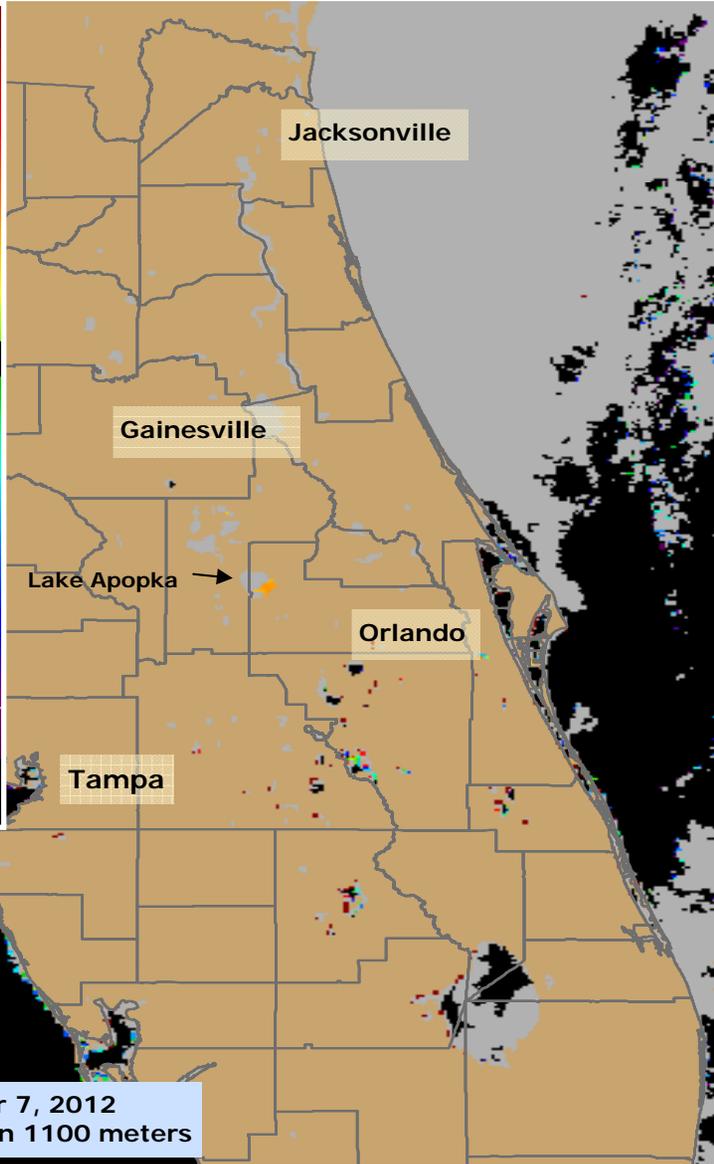


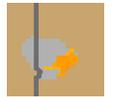
To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-800-222-1222. For questions about the report: contact Andrew Reich, FL-DOH, at 850.245.4187. Images/data were obtained from Florida Water Management Districts,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

High
Med
Low
0



Inland HABs Conditions Report: December 12, 2012

- Lake Apopka (Orange/Lake Counties), on its eastern range, had medium to high estimated chlorophyll-a concentrations.
- Due to cloudy conditions over much of Florida, imagery in much of the state is obscured (see page 2 for MODIS true color image where clouds appear gray).



NEW! FWRI-Mote Harmful Algal Bloom Facebook Page

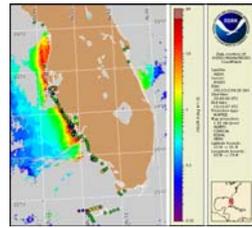
Florida Fish and Wildlife Research Institute and Mote Marine Laboratory are pleased to welcome a new page to Facebook: Florida Red Tide and other Harmful Algal Blooms (HABs) at Facebook.com/FLHABs . This page is a product of the FWRI-Mote Cooperative program, which aims to mitigate the adverse effects of harmful algal blooms, specifically the Florida red tide, along the Florida Gulf coast. This program promotes monitoring, research, and public education. Visit the page to learn more about the program's daily activities and blooms in Florida.



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

Midweek Red Tide Update (FWC/FWRI): *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 medium in Tampa Bay (Pinellas and Manatee counties) and alongshore of Sarasota County. Low concentrations were found alongshore of Charlotte County. In northern Pine Island Sound (Lee County) and the lower Florida Keys (Monroe County), counts ranged from very low to low. In other areas of Florida, samples collected in the Indian River Lagoon (Brevard County) did not contain *K. brevis*. (<http://myfwc.com/research/redtide/events/status/statewide/#Midweek>)

Impacts (NOAA): Very low to medium concentrations of *Karenia brevis* (commonly known as Florida Red Tide) are present along- and offshore southwest Florida from southern Pinellas to Monroe counties as well as offshore the gulfside of the lower Florida Keys. Patchy high respiratory impacts are possible today in the bay regions of southern Pinellas/northern Manatee counties and moderate respiratory impacts are possible Friday through Monday. (<http://tidesandcurrents.noaa.gov/hab/bulletins.html>).



December 7, 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

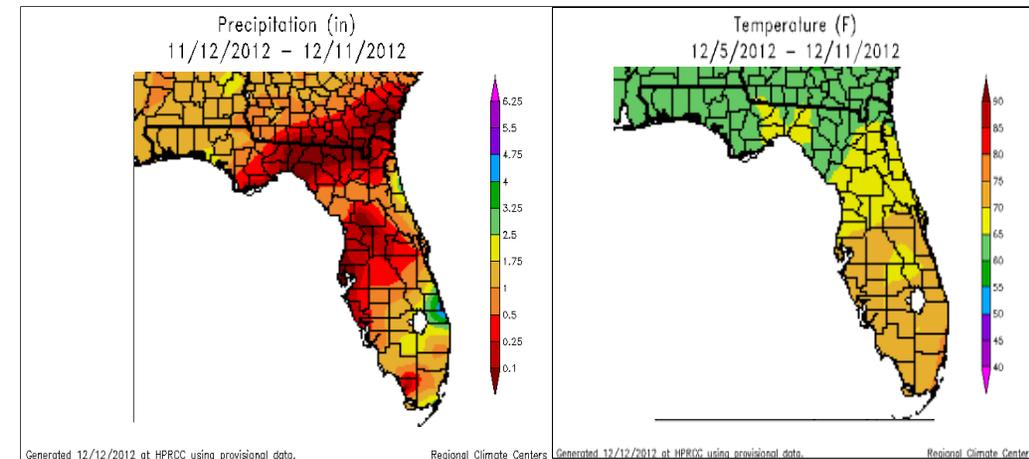
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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: 11/12/12 to 12/11/12 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>

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