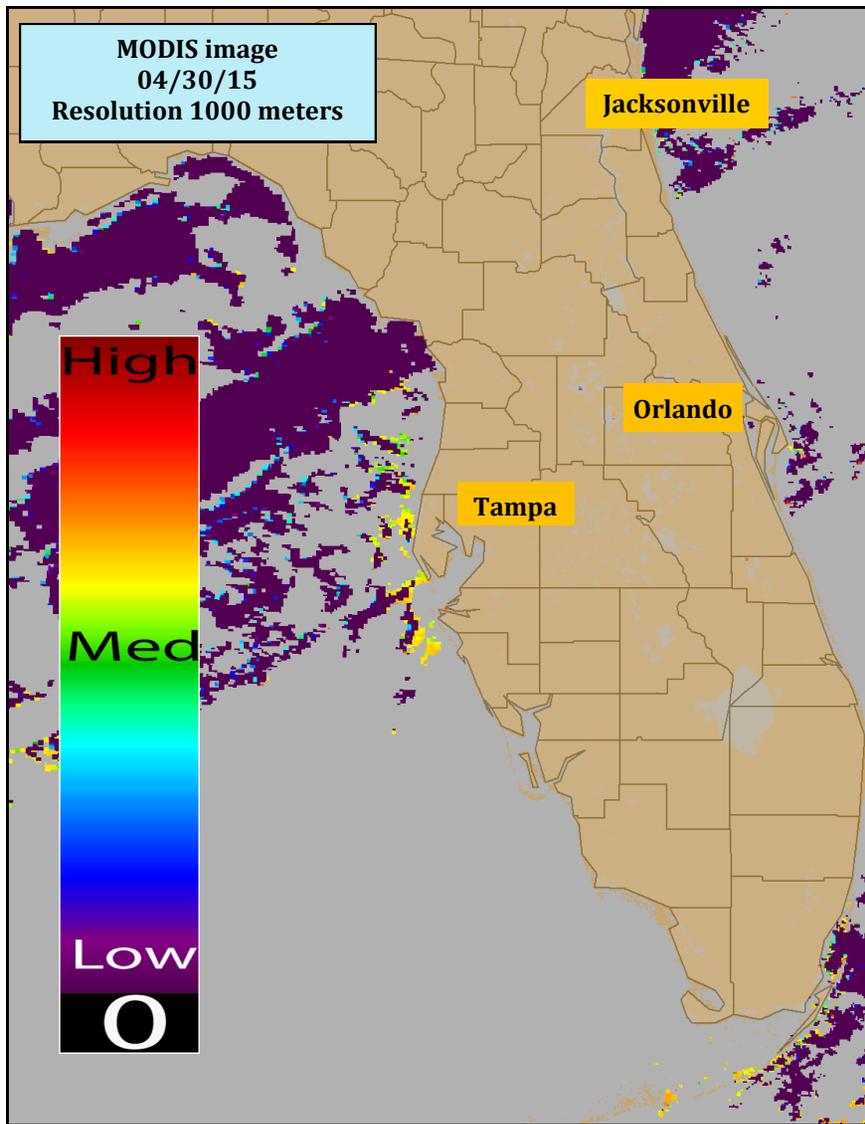


To report an illness related to a freshwater, estuarine, marine toxin or harmful algal bloom, please contact the Florida Poison Information Center at 1-800-222-1222.

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. This report was produced through a collaboration between the Florida Department of Health Water Toxins Program (WTP) and the NOAA Center for Coastal Monitoring and Assessment.



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

CyanoHAB Conditions Report

- Due to significant cloud cover and glint around the state, no usable MODIS image is available for this week's bulletin.
- As shown in the true color image on page 2, cloud cover and glint interfered with data collection and interpretation on April 30, 2015, and throughout the imagery period.

Flows from Lake O. into Caloosahatchee to increase



By Trent Kelly, Reporter

Posted: Apr 30, 2015 5:54 PM EDT; Updated: Apr 30, 2015 6:39 PM EDT

MOORE HAVEN, FL - We have learned the Army Corps of Engineers plans to increase flows from Lake Okeechobee into the Caloosahatchee River starting Friday. This comes just days after officials discovered toxic algae blooms on the east side of the lake. On Thursday we were alongside water management officials as they collected new samples from those blooms in Moorehaven Lock. The water quality on our side of the lake is doing well right now according to the experts we spoke with. It was a much different story on the other end of the lake... where the water from Lake O. is released to the east side of the state. A bright green layer of algae could be seen resting right next to the lock. While algae blooms in Lake Okeechobee are nothing new, this particular bloom has experts concerned. Not only because it's blooming right next to the lock, but because it's also blooming earlier than it normally would. We haven't even made it into rainy season yet. Experts say a combination of hot temperatures and nutrients in the water helped cause that. They tell us the chances of a similar bloom forming on our end of the lake are actually pretty slim right now - and it all has to do with the flow of water: "You do have a good bit of water moving through the Caloosahatchee and the Franklin Lock at this point, reducing lake levels here... so you don't have the stagnant water that we had on this coast," said Randy Smith of SFWMD. Earlier on Thursday technicians from the South Florida Water Management District took samples from the water near those blooms. They're sending those samples off to Tallahassee to learn more about how toxic the algae may be. We're told the results of those tests will determine when the flows to the east side of the state will resume - and for how long. Officials are also conducting similar tests near the Moorehaven Lock but they haven't found anything to be concerned about.

The article is available at <http://www.nbc-2.com/story/28946434/flows-from-lake-o-into-calooahatchee-to-increase>.

Marine Update: *Karenia brevis*

Red Tide Status – FWC/FWRI 5/1/2015: *Karenia brevis*, the Florida red tide organism, was detected in background concentrations in one sample collected inshore of Bay County and in one sample collected alongshore of Franklin County in northwest Florida. Additional samples collected throughout Florida this week did not contain *K. brevis*. For additional information, see <http://myfwc.com/research/redtide/statewide/>.

Red Tide Health Effects – NOAA 4/27/2015: There is currently no indication of *Karenia brevis* along the coast of southwest Florida, including the Florida Keys. No respiratory irritation is expected alongshore southwest Florida Monday, April 27 through Monday, May 4.

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations.

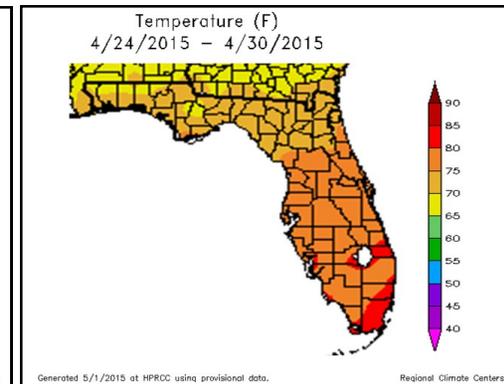
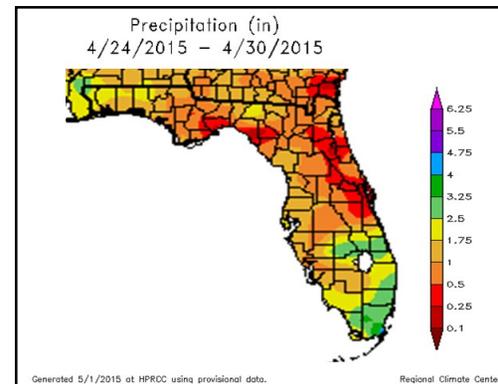
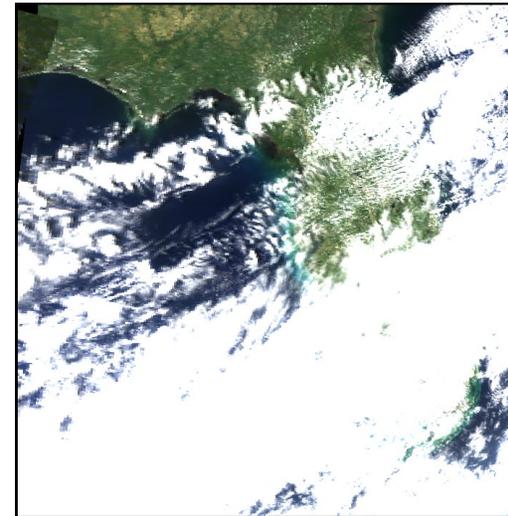
Interpreting Moderate Resolution Imaging Spectroradiometer Data

- 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 - 04/24/15 to 04/30/15

- 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.

MODIS True Color Image April 30, 2015



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