore and offshore southwest Florida. Alongshore Sarasota and Charlotte counties, patchy very low respiratory impacts are possible today, Friday and Sunday and patchy low respiratory impacts are possible Saturday and Monday. In the bay regions of Charlotte and Lee counties, patchy moderate respiratory impacts are possible today, Friday, Saturday and Monday... 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.

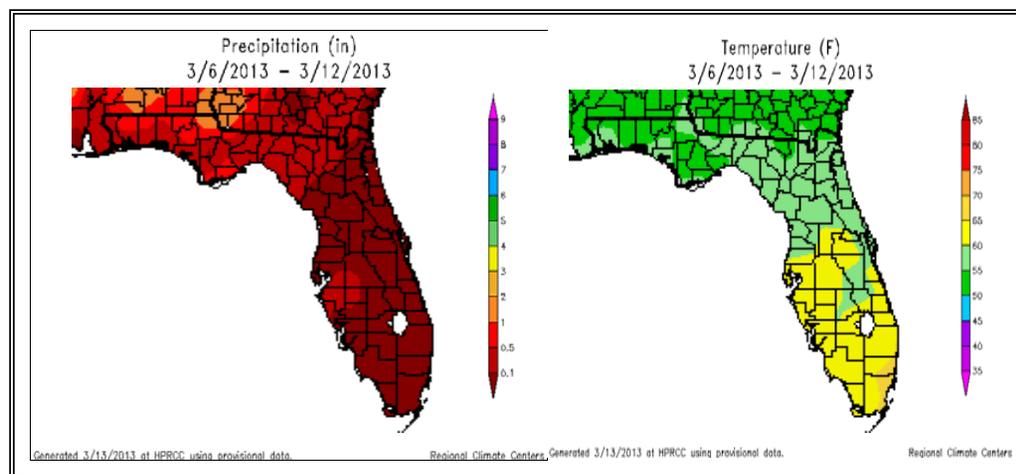
Weather Conditions: 3/6/13 to 3/12/13 Temperature and Precipitation



March 8, 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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[FDOH Aquatic Toxins Program](http://www.fdotx.com/)