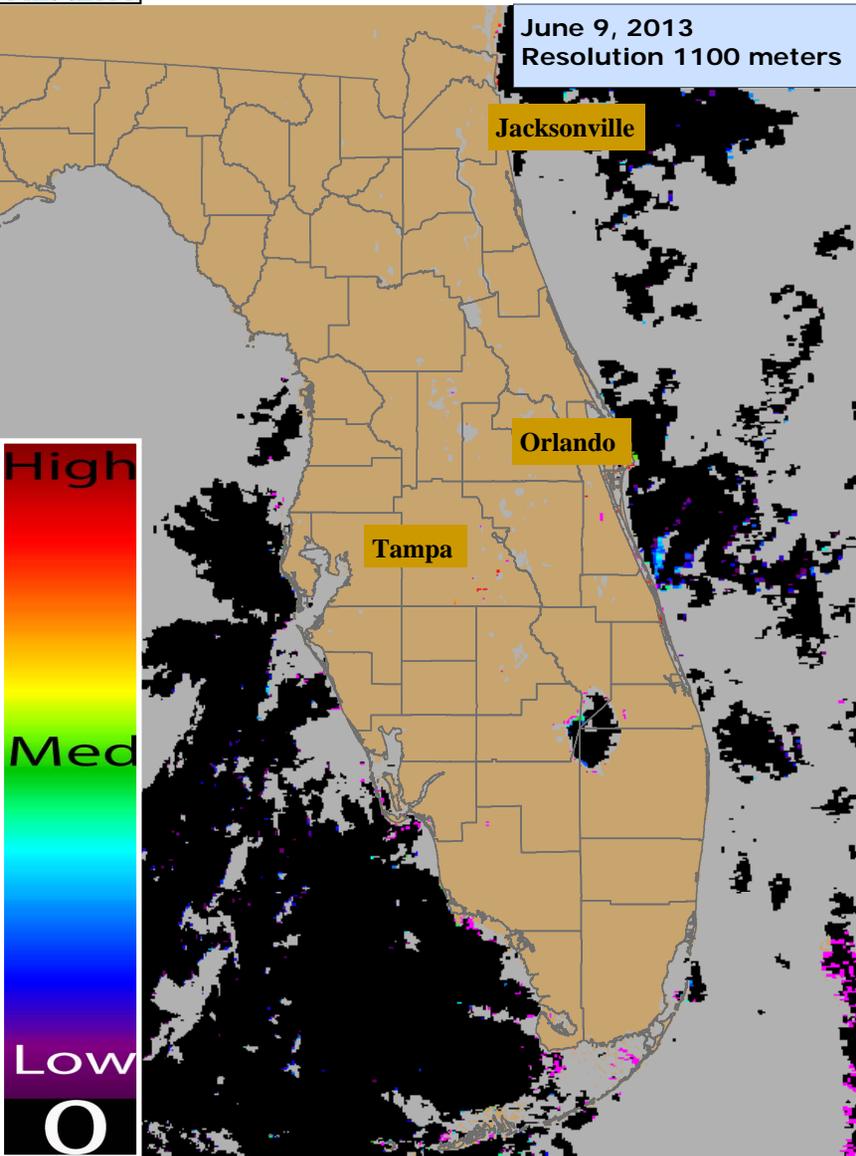


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222. Images/data obtained from Florida Fish and Wildlife Research Institute, Florida Water Management Districts, National Oceanic and Atmospheric Administration (NOAA), NOAA National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



June 9, 2013
Resolution 1100 meters

Inland HABs Conditions Report

- Large water features in Florida were unremarkable on the 1100 meter resolution MODIS image.

News-Press: Algae Bloom Shuts Down Olga Water Plant



June 5, 2013



“Concentrations of potentially-toxic blue green algae in the Caloosahatchee River has caused utility managers to close a Lee County treatment plant.

County plant operations manager Hank Barroso sent a notice Wednesday about the bloom, which is caused by type of cyanobacteria that can be common in the Caloosahatchee River this time of year, that has stained waters in the Olga area. “Due to increasing amounts of algae at the Olga intake we have decided to take the plant offline today until river conditions improve,”

Barroso said in a statement. “The North Lee County (water treatment plant) will increase its production and supply water to the Olga system.” Barroso said the system will remain offline until conditions improve.”

See: <http://www.news-press.com/article/20130605/NEWS01/130605011/Algae-bloom-shuts-down-Olga-water-plant>.

K. brevis at background concentrations off Southwest FL

Red Tide Update - FWRI/FWC (June 7): *Karenia brevis* was found in background concentrations in one sample collected alongshore of Pinellas County and in background to very low concentrations inshore of Sarasota County. Other samples collected throughout southwest Florida did not contain *K. brevis*.

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

NOAA Conditions Report - (June 3): *Karenia brevis* was found in background concentrations in one sample collected alongshore in Pinellas County and in background to very low concentrations in Sarasota County. All other samples collected indicate that *K. brevis* is not present. No dead fish or reports of respiratory irritation associated with *K. brevis* have been reported in the past week. NOAA Conditions Report now issued once/week due to non-bloom conditions. 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

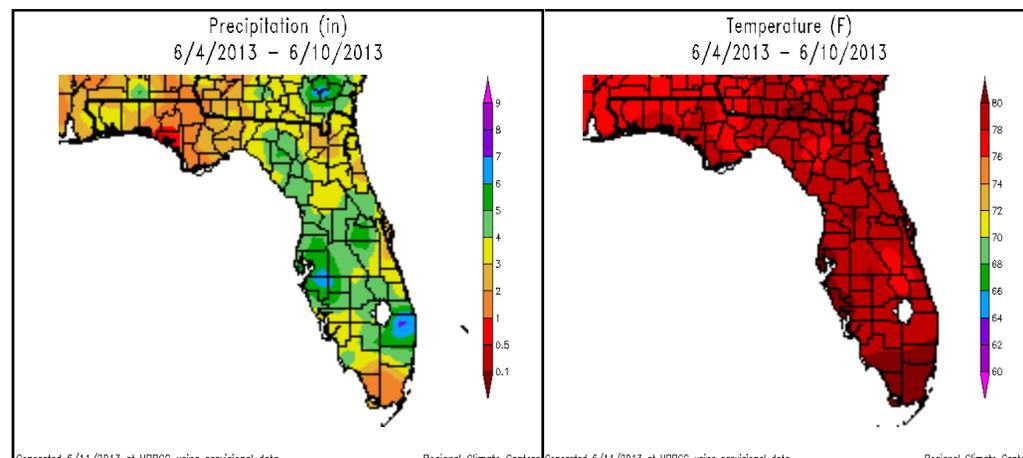
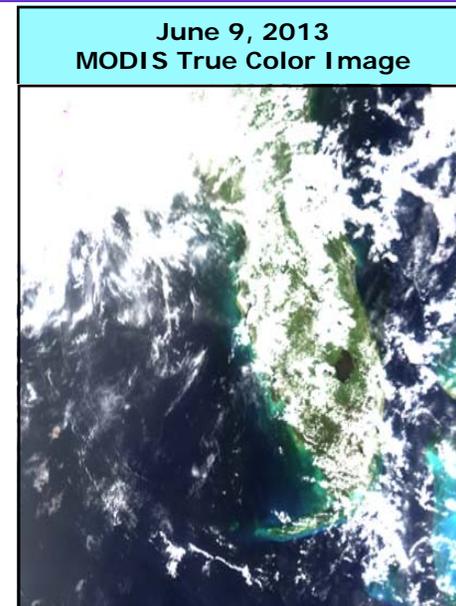
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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: 6/4/2013 to 6/10/2013 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
Andrew Reich, Aquatic Toxins Program
850.245.4187
andy_reich@doh.state.fl.us