



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

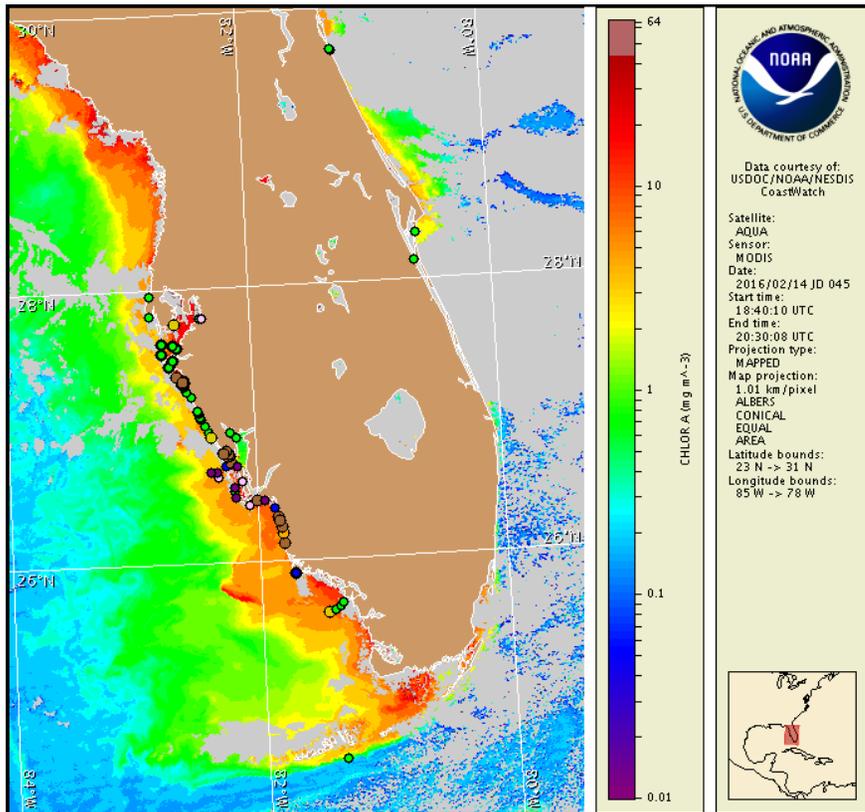
Tuesday, 16 February 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, February 11, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from February 7 to 15: 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

*Karenia brevis* (commonly known as Florida red tide) ranges from not present to high concentrations along the coast of southwest Florida, and up to background concentrations offshore 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 Tuesday, February 16 through Thursday, February 18 is listed below:

### County Region: Forecast (Duration)

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

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

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

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

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

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

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

**Southern Sarasota:** Low (Tu-Th)

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

**Northern Charlotte, bay regions:** Low (Tu-Th)

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

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

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

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

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

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

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

**Southern Lee, bay regions:** Low (Tu-Th)

**Northern Collier:** Moderate (Tu), Very Low (W-Th)

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

**All Other SWFL County Regions:** None expected (Tu-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). Respiratory irritation and dead fish have been reported in Manatee, Sarasota, and Lee counties. Dead fish have been reported alongshore Charlotte and Collier counties.

## Analysis

Recent samples collected along-and offshore southwest Florida indicate background to 'high' *Karenia brevis* concentrations from Pinellas to southern Collier counties and up to background concentrations offshore the Florida Keys (FWRI, MML, CCENRD; 2/8-15). Alongshore Sarasota County, recent sampling indicates *K. brevis* concentrations have decreased to 'low a' from 'high' (FWRI; 2/8). Along the coast of southwest Florida, sampling continues to indicate southward transport of the bloom from Marco Island, with recent sampling detecting up to 'low b' *K. brevis* concentrations offshore Pavilion Key in the Ten Thousand Islands region of northern Monroe County (MML; 2/11). Over the last few days respiratory irritation and dead fish have been reported at various locations in Manatee, Sarasota, and Lee counties (FWRI, MML; 2/11-16). Dead fish have been

reported alongshore Charlotte and Collier counties (FWRI, CCENRD; 2/11-16). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at: <http://myfwc.com/redtidestatus>.

In recent ensemble imagery (MODIS Aqua, 2/14) patches of elevated to high chlorophyll (2-18  $\mu\text{g/L}$ ) with only one of the characteristics of *K. brevis* are visible along- and off-shore southwest Florida from Pinellas to Collier counties.

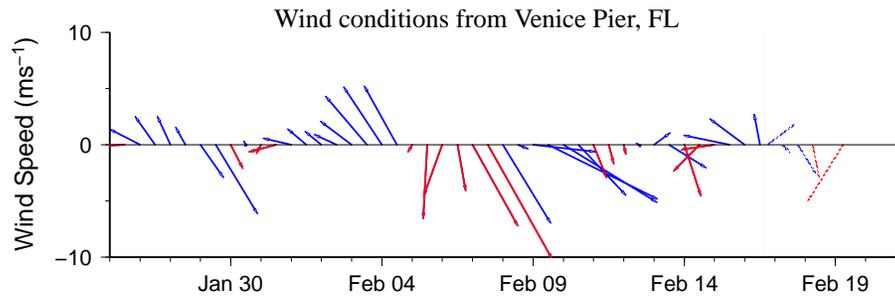
Northwest to northeast winds forecast tonight through Thursday may promote southerly transport of surface *K. brevis* concentrations alongshore southwest Florida.

Davis, Yang

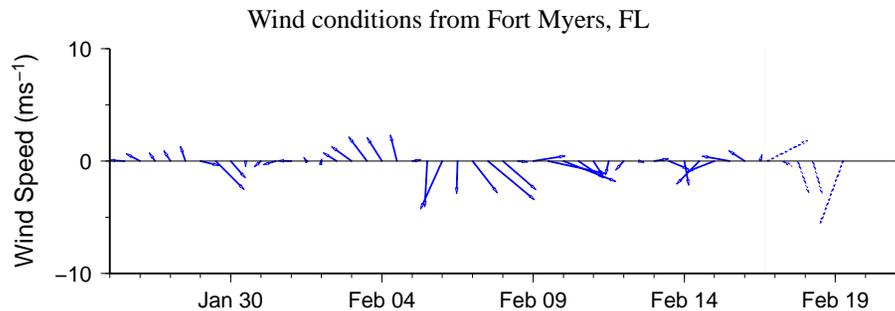
## Wind Analysis

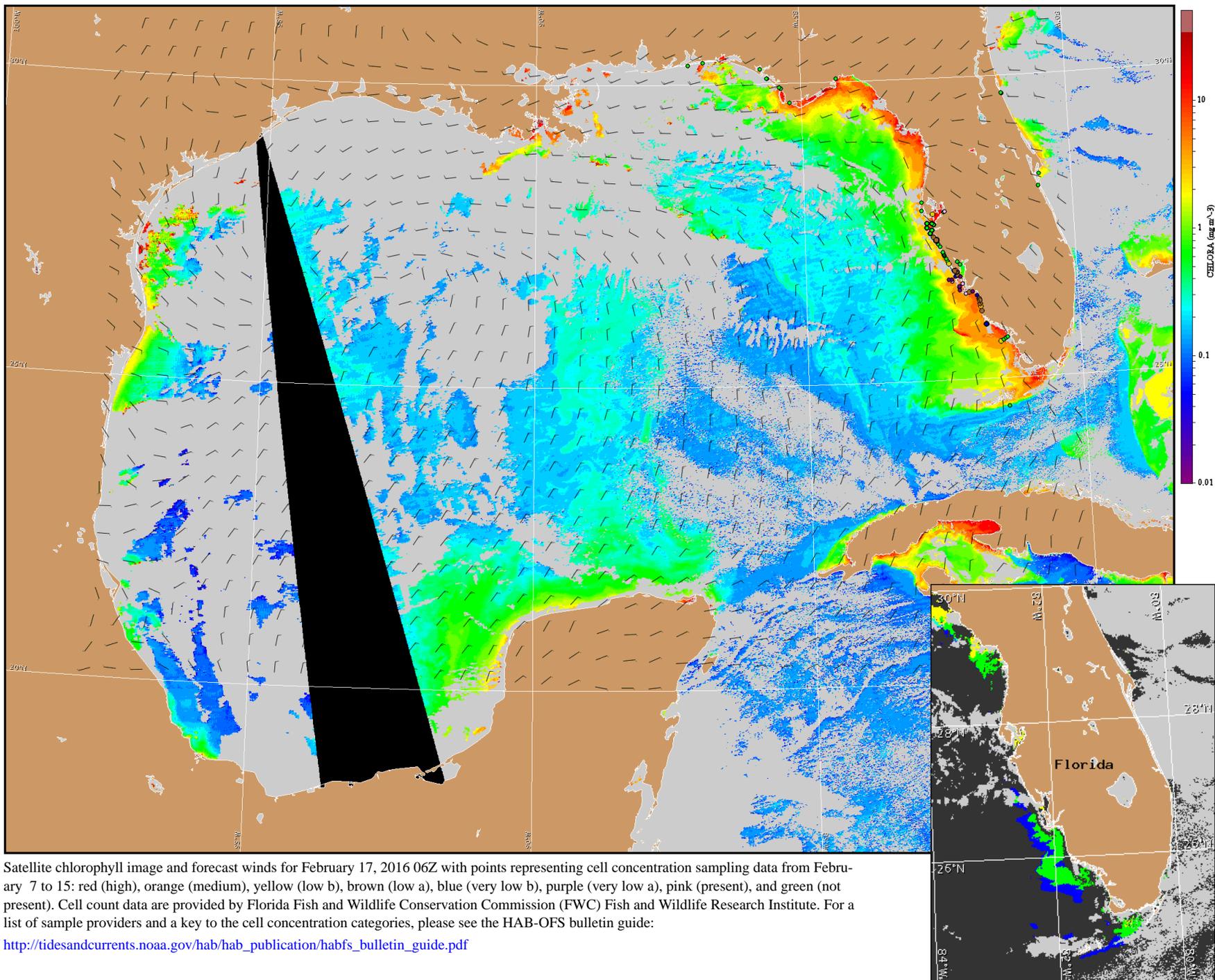
**Englewood to Tarpon Springs (Venice):** Southwest winds (10kn, 5m/s) today becoming northwest winds (10kn) this afternoon. Northwest to northeast winds (10-15kn, 5-8m/s) Wednesday through Thursday.

**Chokoloskee to Bonita Beach:** West southwest winds (5-10kn, 3-5m/s) today becoming north northwest winds (5-10kn) tonight. Northwest to northeast winds (5-15, 3-8m/s) Wednesday through Thursday.



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 February 17, 2016 06Z with points representing cell concentration sampling data from February 7 to 15: 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)

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