



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

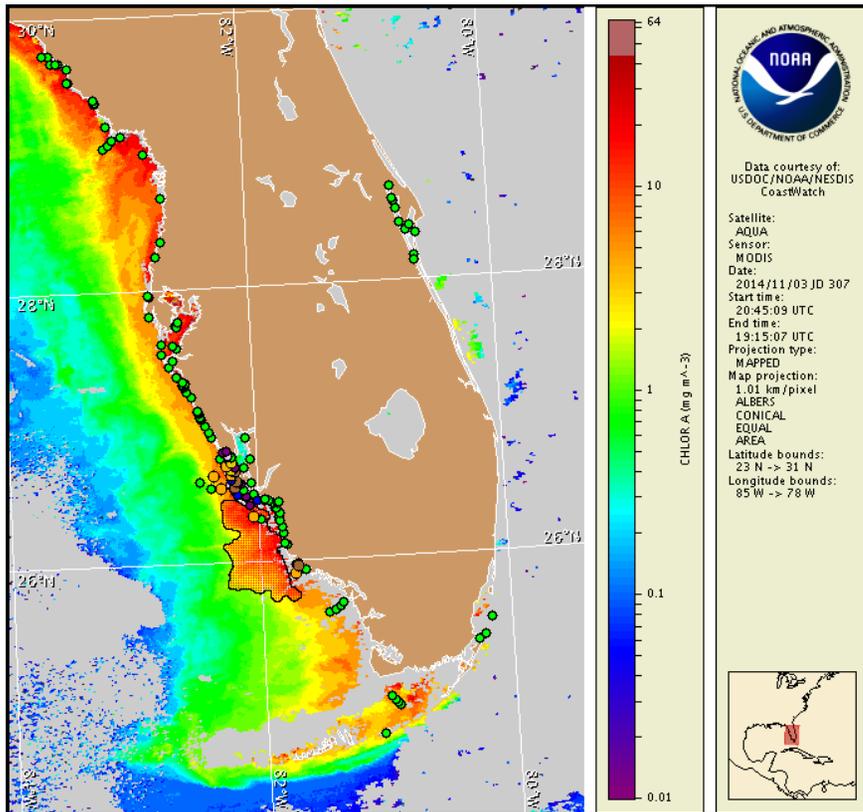
Thursday, 06 November 2014

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 3, 2014



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 27 to November 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, November 6 to Monday, November 10 is listed below:

**County Region: Forecast (Duration)**

**Southern Charlotte, bay regions:** Very Low (Th-Sa, M), None (Su)

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

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

**Central Lee:** Very Low (Th, Sa), None (F, Su-M)

**Central Lee, bay regions:** Very Low (Th-Sa, M), None (Su)

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

**Central Collier, bay regions:** 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). No reports of respiratory irritation have been received from Lee County over the past few days (MML; 11/3-6). Reports of dead fish have been received from central Lee County (FWRI; 11/3).

Visit <http://tidesandcurrents.noaa.gov/hab/#nwfl> for the most recent northwest Florida conditions report.

## Analysis

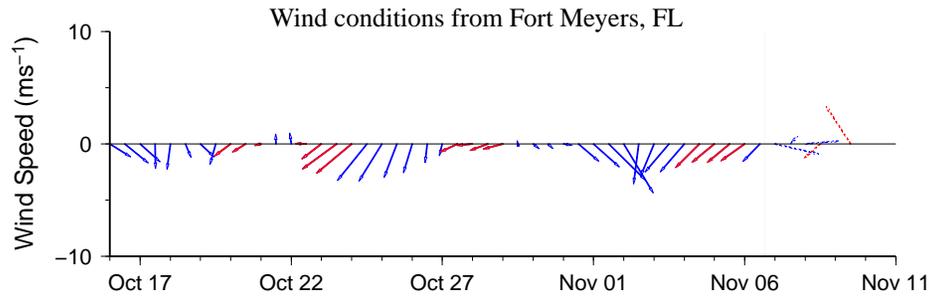
Not present to medium concentrations of *Karenia brevis* are present along- and offshore portions of southwest Florida from Pinellas to Collier counties (FWRI, MML, CCPCPD; 10/31-11/4). Early this week, several samples identified 'background' to 'medium' *K. brevis* concentrations throughout the Pine Island Sound region of Lee County, with the highest concentrations identified at Boca Grande Pass and Cabbage Key (FWRI; 11/3). 'Very low a' to 'low b' *K. brevis* concentrations were also identified in the Gasparilla Sound region of southern Charlotte County, with 'low b' concentrations identified 2.4 miles east of Boca Grande Pass (FWRI; 11/3). 'Low a' and 'medium' concentrations of *K. brevis* were identified within the Marco Island region of central Collier County at Jolly Bridge and South Marco Beach, respectively (FWRI, CCPCPD; 11/3). Samples collected offshore southern Lee County late last week also identified 'medium' *K. brevis* concentrations 13 miles west of Little Hickory Island (FWRI; 10/31). All samples collected elsewhere along- and offshore Dixie to Collier counties and the Florida Keys, including within the Estero Bay region of southern Lee County and alongshore northern Collier County, indicated that *K. brevis* is not present (FWRI, MML, CCPCPD; 10/31-11/4). Over the past few days, reports of dead fish have been received from the Tarpon Bay/Lighthouse Beach area of Sanibel Island in central Lee County (FWRI; 11/3).

In recent MODIS Aqua imagery (11/3, shown left), patches of elevated chlorophyll (2 to 10  $\mu\text{g/L}$ ) are visible stretching along- and offshore Pinellas to Collier counties, with

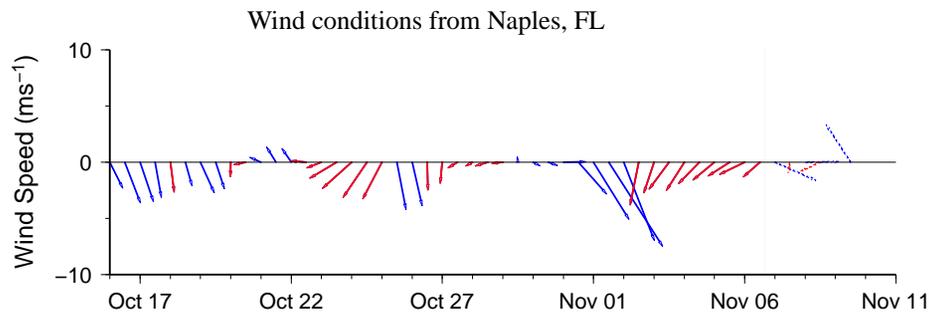
patches of high to very high (10 to >20  $\mu\text{g/L}$ ) chlorophyll visible along- and offshore southern Lee to northern Collier counties, extending up to 10-26 miles offshore this region.

Upwelling favorable winds observed over the past several days may have intensified bloom concentrations at the coast. Forecasted winds over the next several days may promote southerly transport of surface *K. brevis* concentrations. Forecasted winds today through Monday may increase the potential for respiratory irritation alongshore northern and central Lee County and central Collier County, particularly in the bay regions.

Derner, Yang



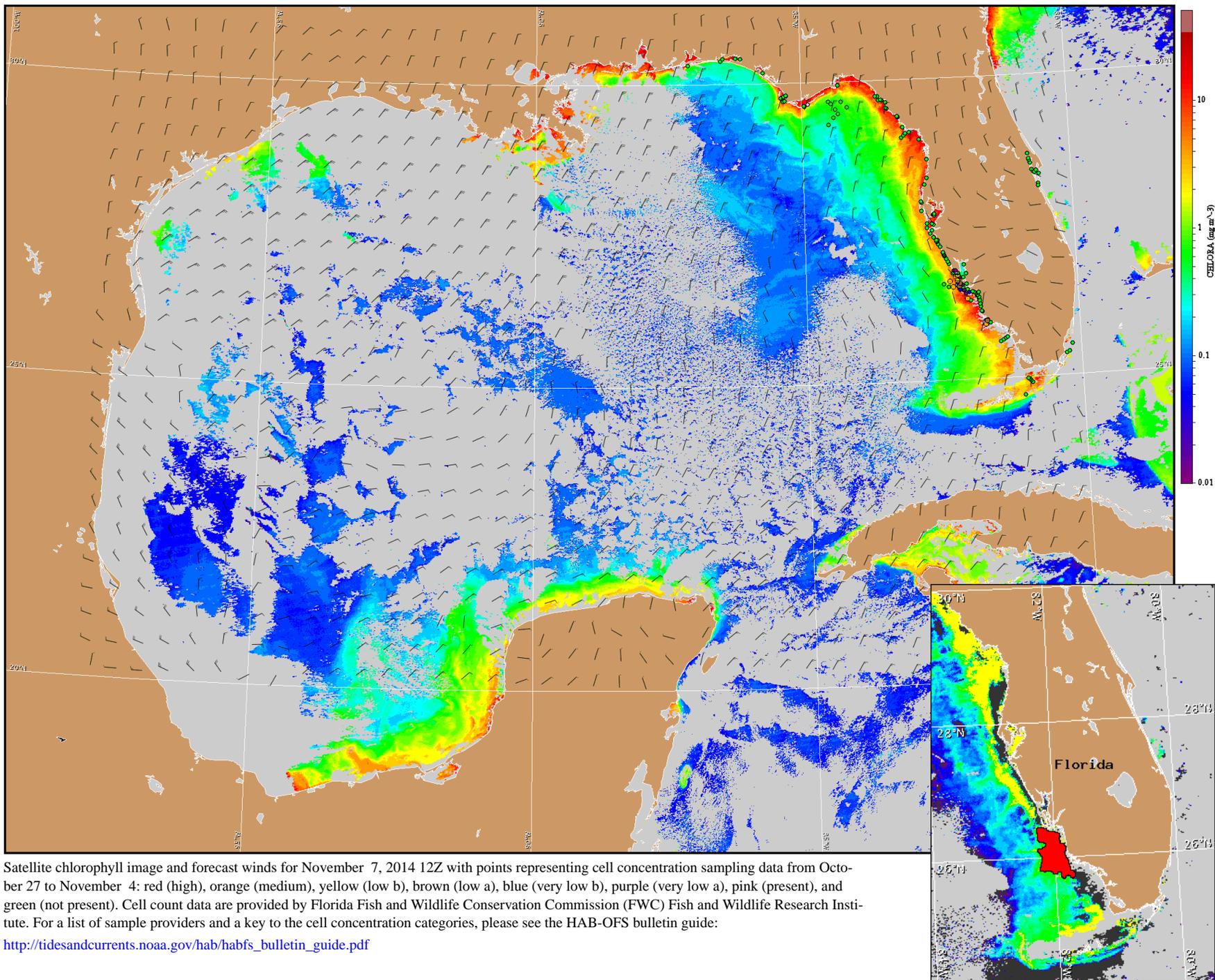
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



## Wind Analysis

**Bonita Beach to Englewood (Fort Meyers Buoy):** Northeast winds (5-10kn, 3-5m/s) today becoming northwest (10-15kn, 5-8m/s) this afternoon through tonight. North to northwest winds (5-15kn, 3-8m/s) Friday. East winds (10kn, 5m/s) Saturday becoming north to northeast (5-10kn) Saturday night. Northwest winds (10-15kn) Sunday becoming north (10-15kn) Sunday night. Northeast winds (10kn) Monday.

**Chokoloskee to Bonita Beach (Naples Buoy):** Northerly winds (5-10kn) today. North northwest winds (5-10kn) Friday. East winds (5-10kn) Saturday becoming southeast in the afternoon. South southwest to west winds (5-10kn) Saturday night. North winds (10-15kn) Sunday becoming north northeast Sunday night. Northeast winds (10-15kn) Monday.



Satellite chlorophyll image and forecast winds for November 7, 2014 12Z with points representing cell concentration sampling data from October 27 to November 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).