



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

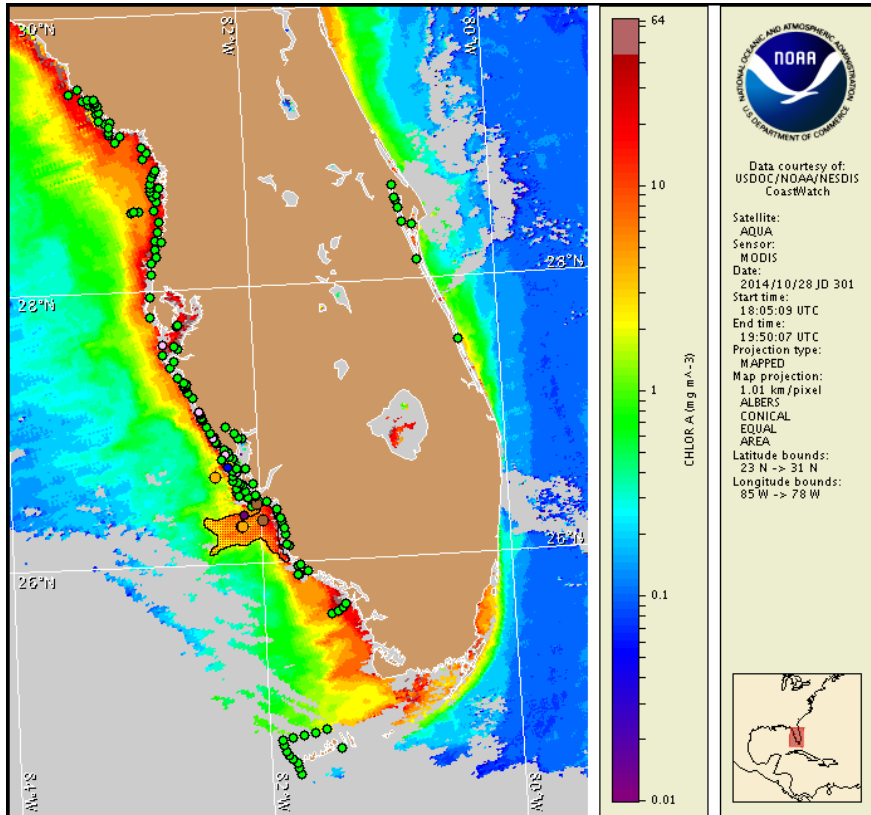
Thursday, 30 October 2014

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 27, 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 20 to 29: 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/habfbs_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, October 30 to Monday, November 3 is listed below:

County Region: Forecast (Duration)

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

Central Lee: Very Low (Th-M)

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

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. Over the past few days, no reports of dead fish or respiratory irritation have been received from southwest Florida.

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

Analysis

Not present to medium concentrations of *Karenia brevis* (commonly known as Florida red tide) are present along- and offshore portions of southwest Florida from Pinellas to Lee counties (FWRI, SCHD; 10/27-28).

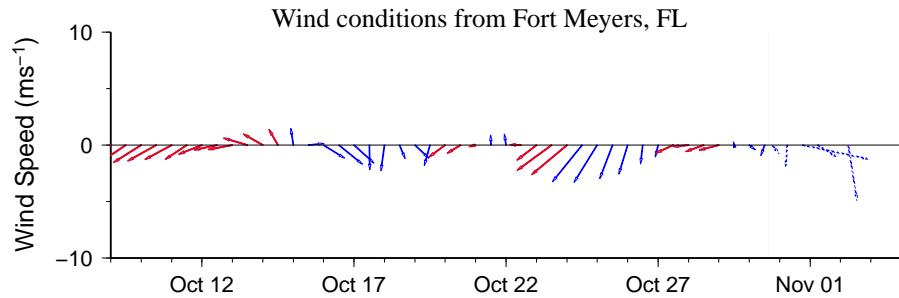
On 10/27, samples collected offshore and in bay regions of northern Lee County indicated 'medium' concentrations of *K. brevis* 7.5 miles west of Cayo Costa, 'low b' concentrations at Boca Grande Pass, background concentrations southwest of Merwin Key and not present at three additional locations (FWRI). Additional Samples collected on 10/28 in the Pine Island Sound region of central Lee County indicate 'very low b' concentrations of *K. brevis* at Boca Grande Pass, background concentrations north of Part Island and not present at fourteen other locations throughout the region (FWRI). In MODIS imagery (10/28, shown left), chlorophyll levels alongshore northern Lee County range from elevated to very high (2 to >20 $\mu\text{g/L}$) and only extend a few miles offshore. In central Lee County, where up to 'medium' *K. brevis* concentrations have been identified, a large anomalously elevated to high (2 to >20 $\mu\text{g/L}$) chlorophyll patch is visible extending as far south as central Collier County and as much as 40 miles offshore. Samples collected alongshore northern and central Collier County on 10/28 all indicated that *K. brevis* is not present; however, elevated to high concentrations of other species of algae were found making it difficult to determine the extent of *K. brevis* in the region (FWRI). No reports of dead fish or respiratory irritation have been reported over the past few days (FWRI, MML; 10/27-30).

Samples collected elsewhere along- and offshore southwest Florida, including the Florida Keys, indicate that *K. brevis* is either not present (Dixie, northern Pinellas, central Collier, Manatee and Monroe counties) or at background concentrations (southern Pinellas and

Sarasota counties) (FWRI, SCHD, MML, CCPCPD; 10/27-28). In MODIS imagery, anomalous elevated to high (4 to >20 $\mu\text{g/L}$) levels of chlorophyll are visible along- and offshore southern Manatee to Charlotte counties where numerous samples indicate not present to background concentrations.

Winds over the past several days may have minimized the transport of *K. brevis* concentrations alongshore southwest Florida. Forecasted winds today through Monday may increase the potential for respiratory irritation in the bay regions of northern Lee County and decrease the potential for respiratory irritation alongshore central Lee County. Additionally, forecasted winds today through Monday may intensify *K. brevis* concentrations and increase the potential for southerly transport alongshore central Lee County.

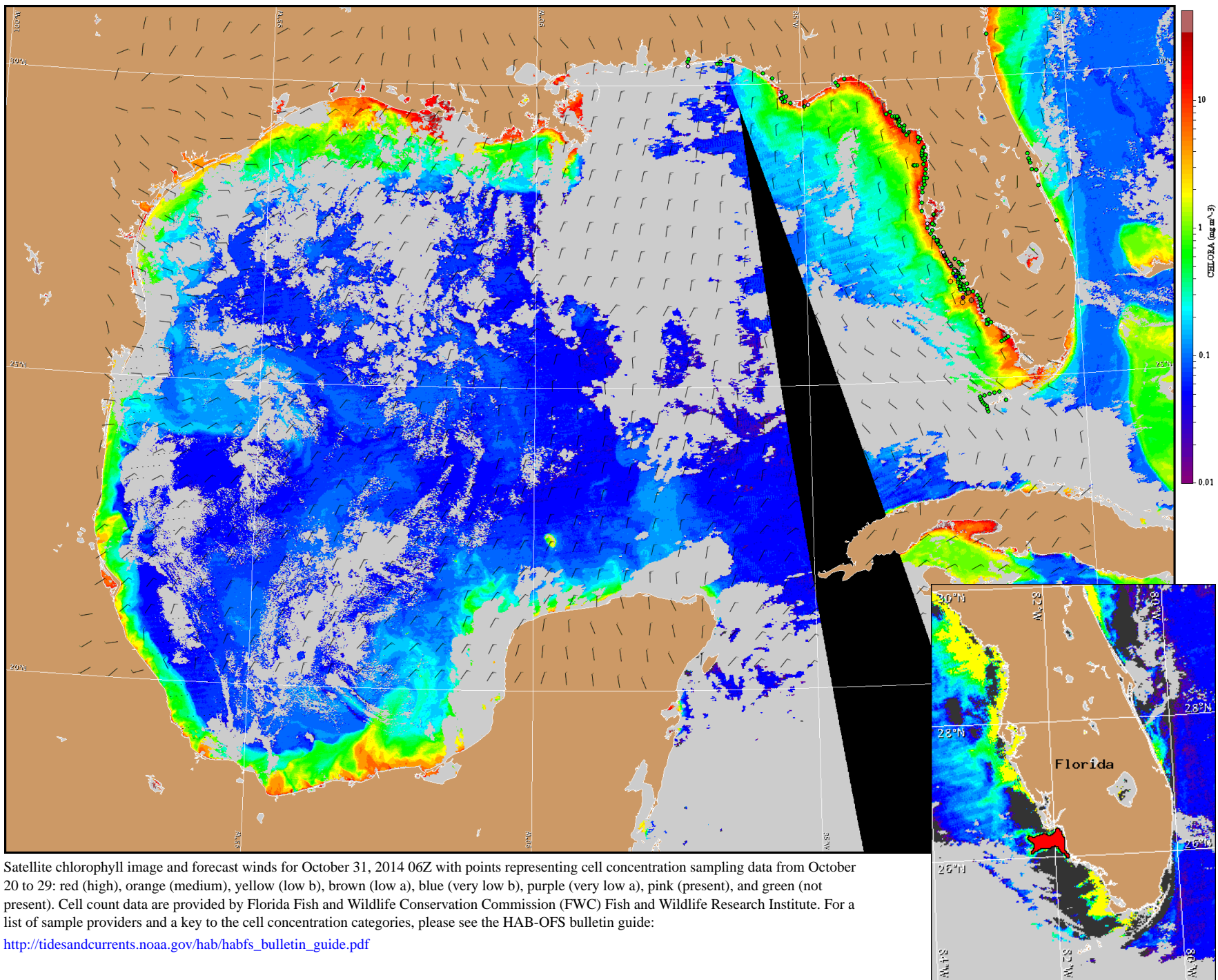
Urizar, Davis



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): Variable winds (5kn, 3m/s) today and northwesterly winds (5-20kn, 3-10m/s) this afternoon through Saturday. Northerly winds (15-20kn, 8-10m/s) Saturday night. Northeasterly winds (15-20kn) Sunday through Monday.



Satellite chlorophyll image and forecast winds for October 31, 2014 06Z with points representing cell concentration sampling data from October 20 to 29: 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).