



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

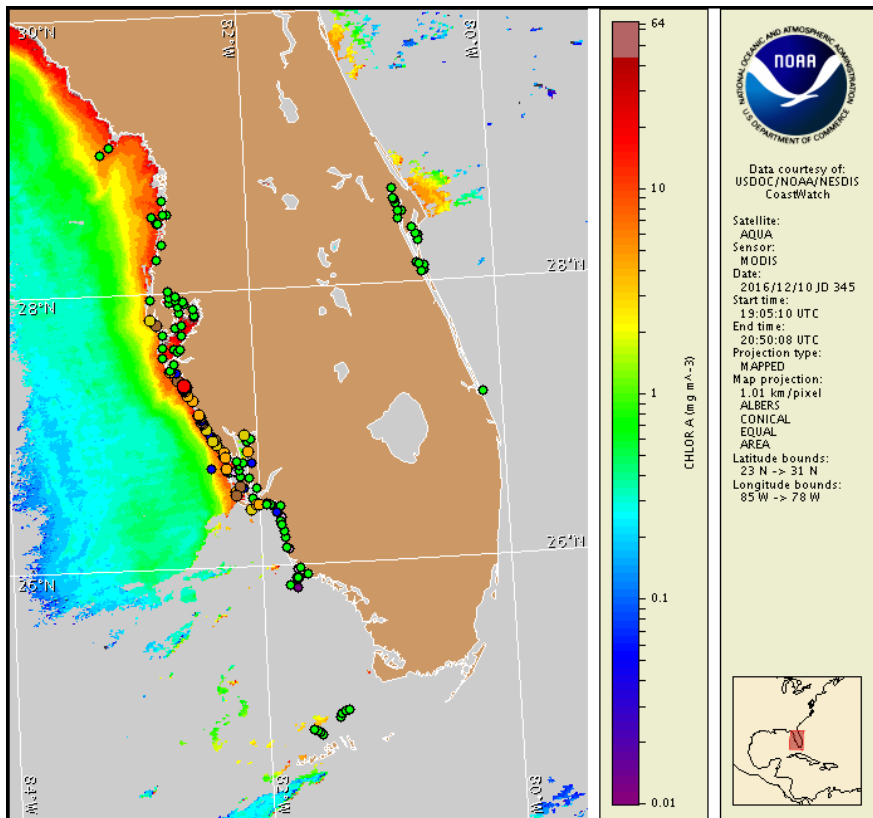
Monday, 12 December 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, December 8, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from December 2 to 9: 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 Monday, December 12 through Thursday, December 15 is listed below:

### County Region: Forecast (Duration)

**Southern Pinellas:** Low (M-Tu, Th), Moderate (W)

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

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

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

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

**Northern Sarasota:** Moderate (M-W), Low (Th)

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

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

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

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

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

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

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

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

**Northern Lee:** Low (M, Th), Moderate (Tu-W)

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

**Central Lee:** Low (M, Th), Moderate (Tu-W)

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

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

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

**Central Collier:** Very Low (M-Tu, Th), Low (W)

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

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 and Manatee counties. Dead fish have been reported from Manatee, 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 Lee counties, with 'high' concentrations located in the bay regions of northern Sarasota County and 'medium' concentrations located in the bay regions of southern Charlotte and central Lee County, and alongshore central Lee County (FWRI, MML, SCHD, CCENRD; 12/6-12/9). 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; 12/8-12/12). Fish kills have been reported from Manatee, Sarasota, Lee, and Collier counties (FWRI, MML, CCENRD; 12/8-12/12).

Recent ensemble imagery (MODIS Aqua, 12/10) is obscured by clouds along and off-shore from southern Lee to Monroe counties, limiting analysis. Patches of elevated to high (2 to 16  $\mu\text{g/L}$ ) 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.

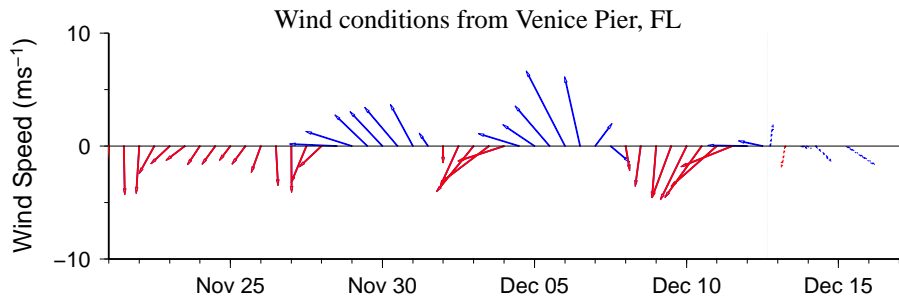
Variable winds forecast today through Thursday (12/12-12/15) will minimize the potential for transport of *K. brevis* concentrations at the coast of southwest Florida.

Yang, Davis

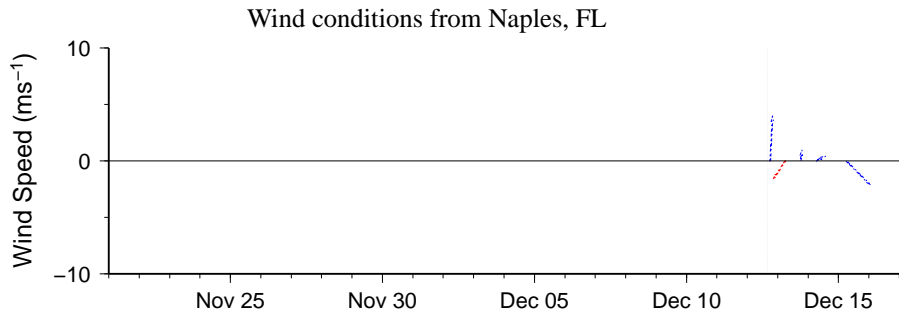
## Wind Analysis

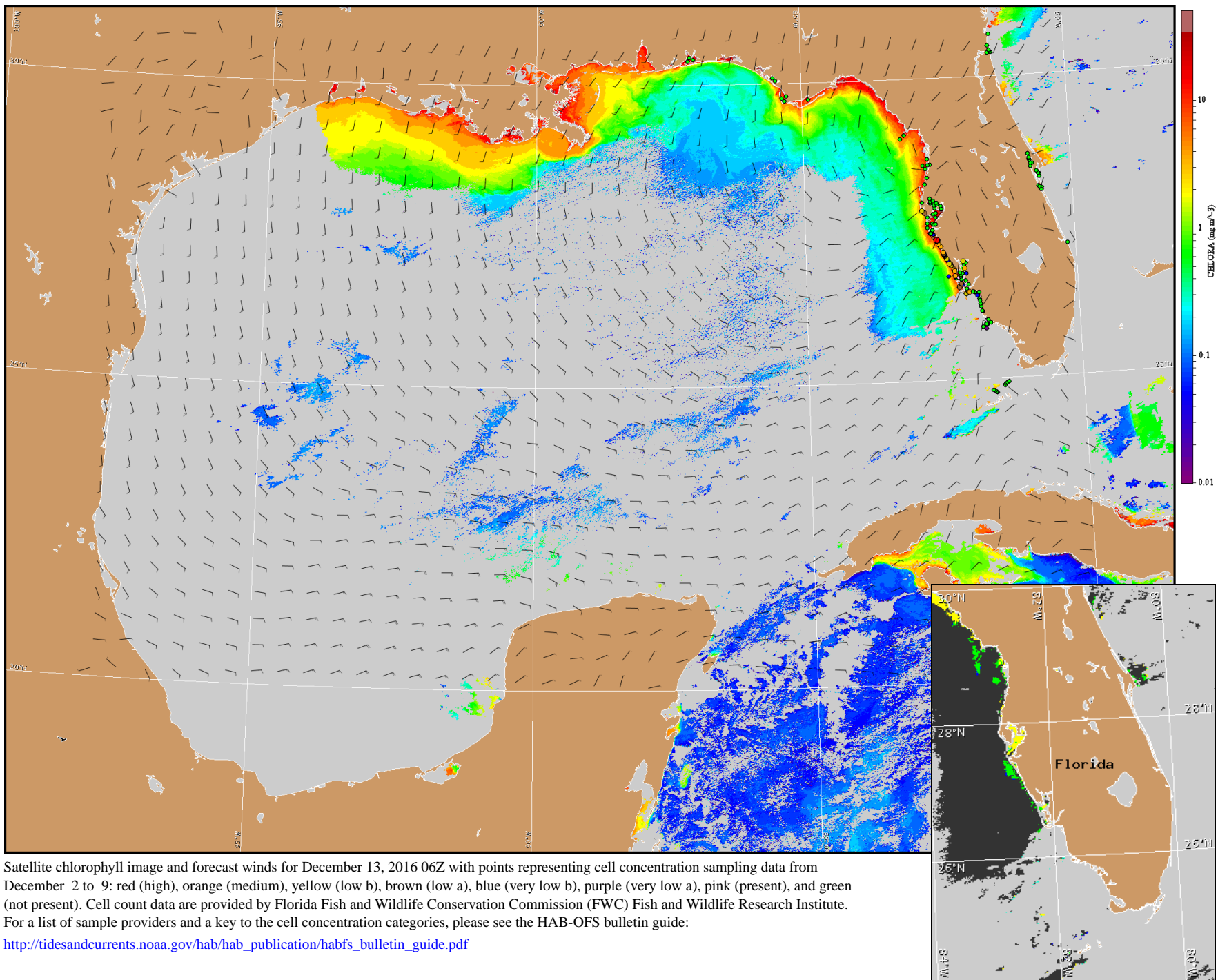
**Englewood to Tarpon Springs (Venice):** Southeast winds (10kn, 5m/s) becoming west (5kn, 3m/s) Monday afternoon. Variable winds (5kn) Monday nights through Wednesday. Northwest winds (10kn) Wednesday night. North to northeast winds (5-15kn, 3-8m/s) Thursday.

**Chokoloskee to Bonita Beach:** Southeast winds (5-kn, 3m/s) today becoming south Monday afternoon. Northeast to east winds (5-10kn, 3-5m/s) tonight through Thursday night.



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 13, 2016 06Z with points representing cell concentration sampling data from December 2 to 9: 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).