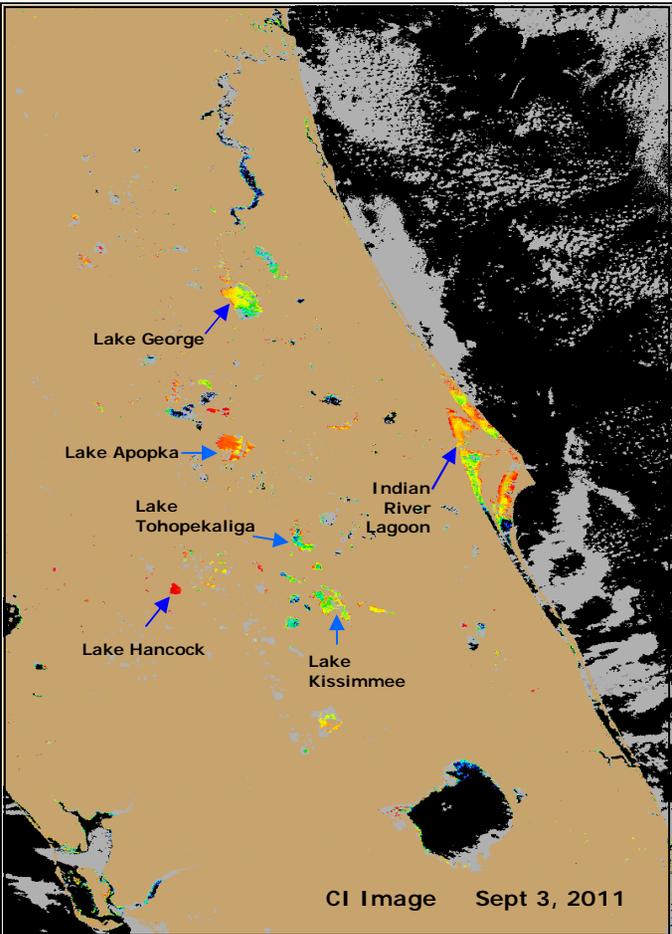


To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-888-232-8635. For questions about the report: please contact Becky Lazensky, FL-DOH, at 352-955-1900. Images/data were obtained from Florida Water Management 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)



## Conditions Report: Sept 3, 2011

- Cyanobacteria estimates were high in Lake Apopka, Lake George, and several other Central FL Lakes.
- The Kissimmee Chain of Lakes which includes Lake Tohopekaliga and Lake Kissimmee recently began displaying a low to medium cyanobacteria index indicating a greater likelihood for an algal bloom compared to past imagery data this season.
- A large kill fish including catfish was reported in the Ocklawaha River. This fish kill was first reported on Sept 2 in Welaka (Putnam County). A fish specimen from the bloom tested positive at the FWRI Kissimmee Diagnostics Lab for *Aeromonas*. For more information visit the HABs and Health section on right.

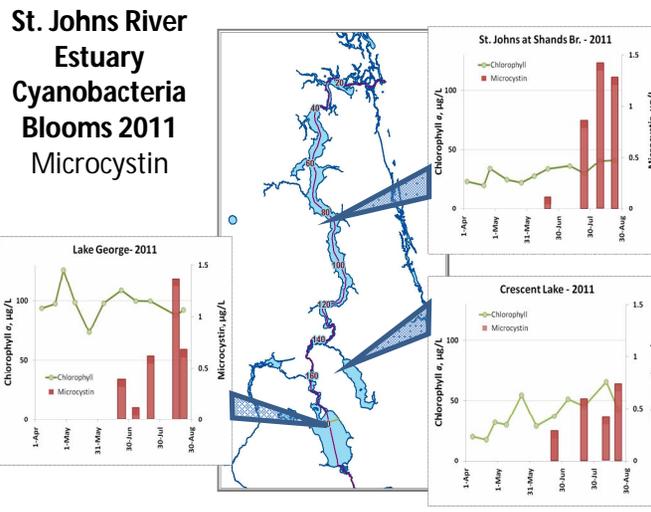
### Lake Apopka

### Kissimmee Chain of Lakes

### Lake George on left and Crescent Lake on right below

## St Johns River Water Management District Conditions Report: By John Hendrixson

Microcystin levels peaked in middle to late August in each of the sampling locations below compared to previous months. For more information email John Hendrixson at: [JHendrickson@sjrwmd.com](mailto:JHendrickson@sjrwmd.com)



## HABs and Health: *Aeromonas sp.* in Fish

**Ocklawaha River:** Fish specimens from kidney, brain, and organs samples tested positive for *Aeromonas sp.*, a common fish pathogen<sup>1</sup>. *Aeromonas sp.* can be found in aquatic environments at any time and should be considered one of many causes of recreational illness in swimmers.

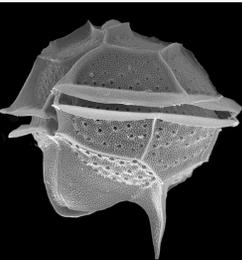
"Symptoms may include GI illness, cellulitis, urinary tract infections, and liver and ear infections, among others<sup>2</sup>."

For More Information visit: EPA- 1. [http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/data\\_aeromonas.cfm](http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/data_aeromonas.cfm) and 2. Popoff MY, et al. Polynucleotide sequence relatedness among motile *Aeromonas* species. *Curr Microbiol* 1981; 5: 109-14.

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.

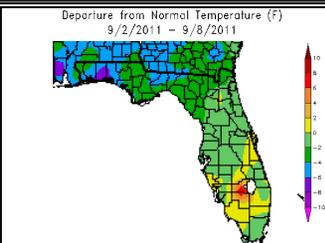
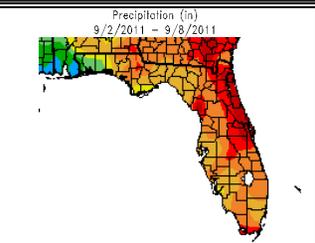
- Very low likelihood of a bloom.
- May indicate clouds or missing data.
- Low cyanobacteria concentrations.
- Medium cyanobacteria concentrations.
- Probable bloom or higher cyanobacteria concentrations.

## Ongoing *Pyrodinium Bahamense* Bloom



**Pyrodinium Bahamense**  
Photo credits: FWC  
<http://www.flickr.com/photos/myfwc/5807570539/sizes/m/in/set-72157626901129940/>

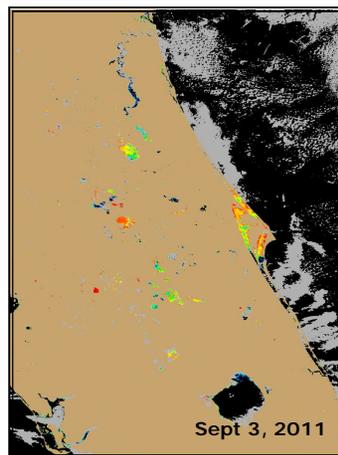
**Location:** Tampa Bay, FL  
**Confirmed Species:** *Pyrodinium bahamense*  
**Sampled By:** Florida Fish and Wildlife (FWC)  
**FWC Update (Sept 9):** "Samples collected alongshore in Tampa Bay showed either no presence or low abundance of *P. Bahamense*, suggesting a dissipation of the ongoing bloom first reported in mid-July."



# 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