



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

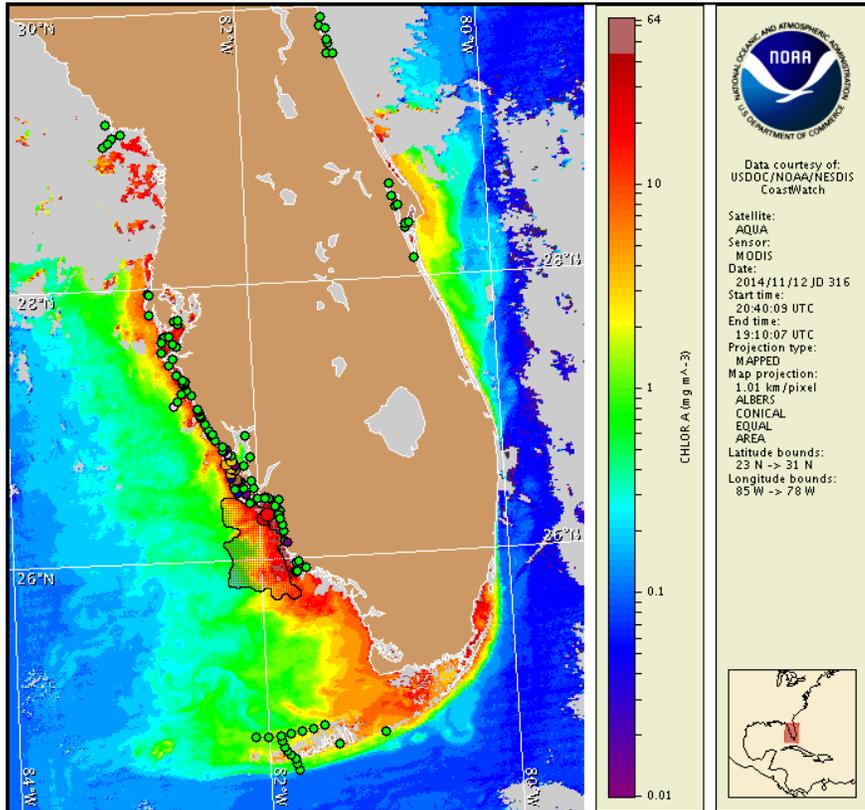
Thursday, 13 November 2014

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 10, 2014



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 3 to 12: 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

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 Thursday, November 13 to Monday, November 17 is listed below:

County Region: Forecast (Duration)

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

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

Northern Lee, bay regions: Moderate (Th-M)

Central Lee, bay regions: Low (Th-M)

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

Northern Collier: Moderate (Th-F, M), Very Low (Sa-Su)

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

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

Central Collier, bay regions: Low (Th-M)

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

Check 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. Reports of respiratory irritation and fish kills have been received over the past few days from Lee and Collier counties (FWRI, MML, CCPCPD; 11/10-11/12).

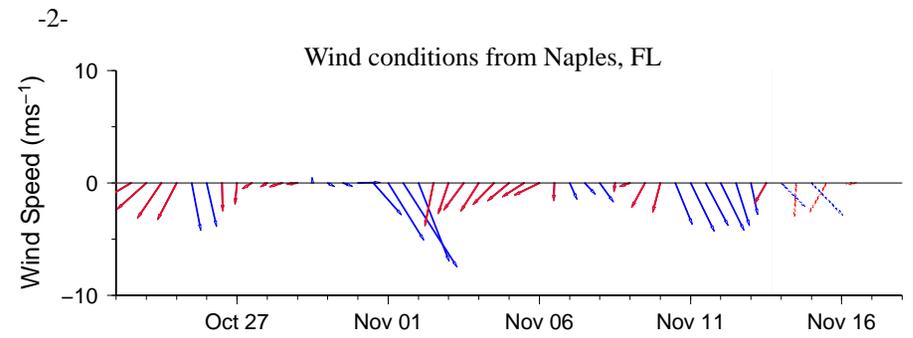
Analysis

Not present to high concentrations of *Karenia brevis* are present along- and offshore portions of southwest Florida from Levy to Collier counties (FWRI, MML, SCHD, CCPCPD; 11/4-11/12). Offshore southern Lee and northern Collier counties, two 'high' *K. brevis* concentrations were identified 5.97 mi west of Bonita Beach and 8.51 mi west of Barefoot Beach, respectively (FWRI; 11/8). In northern Collier County, one 'very low a' *K. brevis* concentration was identified in Naples Bay (FWRI; 11/10). Offshore northern Sarasota County, one 'background' *K. brevis* concentration was identified 10.98 miles west of Casey Key (FWRI; 11/10). No other recent samples have been received this week for southern Charlotte to central Lee counties, where 'very low a' to 'medium' concentrations were reported early last week (FWRI; 11/3-11/5). All samples collected elsewhere along- and offshore Levy to Collier counties and the Florida Keys indicated that *K. brevis* is not present (FWRI, MML, SCHD, CCPCPD; 11/7-11/12). Reports of respiratory irritation have been received from Ft. Myers Beach in southern Lee County and the beaches around Lowdermilk Park in northern Collier County (MML, CCPCPD; 11/11-11/12). Reports of fish kills have also been received over the past few days from Sanibel in southern Lee County and Laudermilk Beach in northern Collier County (FWRI; 11/10, 11/12).

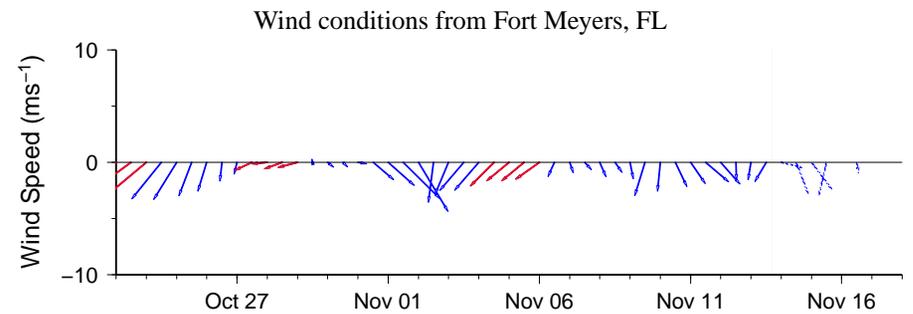
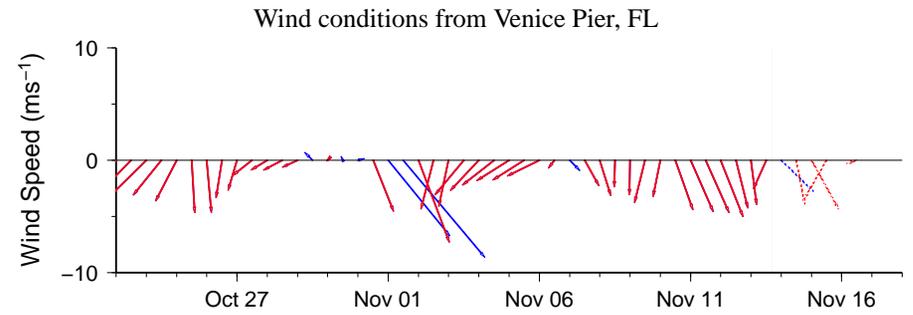
In recent MODIS Aqua imagery (11/12, shown left), patches of elevated chlorophyll (2 to 10 $\mu\text{g/L}$) are visible stretching along- and offshore Pinellas to Collier counties, with patches of high to very high chlorophyll (10 to >20 $\mu\text{g/L}$) visible along- and offshore southern Lee to central Collier counties, extending up to 25 miles offshore this region.

Northerly winds observed over the past several days may have transported surface *K. brevis* concentrations southward. Forecasted northerly winds over the next several days may continue to promote southerly transport of surface *K. brevis* concentrations.

Yang, Derner



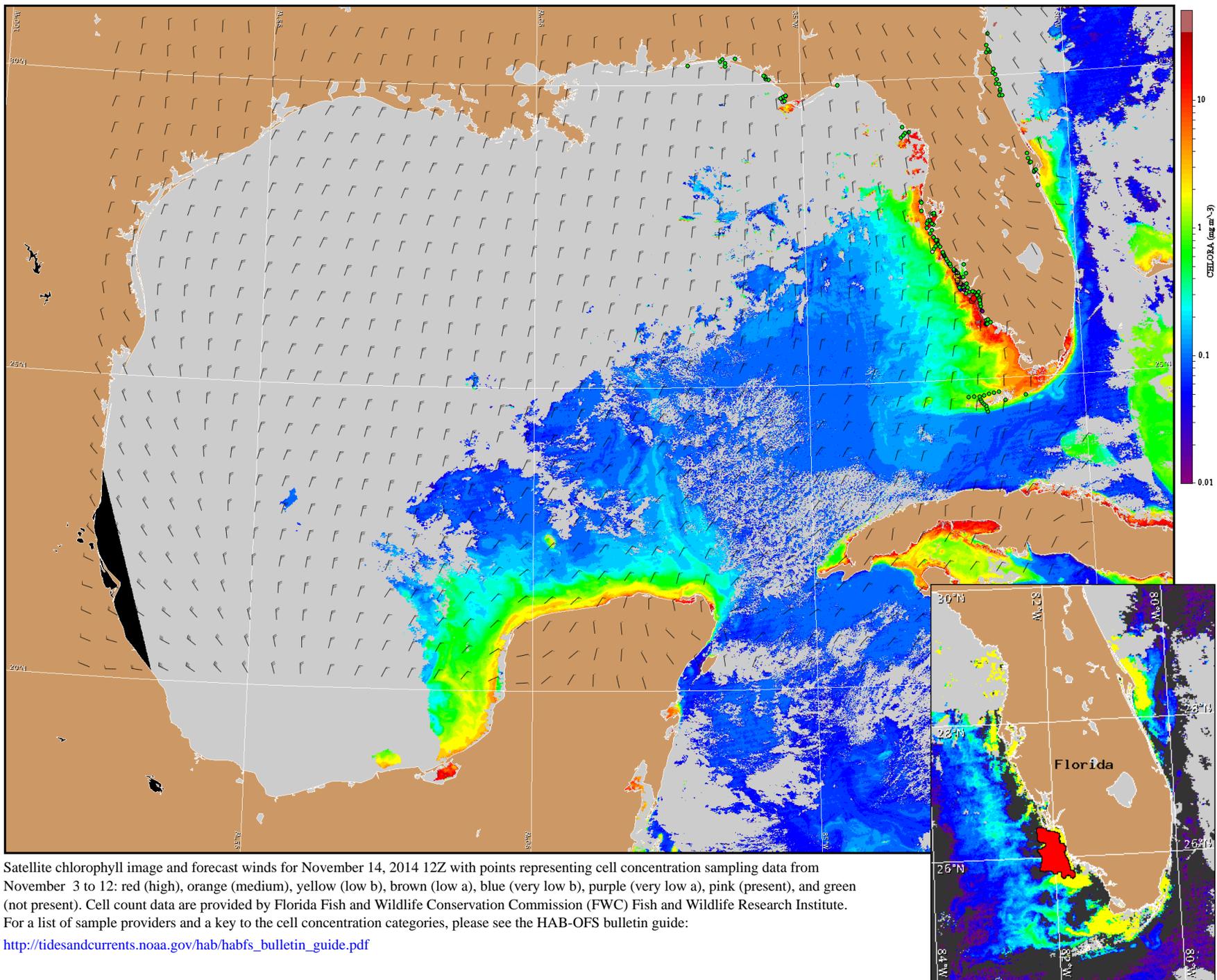
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



Wind Analysis

Bonita Beach to Englewood (Fort Myers Buoy): Northeast winds (10kn, 5m/s) Thursday afternoon becoming northwest (10-20kn, 5-10m/s) Thursday night. North winds (10-15kn, 5-8m/s) Friday. Northeast winds (5-15kn, 3-8m/s) Saturday becoming east (10kn, 5m/s) Saturday night. East winds (10kn) Sunday becoming southeast (5-10kn, 3-5m/s) Sunday afternoon and night. South winds (10-15kn) Monday.

Chokoloskee to Bonita Beach (Naples Buoy): North winds (5-16kn, 3-8m/s) today through Friday. East northeast winds (10-15kn, 5-8m/s) Saturday. East winds (8-13kn, 4-7m/s) Sunday becoming east southeast (6-11kn, 3-6m/s) Sunday night. South winds (6-11kn, 3-6m/s) Monday.



Satellite chlorophyll image and forecast winds for November 14, 2014 12Z with points representing cell concentration sampling data from November 3 to 12: 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

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).