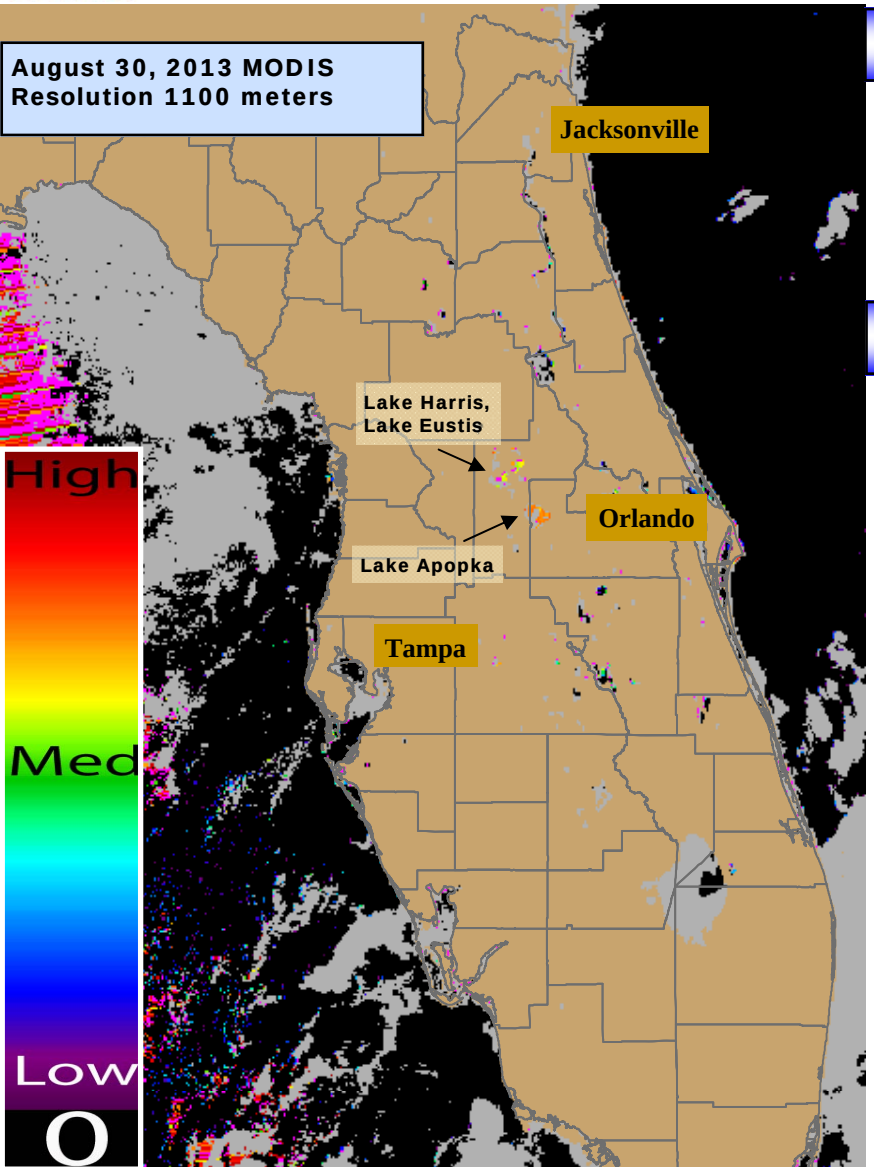
Inland Harmful Algal Blooms Health Bulletin: September 5, 2013

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.



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

Inland CyanoHAB Conditions Report

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

SFWMD ... to Store Water Headed to Caloosahatchee Estuary

Emergency operation at restoration site is part of a broad effort to store water

With Lake Okeechobee's water level high from months of above-average rainfall, the South Florida Water Management District (SFWMD) is again taking emergency action to capture water from the Caloosahatchee River to reduce freshwater impacts on the downstream estuary.

As part of the District's sustained effort to identify opportunities for storage, water will be pumped onto the site of the Caloosahatchee River (C-43) West Basin Storage Reservoir, a future Everglades restoration project in Hendry County. Emergency operations will occur as the U.S. Army Corps of Engineers continues discharging water from the lake to the river for flood control and protection of the Herbert Hoover Dike.

All necessary permits and authorizations have been obtained from partners such as the Corps, the [FDEP] and Hendry County to pump additional water onto 3,500 acres at the site as conditions allow. Overall capacity to capture flows from the river is dependent on how much rain falls in the immediate area.

See: http://www.sfwmd.gov/portal/page/portal/common/newsr/enews/ripple/code/pages/ripple_index.html

**** 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.**

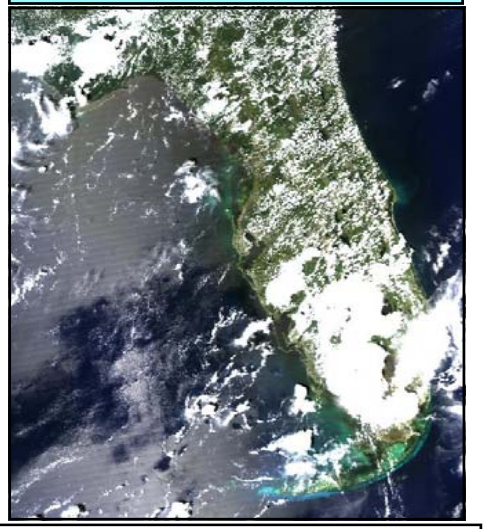
Interpreting Moderate Resolution Imaging Spectroradiometer Data

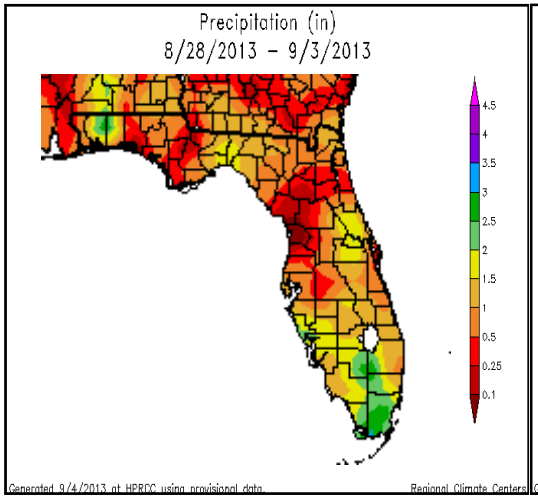
- The Moderate Resolution Imaging Spectroradiometer (MODIS) is deployed by NASA onboard the Terra (EOS AM) and Aqua (EOS PM) satellite. It passes over the earth, collecting new imagery every 1-2 days.
- This imagery is used as a surveillance tool. Data collected by the MODIS sensor are used to generate 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 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.

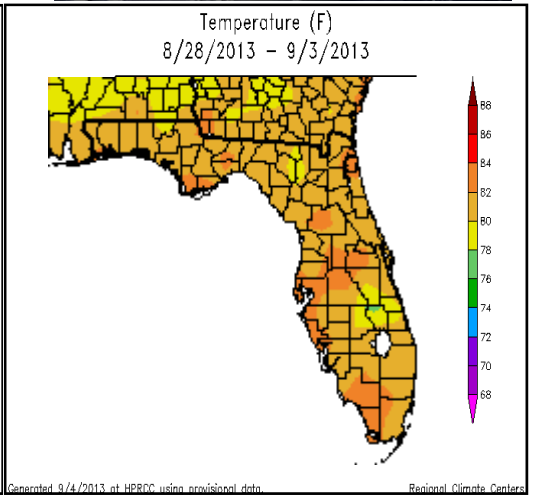
Weather Conditions: Temperature and Precipitation - 8/28/13 to 9/03/13

- 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.

September 01, 2013
MODIS True Color Image







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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