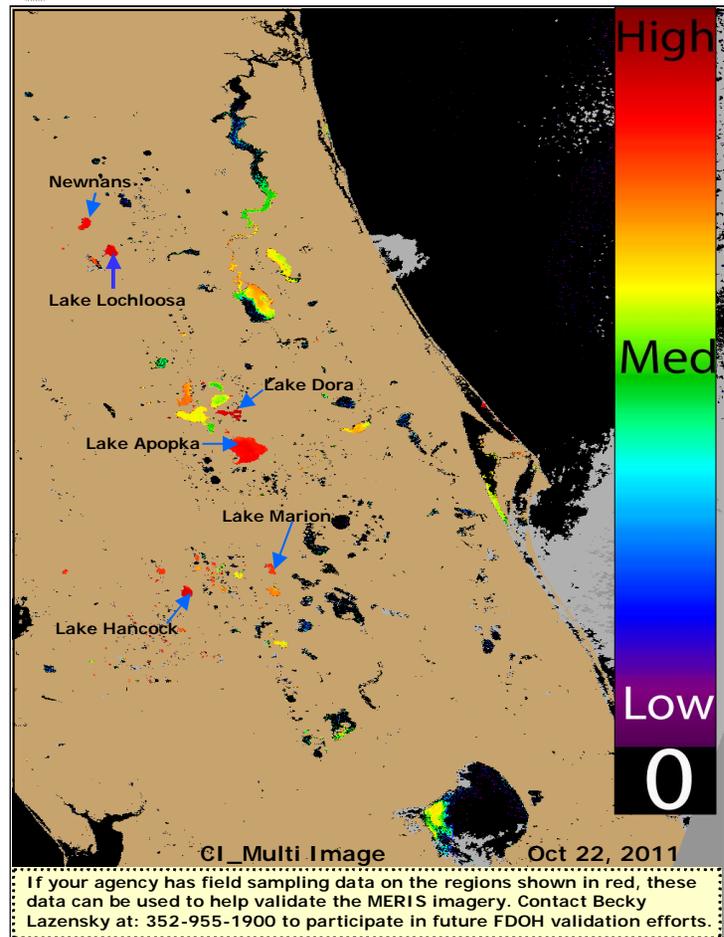


To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-888-232-8635. For questions about the report: please contact Becky Lazensky, FL-DOH, at 352-955-1900. Images/data were obtained from Florida Water Management Districts, The National Oceanic and Atmospheric Administration (NOAA), NOAA National Climatic Data Centers and National Weather Centers. Support to produce this report was received through a NOAA/NASA Agreement (Number: NNH08ZDA001N)



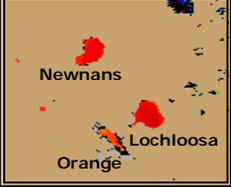
## CyanoHabs Conditions Report: Oct 22

- Multiple lakes in the North Central FL region displayed an elevated estimated cyanobacteria concentration. These lakes included Lake Apopka and Lake Dora in Lake County and Newnans, Lochloosa, and Orange Lakes in Alachua County.
- Lake Hancock and Lake Marion (Polk County) both displayed high estimated cyanobacteria concentrations.
- The St Johns River and parts of Lake George displayed high estimated cyanobacteria concentrations.

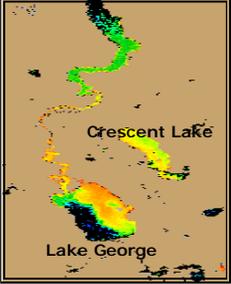
### Lake Dora and Lake Apopka



### Newnans, Lochloosa, & Orange Lakes



### St Johns River Lake George, and Crescent Lake

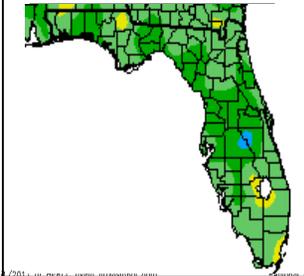


## Aquatic Toxins Disease Prevention Program Updates: Aquatic Rash Reports

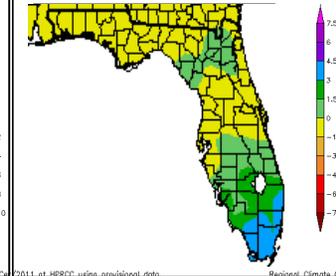
- The table on the right shows a FDOH analysis of 61 rash illnesses reported from 2007 to Oct. 2011 in swimmers at Florida Springs as reported by the Florida Department of Environmental Protection.
- More results from this analysis will be displayed in future satellite health bulletins.

Symptom	Yes	Total Responses (n)
Rash	61	61
Itching	41	47
Skin Tingling and/or Burning	15	47
Nausea	5	9
Sore or Irritated Throat	5	11
Diarrhea	4	9
Cough	4	7
Lightheadedness	4	11
Headache	4	11
Shortness of Breath	3	7
Neurological Tingling	3	11
Fatigue	2	3
Chest Tightness	2	7
Numbness	2	11
Weakness	2	11
Vomiting	1	9
Fever	1	3
Wheezing	1	7
Joint Pain	1	1
Vertigo	1	11

Departure from Normal Temperature (F) 10/24/2011 - 10/30/2011



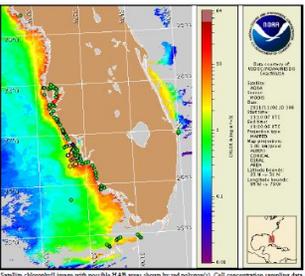
Departure from Normal Precipitation (in) 10/24/2011 - 10/30/2011



The MERIS Satellite Images above display a cyanobacteria index generated with a Medium Resolution Imaging Spectrometer (MERIS) satellite provided by the European Space Agency & NOAA.

- Very low likelihood of a bloom.
- May indicate clouds or missing data.
- Low cyanobacteria concentrations.
- Medium cyanobacteria concentrations.
- Probable bloom or higher cyanobacteria concentrations.

## Non CyanoHABs & Health Report: Southwest FL *K. Brevis* Bloom: Nov 3<sup>rd</sup> Update



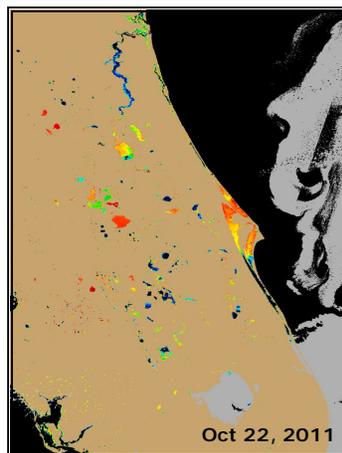
Gulf of Mexico Harmful Algal Bloom Bulletin-Region: Southwest Florida Thursday, November 3, 2011  
NOAA Ocean Service, NOAA Satellite and Information Service, NOAA National Weather Service

**Confirmed Species:** *Karenia brevis*  
**NOAA Gulf of Mexico Forecast:** the bloom is located alongshore & offshore Charlotte & northern to central Lee Counties, including the Gasparilla and Pine Island Sound  
**Change From Last Update:** the bloom is no longer located in Sarasota County  
**Concentration Range:** Very low concentrations in Charlotte and northern Lee counties at the northeast tip of Gasparilla Island in the Gasparilla Sound [Fish and Wildlife Research Institute/Florida Fish and Wildlife Conservation Commission (11/1; FWRI/FWC)] and very low concentrations in one sample collected at Port Boca Grande (10/28; FWRI/FWC). One sample collected about 15 miles southwest of Sanibel Island indicates medium concentrations offshore Lee County (10/27; FWRI/FWC)  
**Health Effects:** no illnesses were reported; health surveillance is ongoing  
**To Report a Fish Kill:** call the FWRI/FWC Fish Kill Hotline at 1-800-636-0511  
**Visit FWRI/FWC for Updates:** <http://myfwc.com/research/redtide/events/status/>

# Interpreting Medium Resolution Imaging Spectrometer Satellite Imagery



- The medium resolution imaging spectrometer (MERIS) is located on the Envisat satellite deployed by the European Space Agency.
- The cyanobacterial index algorithm shown in this report is designed to identify high biomass algal blooms caused by cyanobacteria. However, the current algorithm tends to have false positives, so other blooms may be "flagged". NOAA is currently testing new algorithms that are more specific to cyanobacteria.
- Data can be used to estimate near surface cyanobacteria concentrations which are an indication that algal blooms may be present.
- The mathematical algorithms used to generate the satellite images can vary, resulting in some models having a higher likelihood of detecting surface blooms.
- While patches of red or warm colors may indicate a bloom, these data have not been verified in most cases using ground-truth methods. Data collected by the satellite is considered experimental.
- Only portions of Florida are in the satellite's current coverage area.



- Several environmental factors may affect how results can be interpreted. For example, areas with abundant aquatic plant vegetation may present with a high cyanobacteria index on the color spectrum, resulting in a false positive bloom reading.
- The satellite identifies the 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. Turbidity does not otherwise influence the algorithms. The satellite imagery does not display the species of algae present.
- Cloud coverage can obscure imagery and create patches or gray areas on map and obscure bloom detection.
- 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.

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/climateinfo/historical/historical\\_fl.html](http://www.sercc.com/climateinfo/historical/historical_fl.html)

**Questions about the report or suggestions:** You can contact Becky Lazensky, MPH  
352-955-1900  
Becky\_Lazensky@doh.state.fl.us