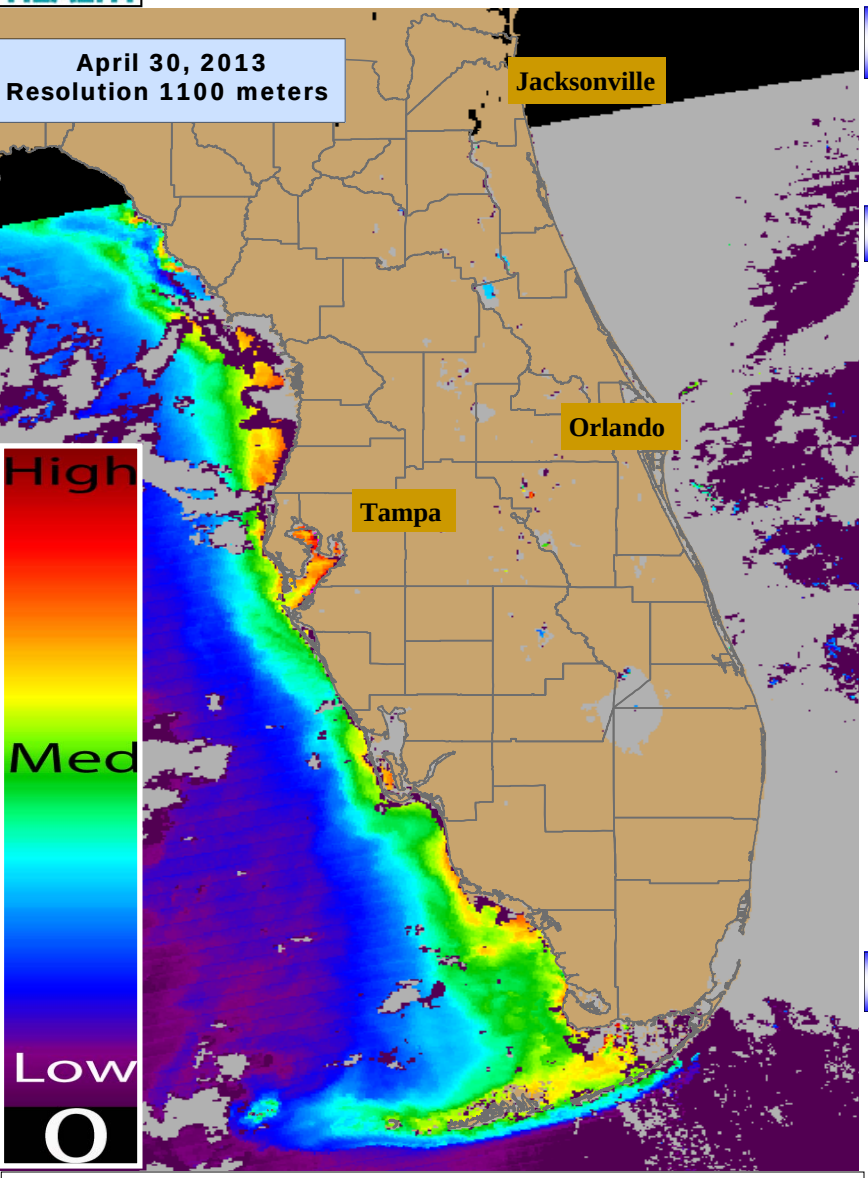
Inland Harmful Algal Blooms Health Bulletin: May 3, 2013

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)

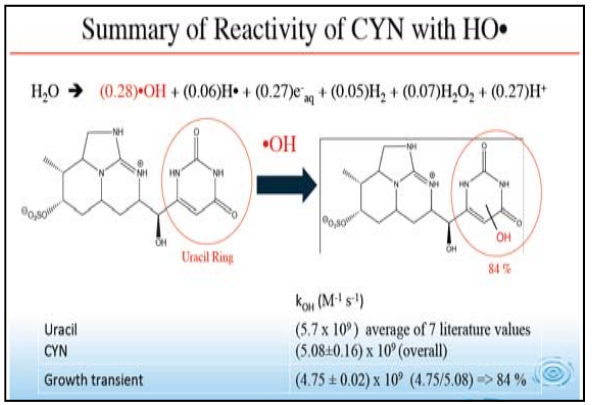
Very low likelihood of a bloom
May indicate clouds or missing data
Low estimated chlorophyll-a concentrations
Medium estimated chlorophyll-a concentrations
Higher estimated chlorophyll-a concentrations

Inland HABs Conditions Report: May 3, 2013

- Lake Apopka (Orange and Lake Counties), the Harris Chain of Lakes (Lake County) and other large water features in Florida were unremarkable on the 1100 meter

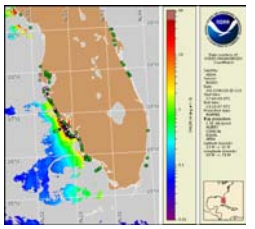
EPA Webinar: Control and Mitigation of Cyanobacteria and Toxins

The US Environmental Protection Agency hosts a web site in support of a national *Inland HAB Discussion Group*. Their mission statement is: *To continue and enhance communication on inland harmful algal bloom issues related to research, monitoring, human and ecological health risk assessment, education, and outreach.*
(See: http://www2.epa.gov/nutrient-policy-data/inland-hab-discussion-group)



On April 25, 2013 a webinar was held on the Control and Mitigation of Cyanobacteria and Cyanotoxins, sponsored by this group. Organizers included Lesley Vazquez-Coriano (EPA), Lorrie Backer (CDC) and Keith Loftin (USGS). Four speakers included Kevin Sellner, Chesapeake Research Consortium; Kevin O'Shea, Florida International University; Harry Gibbons, Tetra Tech; and Milt Baker, Blue Water Satellite, Inc. The agenda and PDFs of their PowerPoint presentations can be found at:
http://www2.epa.gov/nutrient-policy-data/webinar-april-25-2013

Marine Update: SW Fla. *Karenia brevis*



Red Tide Update - FWRI/FWC (May 1): *Karenia brevis*, was detected in a few samples analyzed so far this week in background to very low concentrations in the Pine Island Sound system (Lee County) and alongshore and inshore of Sarasota and Charlotte counties. Other samples collected in southwest Florida did not contain *K. brevis*. See: http://myfwc.com/research/redtide/events/status/statewide/

NOAA Conditions Report - (May 2): Background to very low concentrations of Karenia brevis) are present along- and offshore southwest Florida. In the bay regions of central Lee County, patchy very low respiratory impacts are possible today through Monday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Monday May 6. To read the full NOAA conditions report, visit: http://tidesandcurrents.noaa.gov/hab/bulletins.html

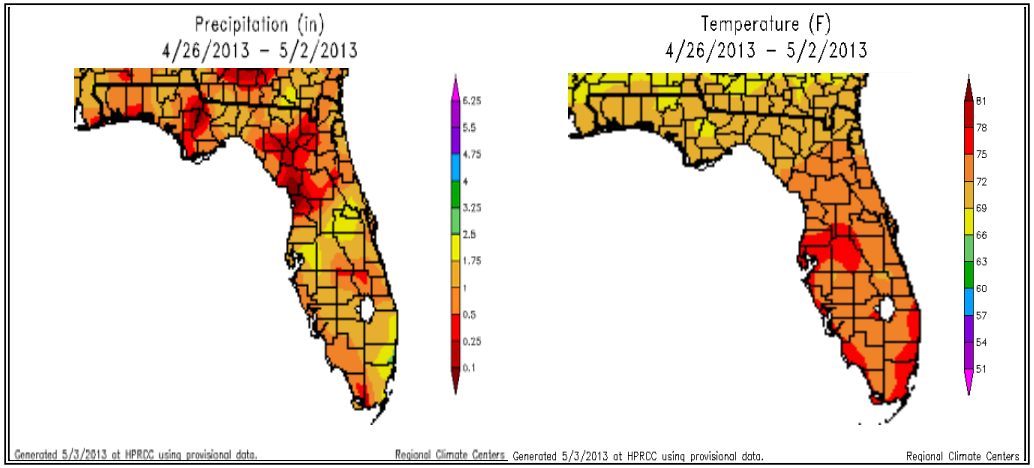
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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: 4/26/13 to 5/02/13 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.

April 30, 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
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