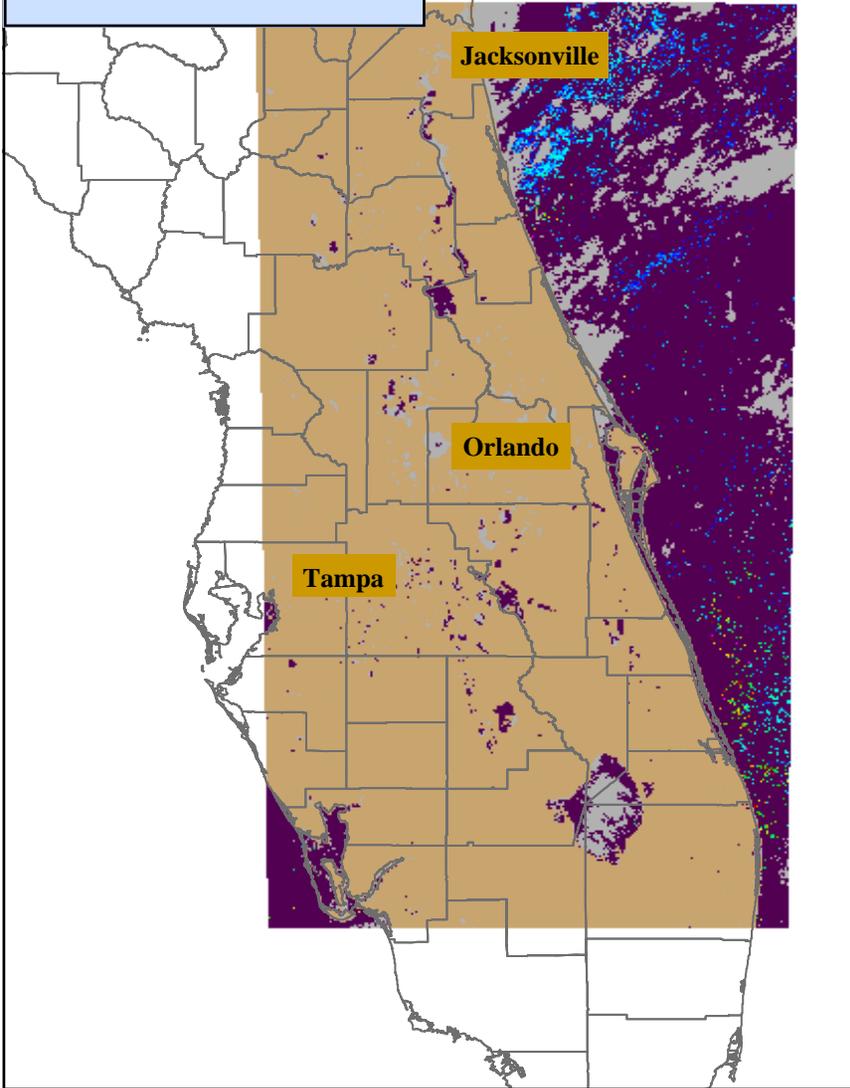


To report an illness related to a marine toxin or algal bloom contact the Florida Poison Information Center at 1-800-222-1222.

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.

August 1, 2013 MODIS Terra 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

Clouds Preclude Assessment of Inland HABs Conditions

- Heavy cloud cover precluded utilizing chlorophyll models to identify possible cyanobacteria blooms.
- Experimental: Terra MODIS image in area of Indian River Lagoon used for first time. Feedback welcome

DEP, FWC, DOH AND SFWMD Working Together In St. Lucie Basin

August 7, 2013: "Efforts must balance flood control, navigation, water supply, water quality and the overall ecological health of waterbodies"

TALLAHASSEE – The Florida Department of Environmental Protection, Fish and Wildlife Conservation Commission, Department of Health and South Florida Water Management District are working together to address the complex environmental and public health issues affecting the St. Lucie River and Estuary, Indian River Lagoon and Lake Okeechobee. The agencies, along with other state and local partners are investing hundreds of millions of dollars to balance flood control, navigation, water supply, water quality and the overall ecological health of these waterbodies ...

The recent development of an algal bloom in the St. Lucie Estuary has highlighted the complexity and unique challenges these ecosystems present. South Florida Water Management District meteorologists report the wettest April through July period on record in South Florida since 1932. The U.S. Army Corps of Engineers, which manages the level of Lake Okeechobee with input from stakeholders including the District, has been making regulatory releases. The heavy influx of fresh water into the St. Lucie basin at this time of year is a primary reason for the type of bloom currently occurring over a significant segment of the estuary.

See: <http://content.govdelivery.com/accounts/FLDEP/bulletins/865192>

**** 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.**

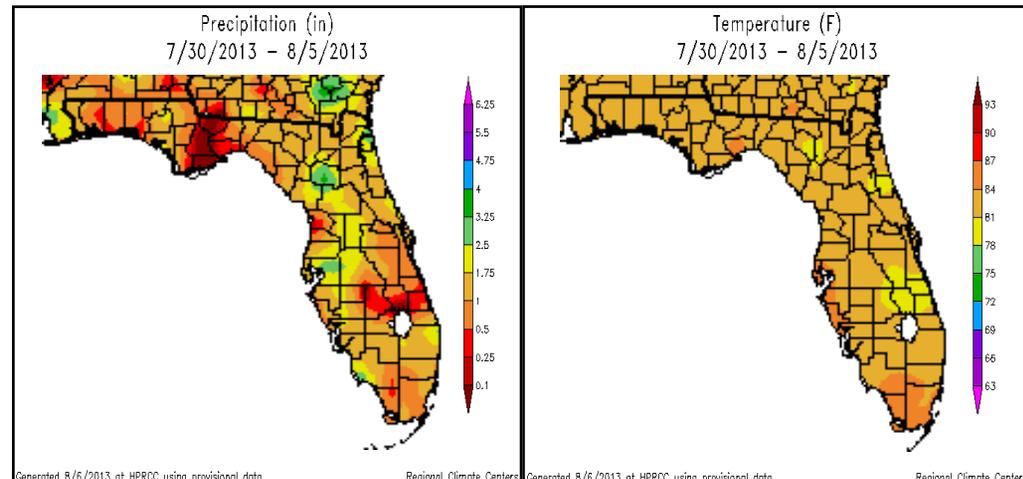
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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: Temperature and Precipitation - 7/30/13 to 8/5/13

- 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.

August 1, 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>

Questions about the bulletin or suggestions- Contact
Andrew Reich, Aquatic Toxins Program
850.245.4187
andy_reich@doh.state.fl.us