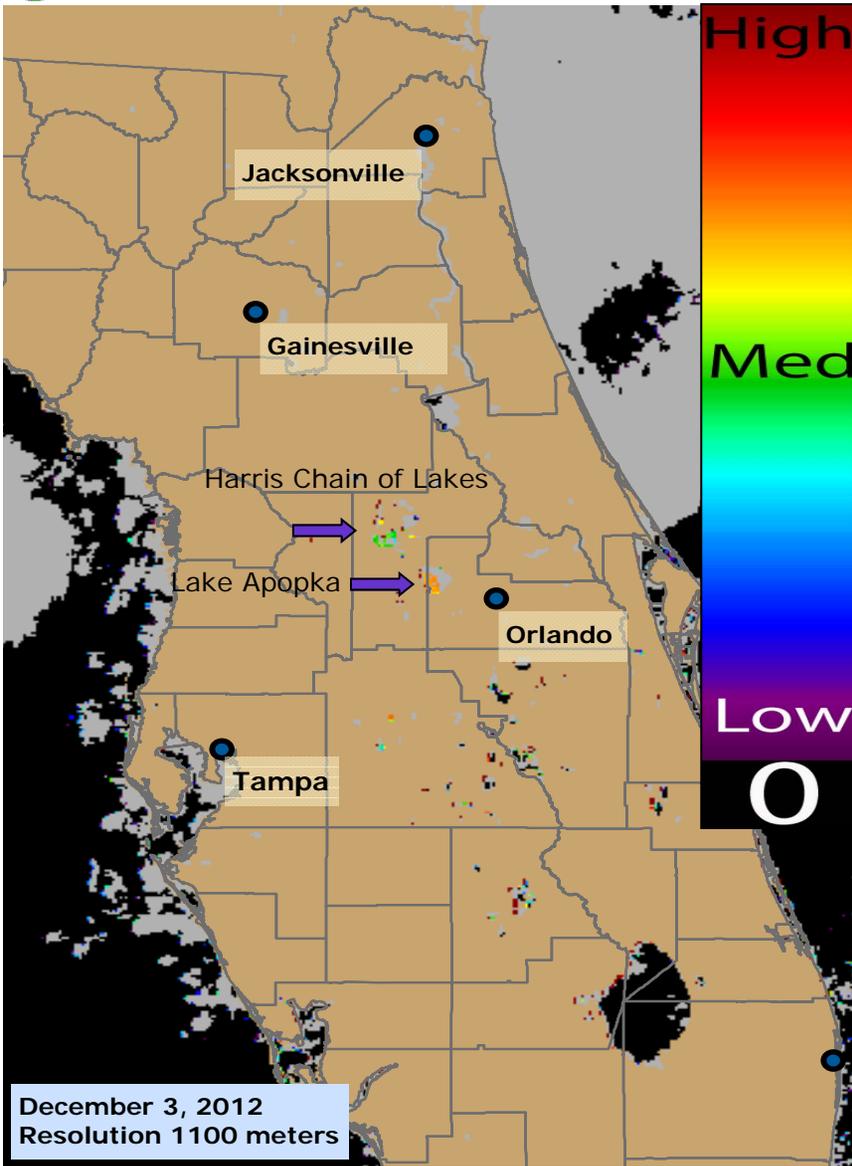
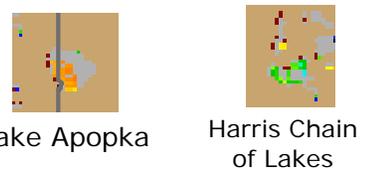


To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-800-222-1222. For questions about the report: contact Andrew Reich, FL-DOH, at 850.245.4187. Images/data were obtained from Florida Water Management Districts, 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: December 5, 2012

- Lake Apopka (Orange/Lake Counties) on its western range had medium to high estimated chlorophyll-a concentrations.
- The Harris Chain of Lakes (Lake County) displayed medium estimated chlorophyll-a concentrations.



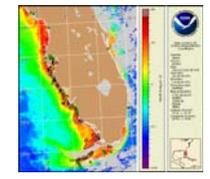
Archives of Inland HAB Health Bulletins now available

The FDOH Aquatic Toxins Program has created an archive of Inland Harmful Algal Bloom Health Bulletins for users of the Cyanobacteria Harmful Algal Bloom Tracking Module in Caspio. Launched on August 9, 2012 the "Harmful Algal Bloom Tracking Module" pulls together information on location of bloom events, environmental conditions, site visit observations, and laboratory results. Submitters may upload multiple photos, lab reports, and other documents to be viewed and supplemented by other users. Checkboxes for human and animal illness (or death, such as fish kills) complaints assist in agency prioritizing while honoring confidentiality protocols. Historical data from the old system is available to preserve temporal continuity of the data set.

There are 55 subscribers representing eight agencies. Secure access to this site is via user name and password entry with the FDOH facilitating coordination of the participants. In addition to the database of bloom records with site information, there is a document library where users can post and access important documents related to cyanobacteria bloom response. Recently, we added a location where archives of the Health Bulletins are available. For more information on this system, please contact either Mr. Andrew Reich (andy_reich@doh.state.fl.us) or Ms. Becky Lazensky (becky_lazensky@doh.state.fl.us).

Marine Update: *K. brevis* bloom SW Fla. and the Keys: 12/4/12

Midweek Red Tide Update: *Karenia brevis*, the Florida red tide organism, has been detected in water samples analyzed so far this week in concentrations ranging from very low to low in Tampa Bay (Pinellas and Manatee counties) and Pine Island Sound (Lee County).



In other areas of Florida, samples collected in the Indian River Lagoon (Brevard County), inshore of Bay County, alongshore of Levy County and alongshore and offshore of Okaloosa County did not contain *K. brevis*. [The bloom is also patchy through the Florida Keys (Personal Communication: A. Corcoran)]. Sampling will continue this week, and complete results will be available in the next scheduled status report on Friday, December 7 (FWC/FWRI).

Forecasted offshore winds through Thursday may minimize the potential for onshore transport of the bloom and decrease respiratory impacts along the coast from southern Manatee to Monroe counties, except in the bay regions (NOAA).

December 3, 2012
Resolution 1100 meters

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

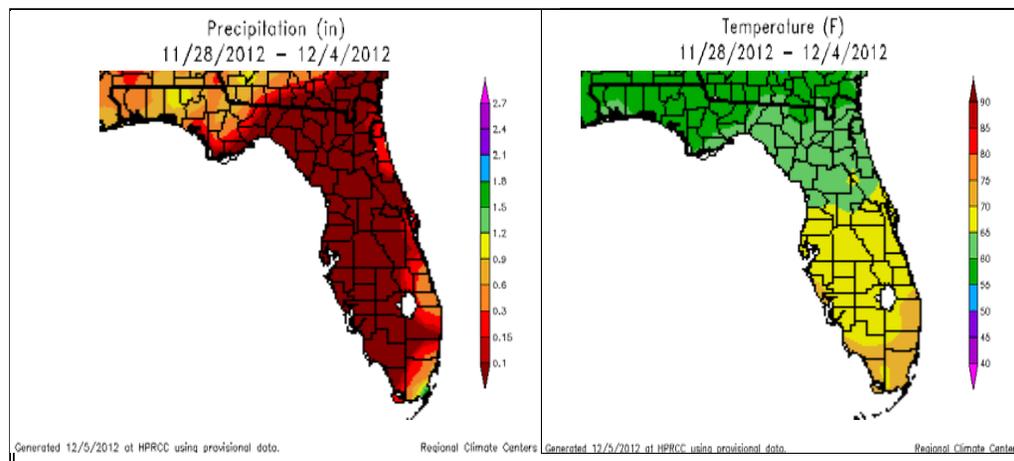
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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: 11/28/12 to 12/4/12 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/>



For Individual Weather Station Data-
Visit: <http://www.sercc.com/perspectives>

Questions about the bulletin or suggestions- Contact
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