



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

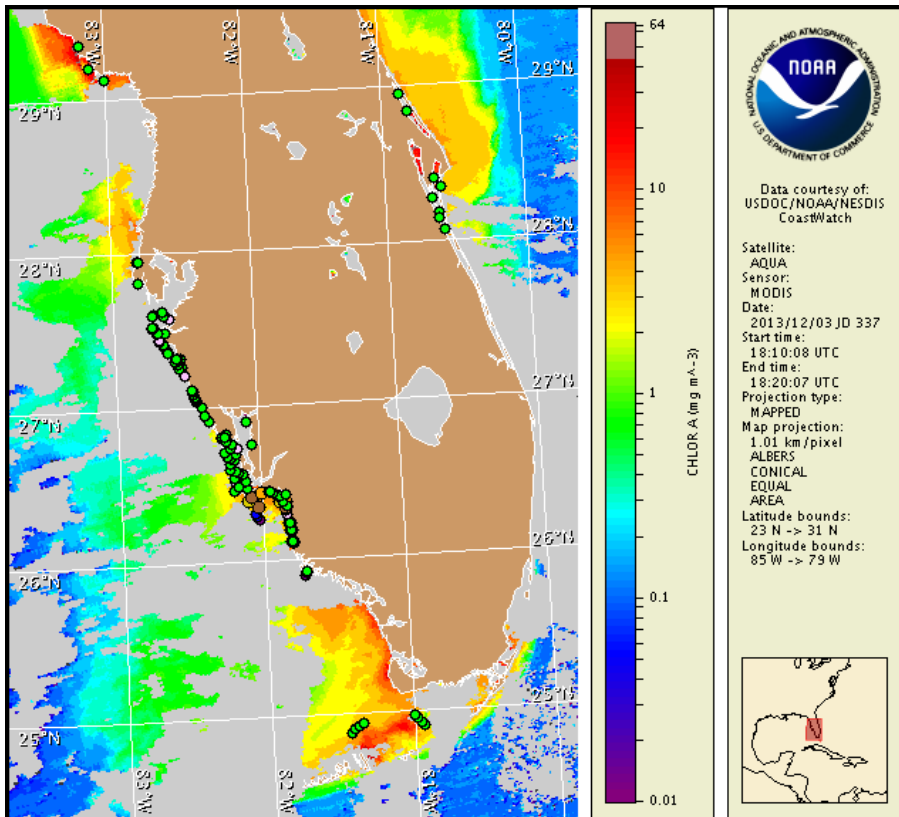
Thursday, 05 December 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 2, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 25 to December 4: 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/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/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 medium 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 5 to Monday, December 9 is listed below:

**County Region:** Forecast (Duration)

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

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

**Southern Lee:** Moderate (Th), Very Low (F-M)

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

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

**All Other SWFL County Regions:** None (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 past several days, reports of respiratory irritation associated with *K. brevis* have been received from northern and central Collier County.

## Analysis

Samples collected over the past ten days along- and offshore southwest Florida indicate that *Karenia brevis* concentrations range from 'not present' to 'medium', and are not present in the Florida Keys (FWRI, MML, SCHD, CCPCPD; 11/25-12/4). Recent samples collected from the bay regions of Charlotte and Lee counties identified several 'background' concentrations of *K. brevis* in northern and central Lee County, while all other samples indicate that *K. brevis* is not present (FWRI; 11/25-12/3). Alongshore southern Lee County, a sample identified 'very low a' *K. brevis* concentrations (FWRI; 11/26). *K. brevis* was also not present in samples collected alongshore northern Collier County (FWRI, CCPCD; 12/2), but respiratory irritation was reported from Vanderbilt Beach (FWRI; 12/2). In central Collier County, samples indicate up to 'very low b' concentrations of *K. brevis* (FWRI, CCPCD; 12/2-3), and respiratory irritation was reported from Marco Island (FWRI, CCPCD; 12/3).

Over the last several days, MODIS Aqua imagery has been partially obscured by clouds along- and offshore the coast of southwest Florida from Pinellas to Lee counties, limiting analysis. In MODIS Aqua imagery from 12/3 (shown left), elevated to high chlorophyll (2-11  $\mu\text{g/L}$ ) is visible alongshore central and southern Lee County. MODIS Aqua imagery from both 12/3 and 12/4 (not shown) indicate patches of elevated to high chlorophyll (2-11  $\mu\text{g/L}$ ) approximately 5-30 miles south of the Marco Island region.

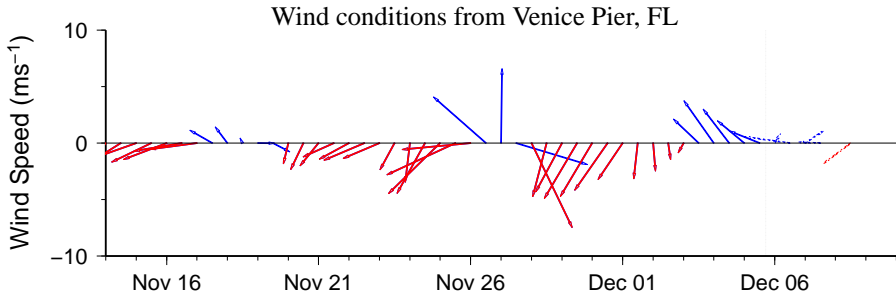
Forecasted winds over the next several days are unlikely to favor intensification of *K. brevis* concentrations at the coast, but there is a potential for northerly transport.

Kavanaugh, Davis

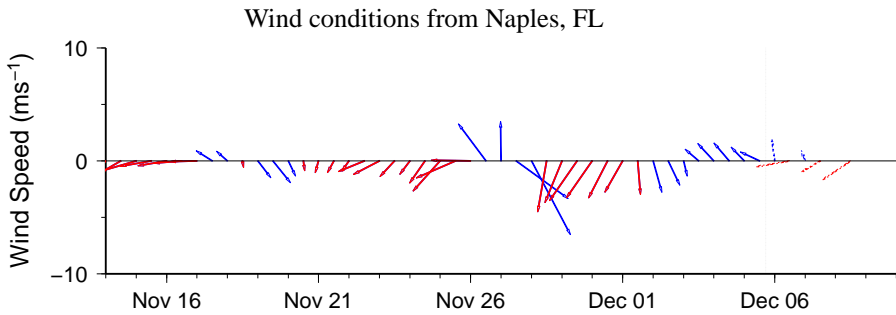
## Wind Analysis

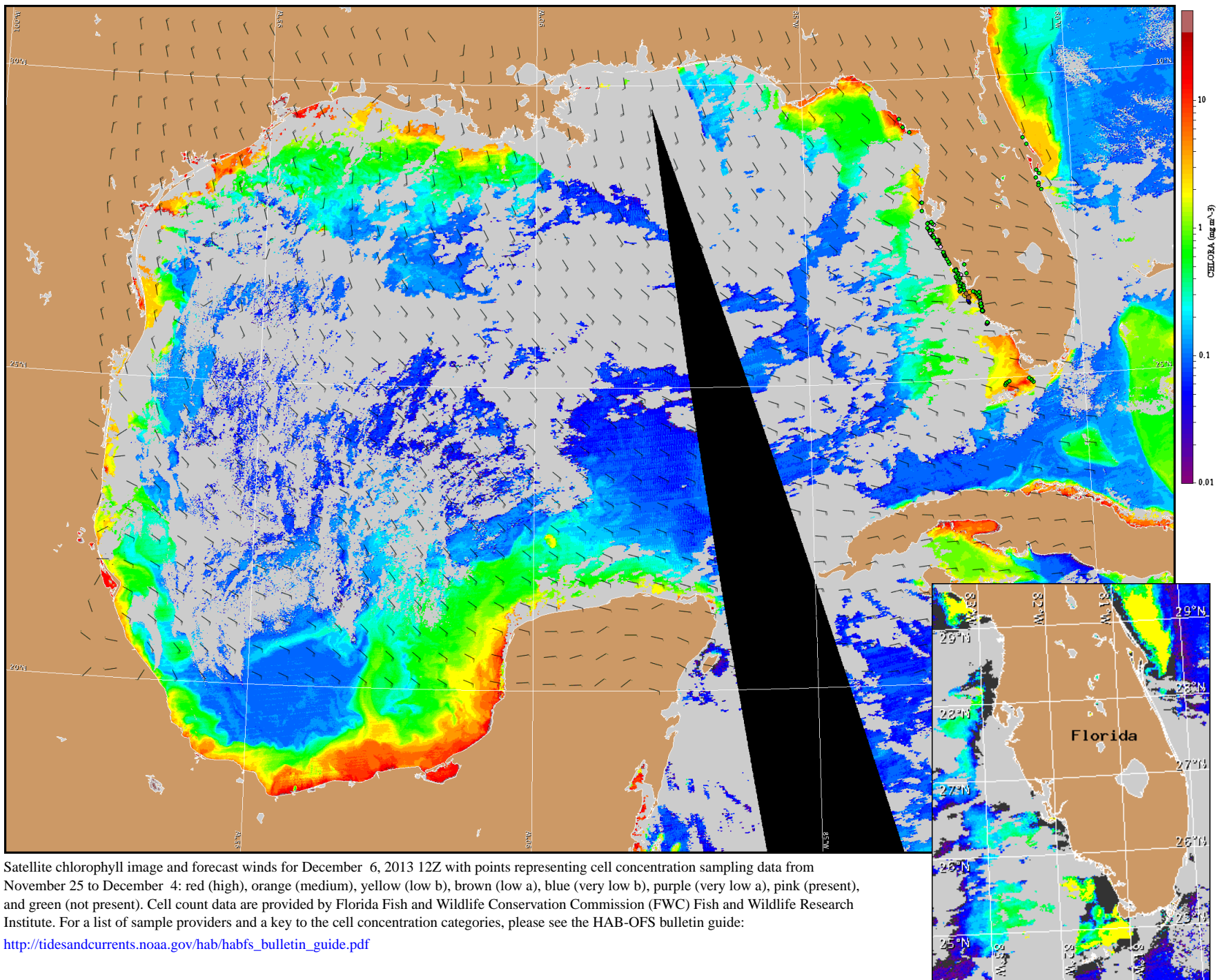
**Lee County:** Southeast winds (5-10 kn, 3-5 m/s) today becoming southwest in the afternoon. South winds (5-10 kn) tonight becoming southeast winds (10 kn, 5 m/s) after midnight. Southeast winds (10 kn) Friday and Saturday becoming east winds (5 kn, 3 m/s) Saturday afternoon. Northeast winds (10 kn) Saturday night becoming east winds after midnight. Southeast winds (10 kn) Sunday becoming south winds (10-15 kn, 5-8 m/s) Monday.

**Collier County:** East southeast winds (8-17 kn, 4-9 m/s) today through Friday. East winds (10-17 kn, 5-9 m/s) Friday night through Saturday night. Southeast winds (12-17 kn, 6-9 m/s) Sunday through Monday.



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).





Satellite chlorophyll image and forecast winds for December 6, 2013 12Z with points representing cell concentration sampling data from November 25 to December 4: 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 of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).