



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

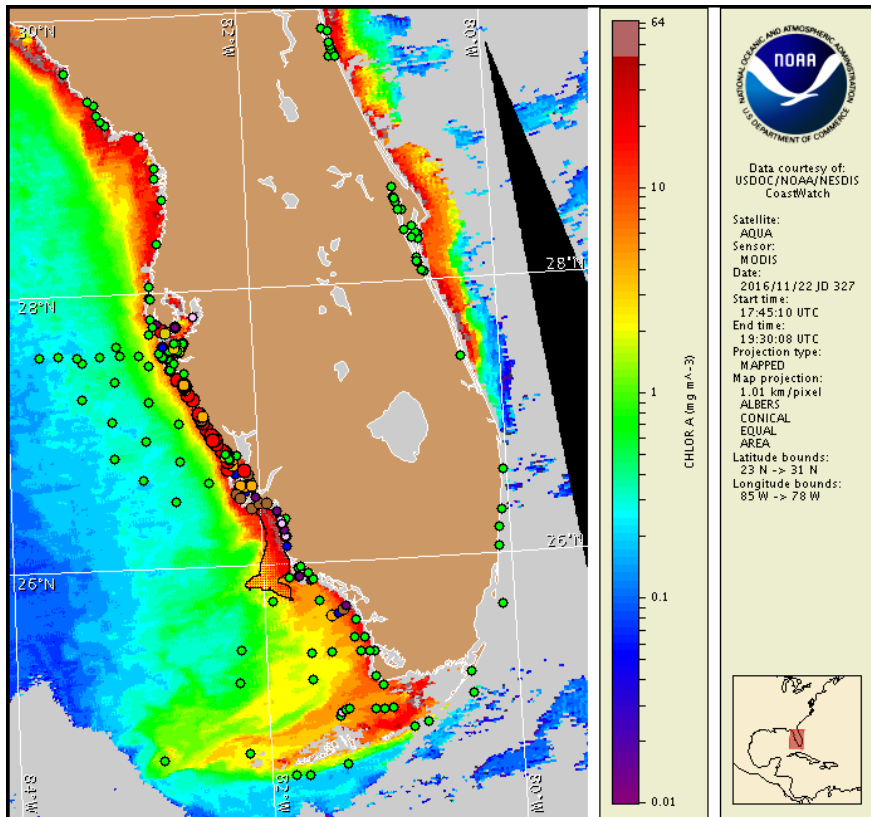
Wednesday, 23 November 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 21, 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 13 to 22: 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 Wednesday, November 23 through Monday, November 28 is listed below:

### County Region: Forecast (Duration)

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

**Southern Pinellas, bay regions:** Moderate (W-M)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Central Lee, bay regions:** Low (W-M)

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

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

**Northern Collier:** Low (W-M)

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

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

**All Other SWFL County Regions:** None expected (W-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 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 Monroe counties, with the highest concentrations located in the bay regions of Sarasota, Charlotte, and Lee counties (FWRI, MML, SCHD, CCENRD; 11/18-11/22). Samples from offshore central and southern Collier and Monroe counties, including the Florida Keys indicated *Karenia brevis* is not present (FWRI, MML, SCHD, CCENRD; 11/14-11/22). 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. Slight and moderate respiratory irritation has been reported Sarasota, Charlotte, and Lee counties (MML; 11/21-11/23). Dead fish have been reported from Manatee to Lee counties (FWRI, MML; 11/21, 11/23).

Recent ensemble imagery (MODIS Aqua, 11/22) indicates the presence of elevated to very high (2 to  $>20\mu\text{g/L}$ ) chlorophyll with the optical characteristics of *K. brevis* is visible along- and offshore Pinellas to Monroe counties, extending up to 7 miles offshore from central Lee to northern Collier counties.

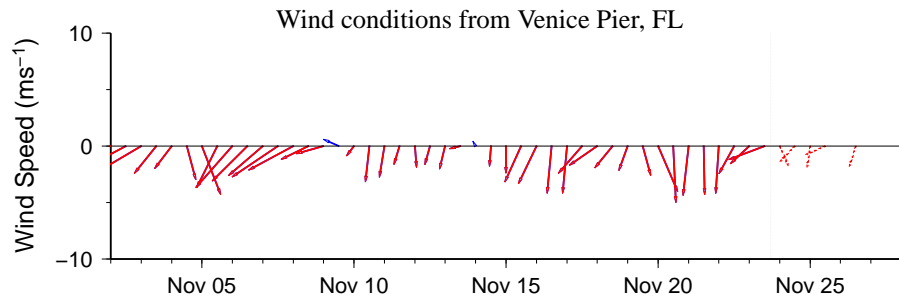
Forecasted winds today through Sunday (11/23-11/27) may promote southerly transport of surface *K. brevis* concentrations alongshore southwest Florida.

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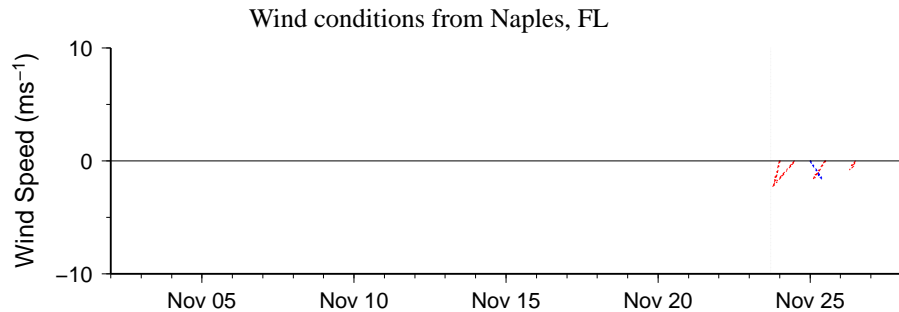
## Wind Analysis

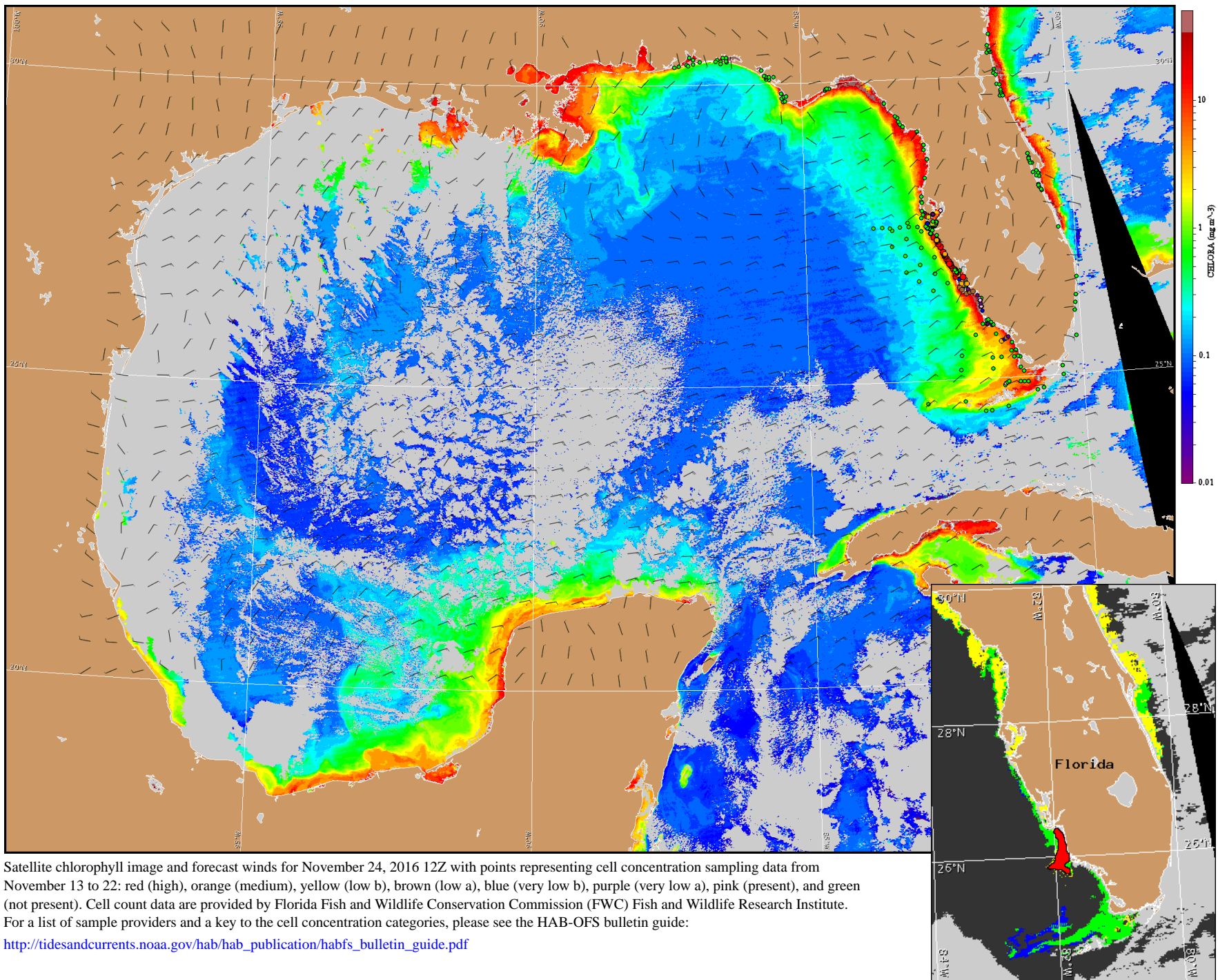
**Englewood to Tarpon Springs (Venice):** Southeast to northwest winds (5kn, 3 m/s) today. North to northeast winds (10kn, 5m/s) Tuesday evening through Monday.

**Chokoloskee to Bonita Beach:** East to northeast winds (5-15kn, 3-8m/s) today through Friday. North to northeast winds (5-15kn) Saturday and Sunday.



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 November 24, 2016 12Z with points representing cell concentration sampling data from November 13 to 22: 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.

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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).