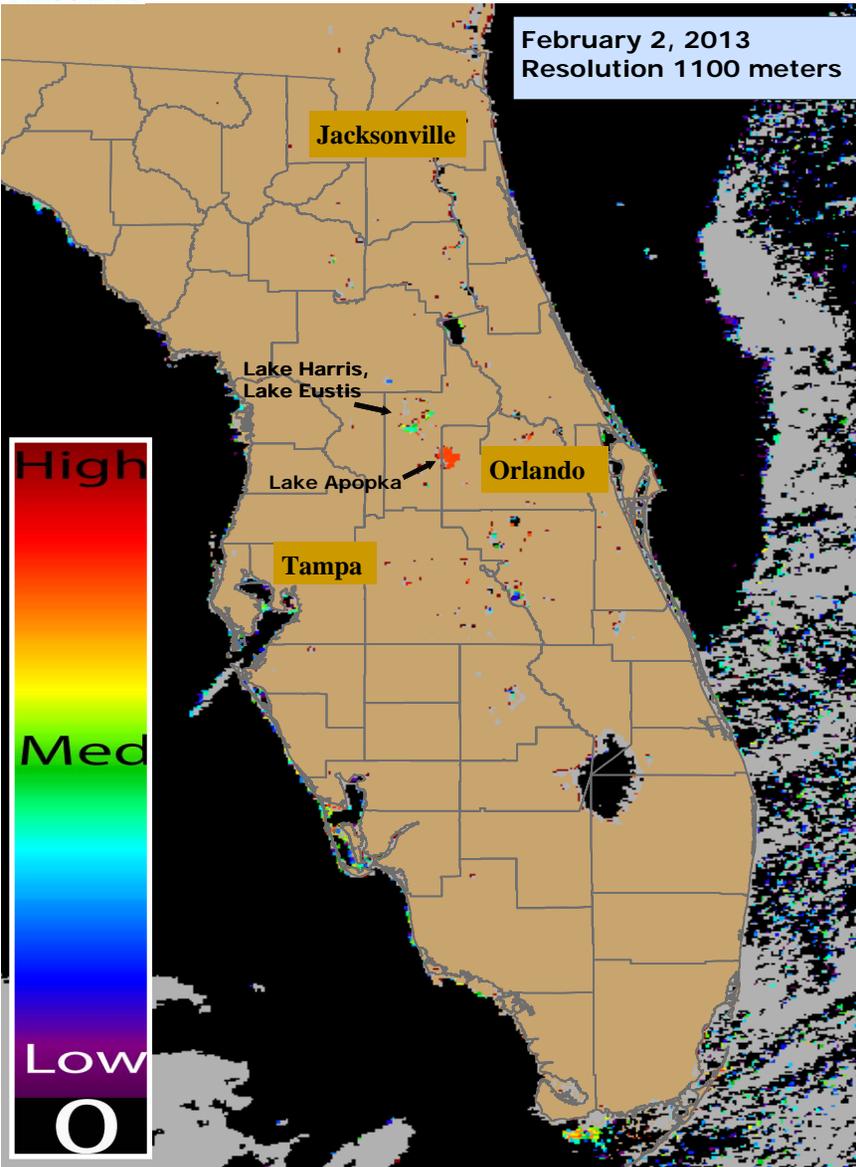


To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-800-222-1222. For questions about the report: contact Andrew Reich, FL-DOH, at 850.245.4187. Images/data were obtained from Florida Water Management Districts,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

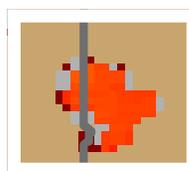


February 2, 2013
Resolution 1100 meters

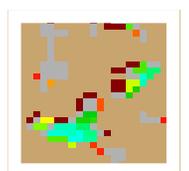


Inland HABs Conditions Report: February 7, 2013

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



Lake Apopka



Lake Harris, Lake Eustis

Ciguatera Fish Poisoning in Florida, 2003-2012

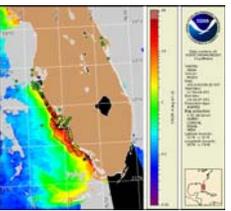
Ciguatera fish poisoning cases are associated with consumption of large reef-dwelling fish typically found in warm tropical waters. Larger species tend to accumulate higher concentrations of ciguatera toxins (ciguatoxins) which are produced by *Gambierdiscus toxicus*. Over 400 fish species are known to accumulate ciguatoxins either through consuming the toxic algae directly or by consuming smaller toxin-laden fish. Recreational fishing was reported in many of the CFP cases, with the majority having consumed self-caught fish, primarily barracuda and grouper.

Year	# Cases
2003	7
2004	4
2005	10
2006	32
2007	29
2008	53
2009	49
2010	20
2011	48
2012	30

From 2003-2012, 282 ciguatera fish poisoning cases were reported in Florida. Four of Florida's 67 counties contributed 71% of cases: Miami-Dade (43%), Palm Beach (15%), Broward (8%), and Monroe County (5%). Fish testing at the FDA Dauphin Island Gulf Coast Seafood Laboratory in Alabama is conducted whenever possible to confirm the presence of ciguatoxin in leftover fish samples.

Marine Update: *K. brevis* bloom off SW Florida Coast

Red Tide Update - FWRI/FWC (Feb. 6): *Karenia brevis* red tide persists alongshore of SW Florida, with the highest concentrations this week alongshore and inshore of Charlotte and Lee counties. Background to low concentrations were detected alongshore of Sarasota County and low to medium concentrations were detected alongshore and inshore of Collier County.



See: <http://myfwc.com/research/redtide/events/status/statewide/>

NOAA Conditions Report - (February 7): Very low to high concentrations of *Karenia brevis* are present along- and offshore southwest Florida from southern Pinellas to Monroe counties. Respiratory impacts are possible in Sarasota, Charlotte, Lee and Collier Counties. Reports of dead fish were received from Charlotte and Sarasota counties over the past few days. 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 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.

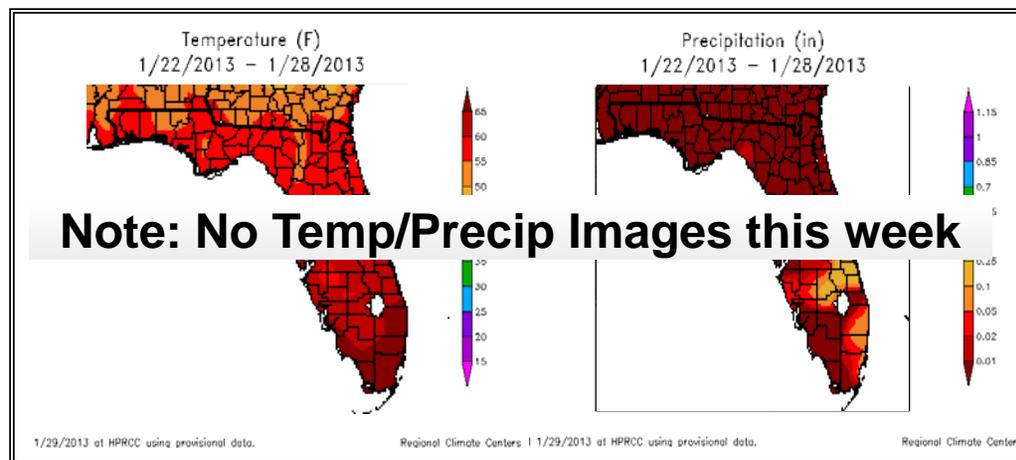
Weather Conditions: 1/22/13 to 1/28/13 Temperature and Precipitation



February 2, 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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