



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

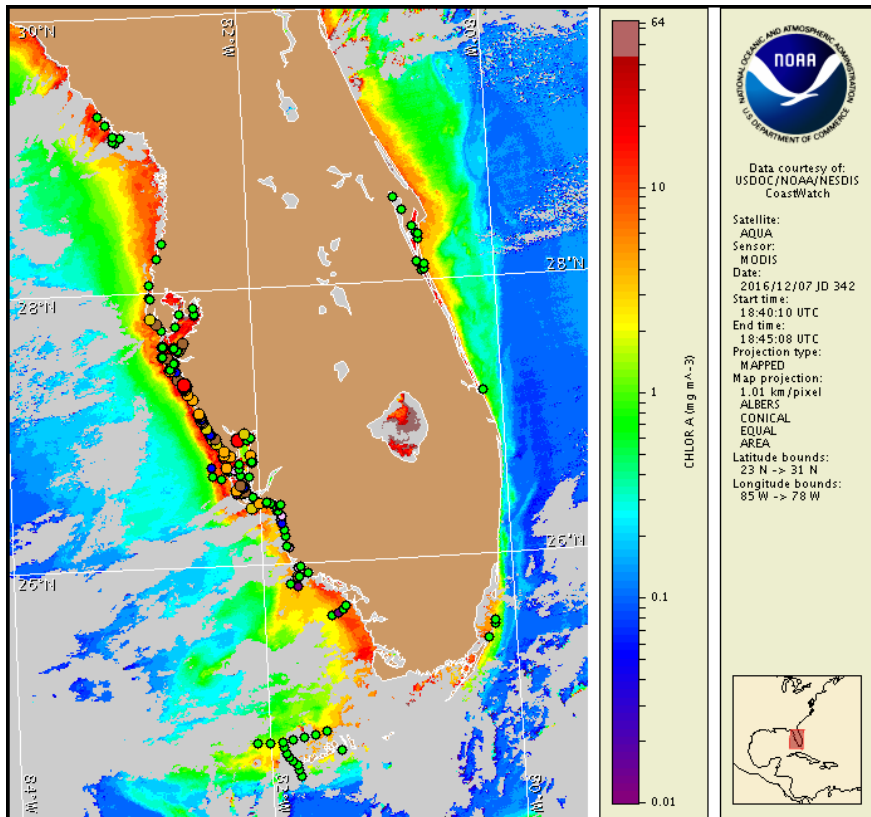
Thursday, 08 December 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 5, 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 28 to December 7: 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 8 through Monday, December 12 is listed below:

**County Region: Forecast (Duration)**

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

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

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

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

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

**Northern Sarasota: Moderate (Th-M)**

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

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

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

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

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

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

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

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

**Northern Lee: Very Low (Th-Su), Low (M)**

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

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

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

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

**Northern Collier: None (Th-Su), Very Low (M)**

**Central Collier: 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 Manatee and Sarasota counties. Dead fish have been reported from Manatee, Sarasota, Charlotte, and Lee 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 Collier counties, with the highest concentrations located in the bay regions of Sarasota and Charlotte counties (FWRI, MML, SCHD, CCENRD; 11/29-12/7). Alongshore southern Pinellas County, new sampling indicates *K. brevis* concentrations have increased to 'low b' from 'low a' (FWRI; 12/5). New samples collected in the upper region of Charlotte Harbor indicate *K. brevis* concentrations have decreased to 'low b' where up to 'high' concentrations were detected on 11/28 (FWRI; 12/5). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute

at: <http://myfwc.com/redtidestatus>. Respiratory irritation has been reported from several locations in Manatee and Sarasota counties (MML; 12/5-12/8). Fish kills have been reported throughout southwest Florida from Manatee to Lee counties (FWRI, MML; 12/5-12/8).

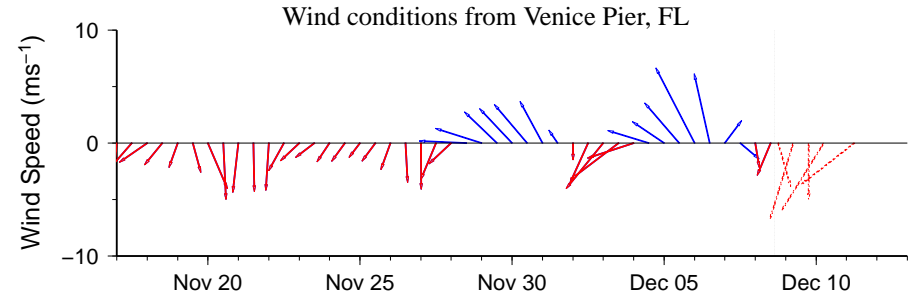
Recent ensemble imagery (MODIS Aqua, 12/7) is partially obscured by clouds along and offshore from central Lee to central Collier counties, limiting analysis. Patches of elevated to very high (2 to  $>20\mu\text{g/L}$ ) chlorophyll with some of the optical characteristics of *K. brevis* are visible alongshore southwest Florida from southern Manatee to central Lee County, where respiratory irritation and fish kills have recently been reported.

Forecasted winds today through Saturday (12/8-12/10) may promote southerly transport of surface *K. brevis* concentrations alongshore southwest Florida. Offshore winds forecast today through Sunday (12/8-12/11) may reduce the potential for respiratory irritation at the coast.

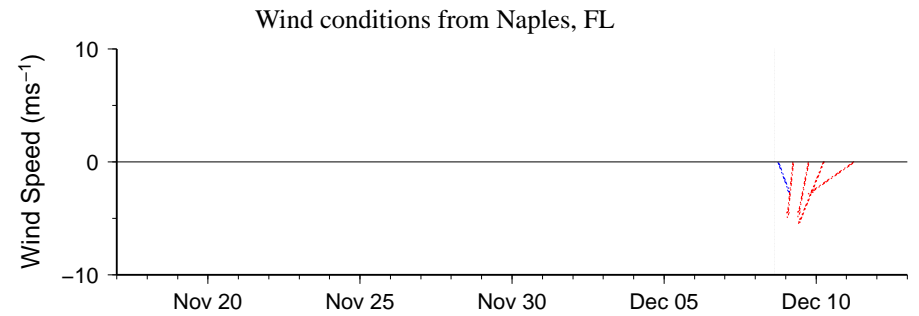
Davis, Yang

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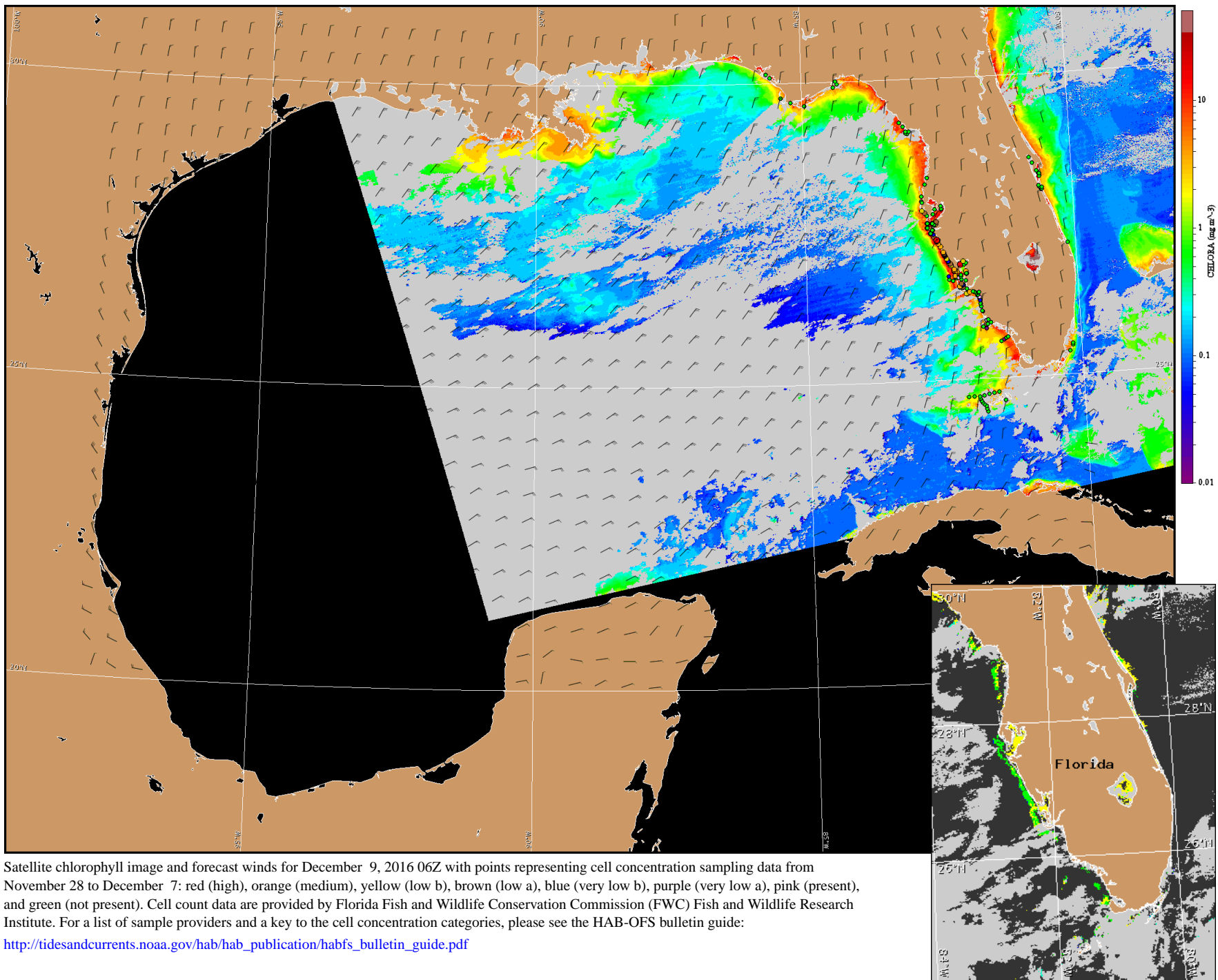
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



## Wind Analysis

**Englewood to Tarpon Springs (Venice):** Northeast to north winds (5-20kn, 3-10m/s) today through Saturday becoming east winds (10-15kn, 5-8m/s) Saturday night. East to southeast winds (5-15kn, 3-8m/s) Sunday. South to southwest winds (5-10kn, 3-5m/s) Monday.

**Chokoloskee to Bonita Beach:** Northwest to northeast winds (5-15kn) today. Northeast-erly winds (15-30kn, 8-15m/s) Friday through Saturday. East winds (15-20m/s, 8-10m/s) Sunday. South southeast winds (5-10kn) Monday.



Satellite chlorophyll image and forecast winds for December 9, 2016 06Z with points representing cell concentration sampling data from November 28 to December 7: 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:

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