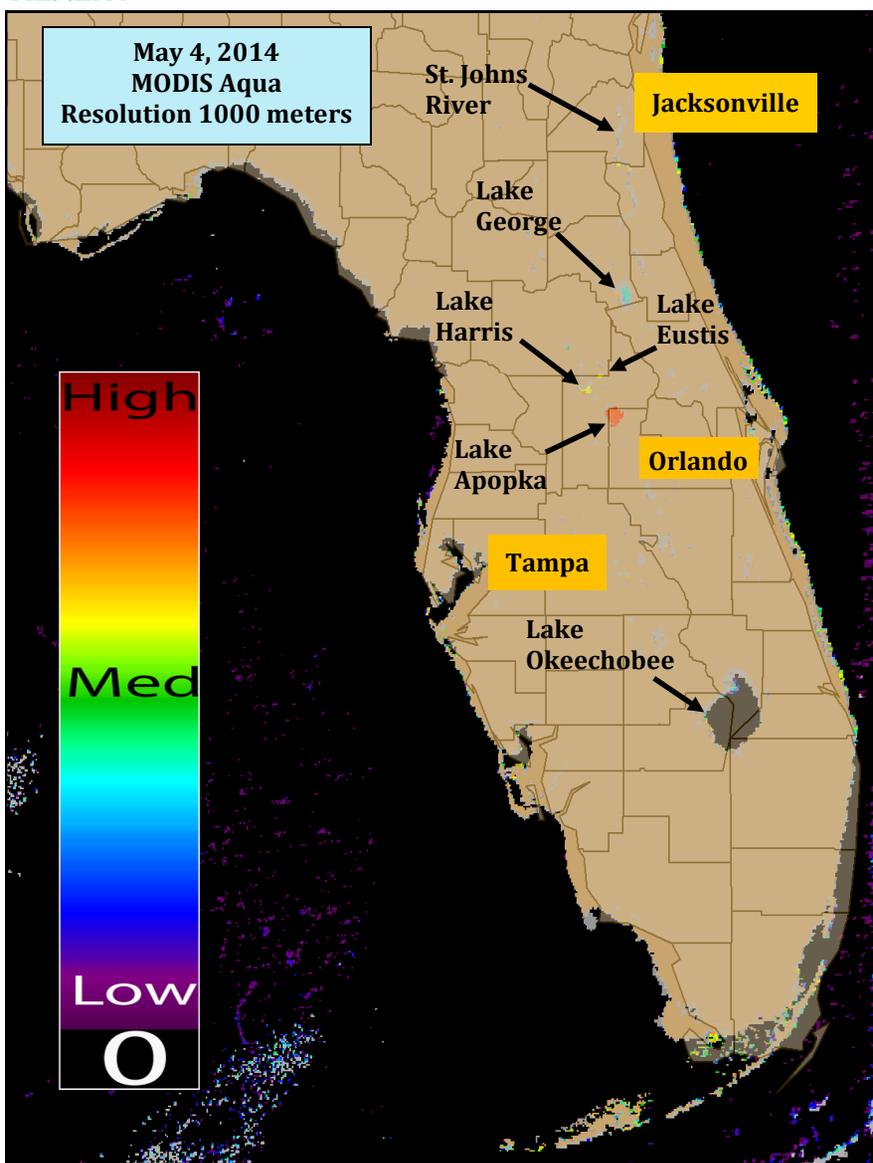


To report an illness related to a freshwater, estuarine, marine toxin or harmful algal bloom, please contact the Florida Poison Information Center at 1-800-222-1222.

Images/data are 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



CyanoHAB Conditions Report

- Lake Apopka (Orange/Lake Counties) displayed high estimated elevated chlorophyll-a concentrations.
- Lake Harris and Lake Eustis (Lake County) displayed medium estimated elevated chlorophyll-a concentrations.
- Lake George (Volusia/Putnam Counties) displayed low to medium estimated elevated chlorophyll-a concentrations.
- Lake Okeechobee (Okeechobee/Glades/Hendry/Palm Beach/Martin Counties) displayed low estimated elevated chlorophyll-a concentrations.
- St. Johns River (Duval/Putnam Counties) displayed medium estimated elevated chlorophyll-a concentrations. St. Johns River Water Management District (SJRWMD) staff reported seeing blooms of algae in the river within these counties.
- Due to technical difficulties the waterbodies appear to be slightly shifted on the MODIS image from their actual locations.

Indian River Lagoon lined up for muck money

FLORIDA TODAY
A GANNETT COMPANY

By Jim Waymer, Brevard
Released: May 6, 2014 at 11:34 PM

.... Legislators signed off on \$23 million this month to lagoon projects in Brevard County alone, most of which will be used to dredge some of the noxious black muck that's smothering so much seagrass. The money is part of \$170 million the Legislature recently approved for the estuary as part of \$77.1 billion in state spending this year. Much of the lagoon-related money would go toward tempering polluted discharges from Lake Okeechobee into the lagoon. But the lagoon money here would bring long-awaited "muck relief" for residents along the Eau Gallie River and Elbow Creek. The Legislature approved \$10 million toward dredging portions of the river and creek. Gov. Rick Scott has 15 days from the time the bill is presented to him to sign or veto the budget bill.... The Legislature also approved \$10 million for Brevard County to dredge muck hotspots from lagoon channels, of which \$1 million would go to Florida Institute of Technology to study how effective that dredging is toward growing back seagrass. Brevard County would also get \$800,000 to reduce sources of muck into the lagoon. The county plans to remove weeds that rot to form muck in ponds, which, ultimately, empty to the lagoon. It also would pay to map how thick and toxic the muck is in specific locations, especially near seagrass. Brevard officials want to dredge decades of organic muck to remove excess nutrients from the estuary. Muck blankets the lagoon and its tributaries, in some spots more than 10 feet thick. It's mostly soil runoff from construction, farming and erosion along lagoon tributaries, but also rotting algae and dead plants.... In addition to the muck money, the Legislature approved \$410,000 for the next phase of Brevard's oyster restoration project...

For the complete article, see <http://www.floridatoday.com/story/news/local/environment/lagoon/2014/05/06/indian-river-lagoon-lined-muck-money/8793487/>

Status reports for Florida red tide are suspended until bloom conditions reoccur.

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

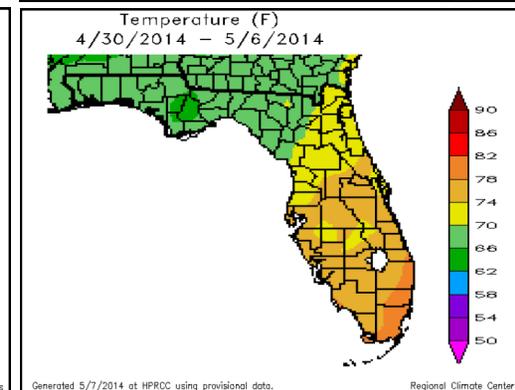
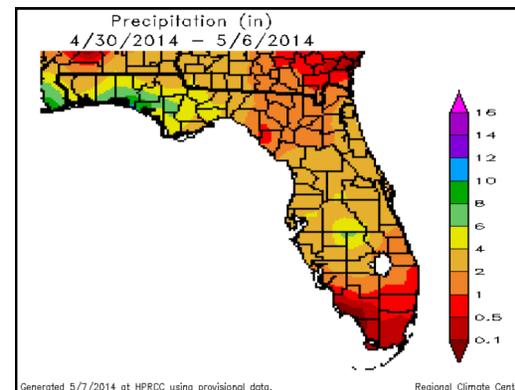
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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 that 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. 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. However, 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 chlorophyll-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: Precipitation and Temperature - 04/30/14 to 05/06/14

- 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.

May 4, 2014 MODIS Aqua 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/bulletins.html>



For Individual Weather Station Data, visit:
<http://www.sercc.com/climate>

For information, please contact:
Laura Morse, Public Health Toxicology Program, at 850.245.4444 x 2080 or laura.morse@flhealth.gov