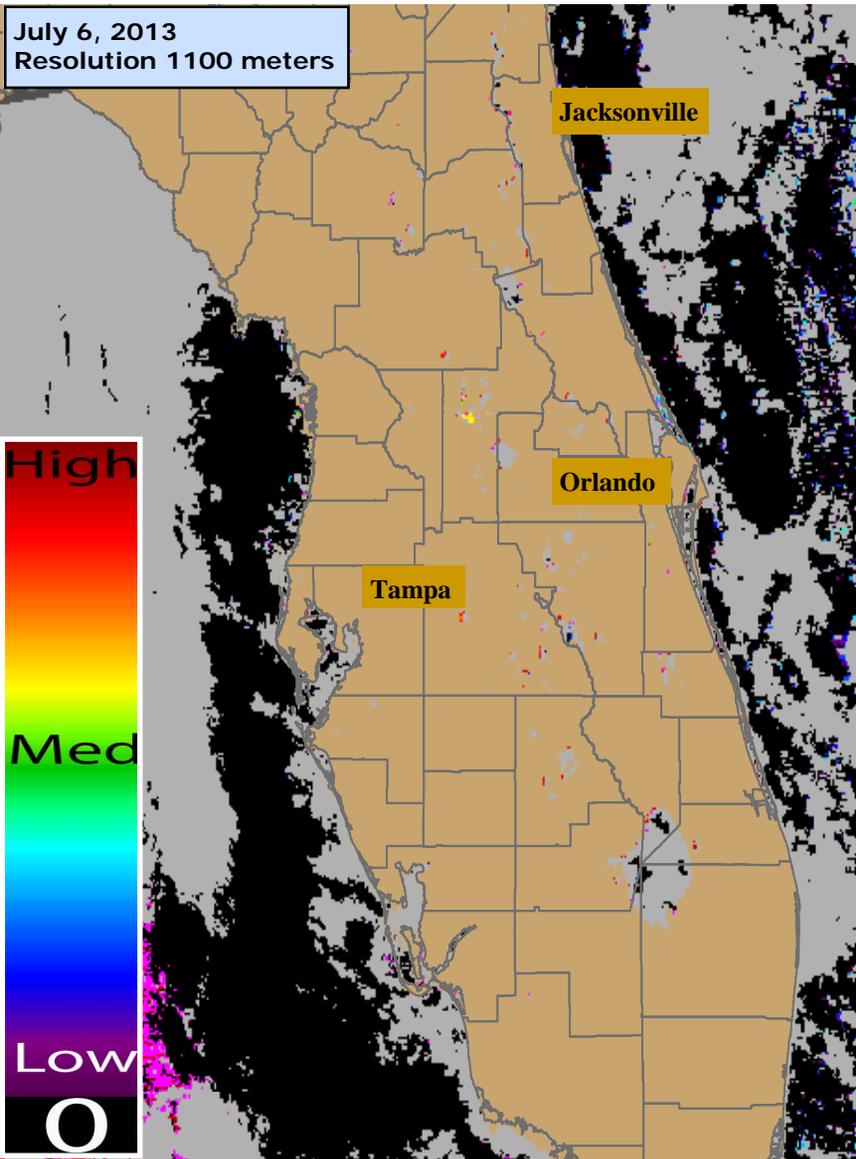


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222.

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.

July 6, 2013
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

Glint and Clouds Prevent Assessment of Inland HABs Conditions

Due to clouds, humidity and severe glint, the processing algorithms are not effective in identifying interesting areas. Stay tuned for next week ...

Novel testing device for detecting toxic blue-green algae



VTT Technical Research Centre of Finland has developed a fast and affordable testing device for detecting the presence of toxic blue-green algae in water. There is currently no fast, affordable and user-friendly way for consumers to check water quality themselves.

The blue-green algae testing kit developed by VTT and the University of Helsinki is like a miniature laboratory. The device is the size of a thermometer, and it contains antibodies that react to any toxic bacteria found in a water sample. The test reveals in minutes whether the water sample contains toxic blue-green algae ... Until now, the toxicity of algae has generally had to be tested in a laboratory. For example, only approximately half of blue-green algal blooms in lakes are toxic and harmful to humans and animals. The new testing kit provides a fast and reliable means of determining whether a blue-green algal bloom is toxic.

Blue-green algae, also known as cyanobacteria, favour eutrophic and warm water. Cyanobacteria can be found in almost every terrestrial and aquatic habitat - oceans, fresh water, damp soil, temporarily moistened rocks in deserts, and even Antarctic rocks. Every year, they form extensive blooms ... The testing kit for detecting toxic blue-green algae is in the process of being commercialized. The kits could be on sale within 2-3 years.

See: http://www.vtt.fi/news/2013/18062013_waterchip.jsp?lang=en

**** Due to background levels of *K. brevis* off Florida's SW coast, status reports for Florida red tide will be suspended until bloom concentrations re-occur.**

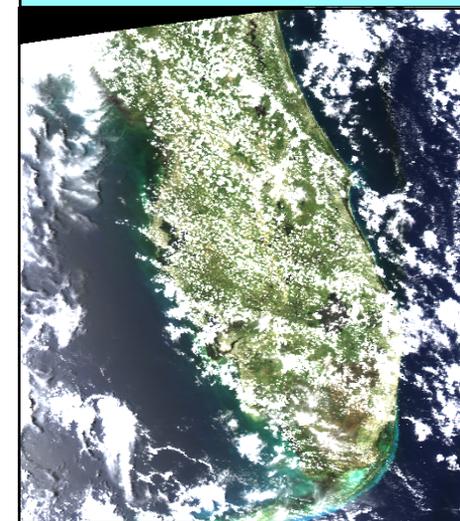
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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.

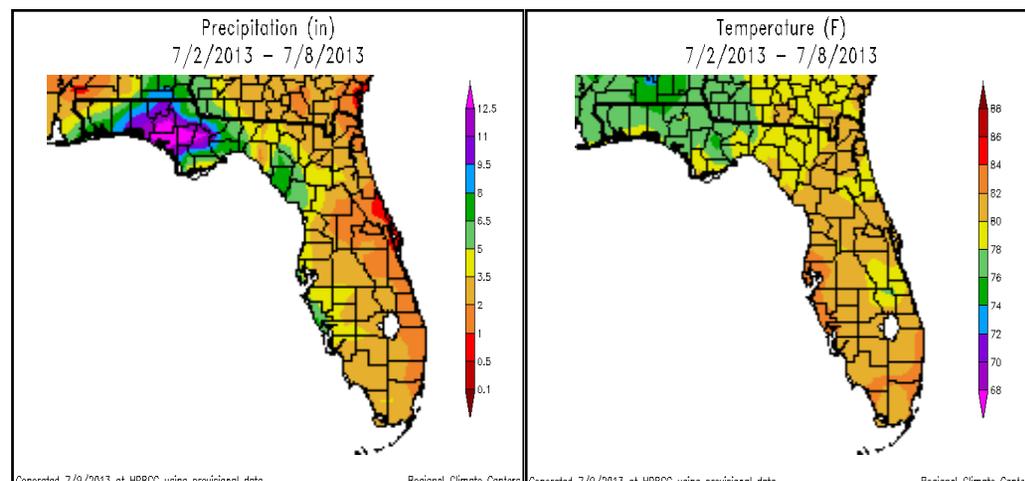
Weather Conditions: 7/2/2013 to 7/8/2013 Temperature and Precipitation



July 6, 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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