



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

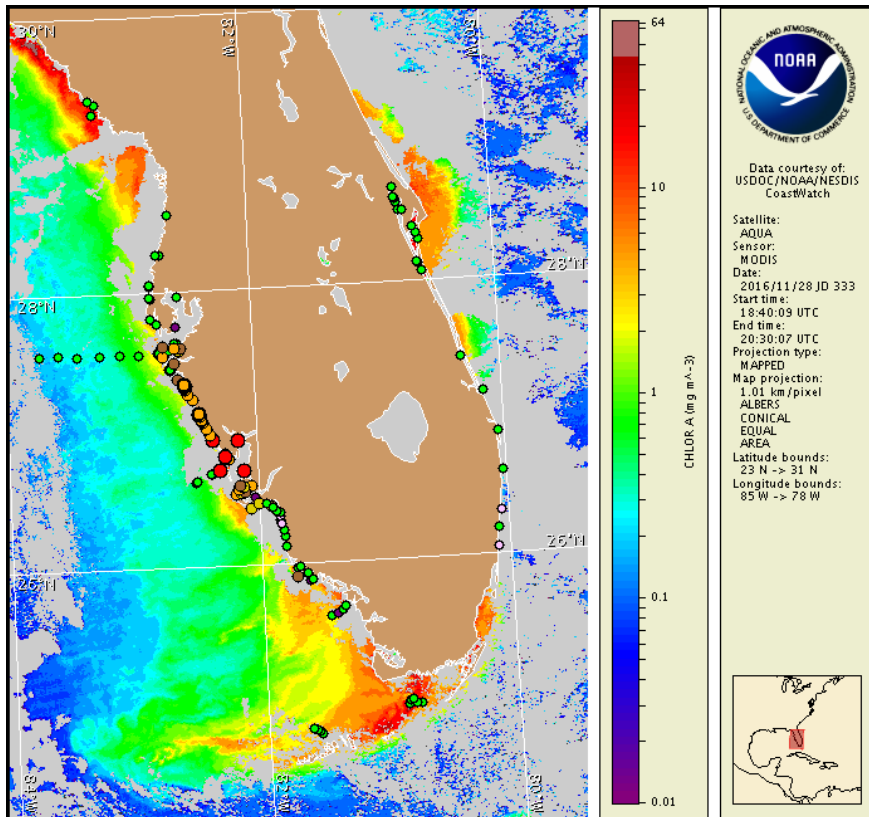
Thursday, 01 December 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 28, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 21 to 29: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/hab\\_publication/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf)

Detailed sample information can be obtained through FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

## Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as Florida red tide) are present along- and offshore portions of southwest Florida, and not present in the Florida Keys. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, December 1 through Monday, December 5 is listed below:

**County Region: Forecast (Duration)**

**Southern Pinellas: Very Low (Th-M)**

**Southern Pinellas, bay regions: Low (Th-M)**

**Northern Manatee, bay regions: Moderate (Th-M)**

**Southern Manatee: Low (Th-M)**

**Southern Manatee, bay regions: Moderate (Th-M)**

**Northern Sarasota: High (Th, M), Moderate (F-Su)**

**Northern Sarasota, bay regions: High (Th-M)**

**Southern Sarasota: Moderate (Th, M), Low (F-Su)**

**Southern Sarasota, bay regions: High (Th-M)**

**Northern Charlotte: Moderate (Th, M), Low (F-Su)**

**Northern Charlotte, upper harbor, bay regions: Moderate (Th-M)**

**Northern Charlotte, bay regions: Moderate (Th-M)**

**Southern Charlotte: Low (Th-M)**

**Southern Charlotte, bay regions: Moderate (Th-M)**

**Northern Lee: Low (Th-M)**

**Northern Lee, bay regions: Moderate (Th-M)**

**Central Lee: Low (Th-Sa), Moderate (Su-M)**

**Central Lee, bay regions: Moderate (Th-M)**

**Southern Lee: Low (Th-M)**

**Southern Lee, bay regions: Low (Th-M)**

**Northern Collier: Very Low (Th-M)**

**Central Collier: Very Low (Th-M)**

**Central Collier, bay regions: Very Low (Th-M)**

**All Other SWFL County Regions: None expected (Th-M)**

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](http://tidesandcurrents.noaa.gov/hab/beach_conditions.html) for recent, local observations. Health information, from the Florida Department of Health and other agencies, is available at [http://tidesandcurrents.noaa.gov/hab/hab\\_health\\_info.html](http://tidesandcurrents.noaa.gov/hab/hab_health_info.html). Over the last few days, respiratory irritation has been reported from Sarasota, Charlotte, and Lee counties. Dead fish have been reported from Pinellas, Sarasota, Lee, and Collier counties.

## Analysis

New samples collected along-and offshore the coast of southwest Florida continue to indicate up to 'high' concentrations of *Karenia brevis* are present from Pinellas to Monroe counties, with the highest concentrations located in the bay regions of Sarasota, Charlotte, and Lee counties (FWRI, MML, SCHD, CCENRD; 11/21-11/29). 'High' concentrations of *K. brevis* have been newly identified in upper Charlotte Harbor in the bay regions of northern Charlotte County (FWRI; 11/28). Concentrations of *K. brevis* have decreased to 'medium' alongshore and in the bay regions of Manatee and Sarasota

counties; and to 'very low a' in the bay regions of Pinellas County (FWRI, SCHD; 11/28-11/29). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at: <http://myfwc.com/redtidestatus>. Slight to moderate respiratory irritation has been reported from several locations in Sarasota County, and slight respiratory irritation has also been reported from Newton Park alongshore southern Lee County (MML; 11/28-12/1). Dead fish have been reported from Pinellas, Sarasota, Lee, and Collier counties. (FWRI, MML; 11/28-12/1).

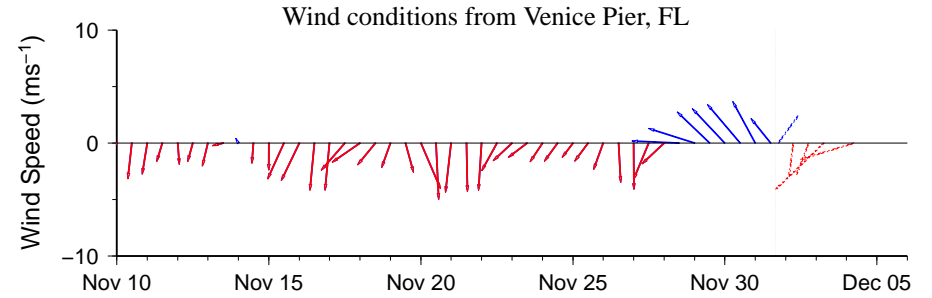
Recent ensemble imagery (MODIS Aqua, 11/28) is partially obscured by clouds along the coast of southwest Florida, limiting analysis. Patches of elevated to high (2-10  $\mu\text{g/L}$ ) chlorophyll with the optical characteristics of *K. brevis* are visible offshore Lee and Collier counties, extending up to 10 miles offshore.

Forecasted winds Friday through Sunday (12/2-12/4) may promote southerly transport of surface *K. brevis* concentrations alongshore southwest Florida. Winds forecasted Saturday through Monday (12/3-12/5) may increase the potential for bloom intensification at the coast alongshore southern Lee and Collier counties.

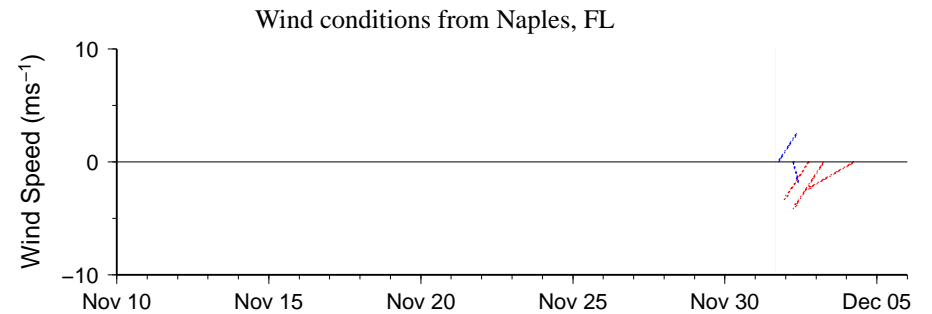
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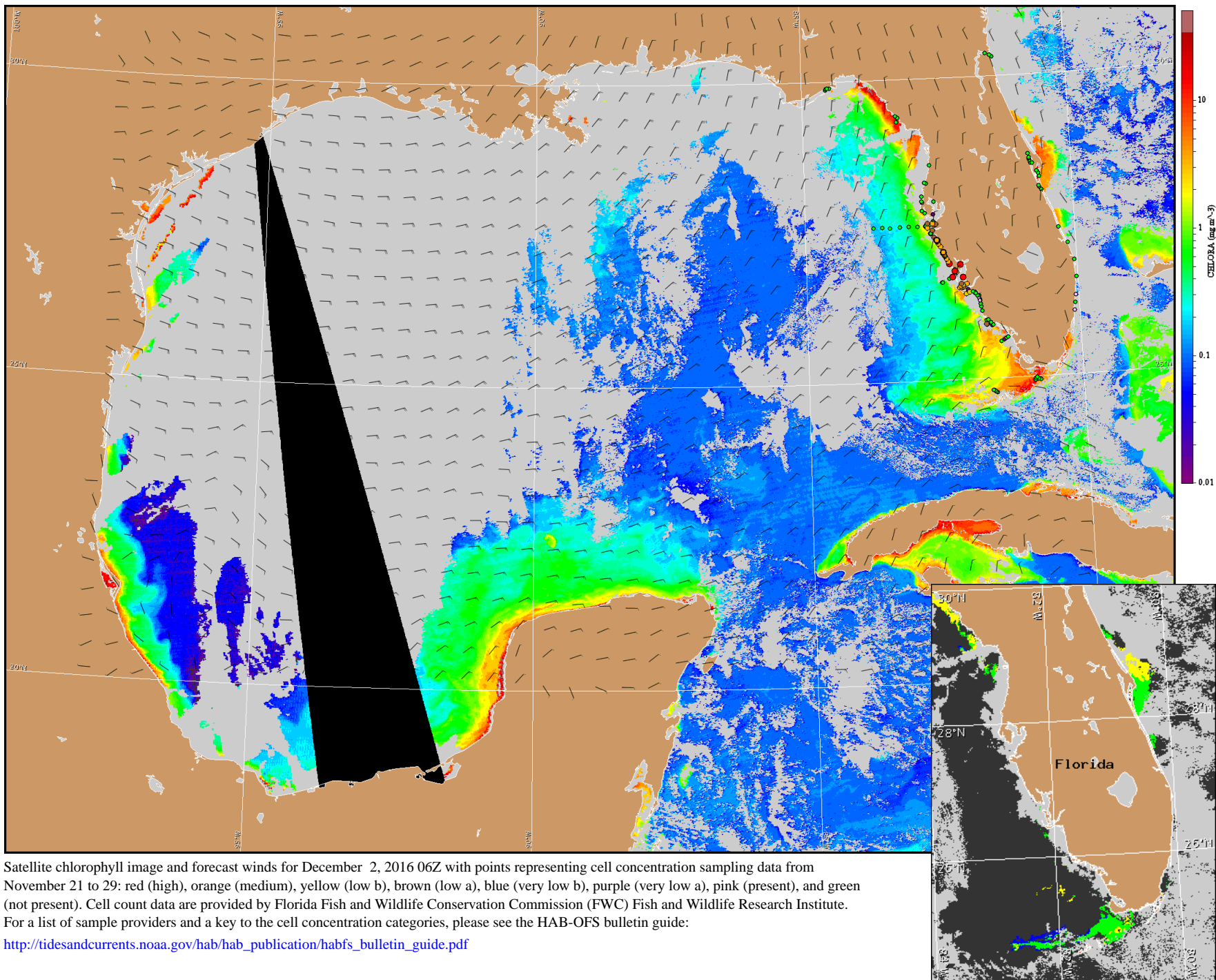
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



## Wind Analysis

**Englewood to Tarpon Springs (Venice):** South winds (10kn, 5m/s) today becoming north to northwest winds (5-15kn, 3-8m/s) this evening. Northeast to east winds (5-15kn) Friday through Sunday evening. Southeast winds (10kn) Sunday and Monday.

**Chokoloskee to Bonita Beach:** Southerly winds (5kn, 3m/s) today becoming northeast winds (5-15kn, 3-8m/s) Thursday evening through Saturday. Southerly winds (10-15kn, 5-8m/s) Sunday and Monday.



Satellite chlorophyll image and forecast winds for December 2, 2016 06Z with points representing cell concentration sampling data from November 21 to 29: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: [http://tidesandcurrents.noaa.gov/hab/hab\\_publication/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf)

Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).