



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

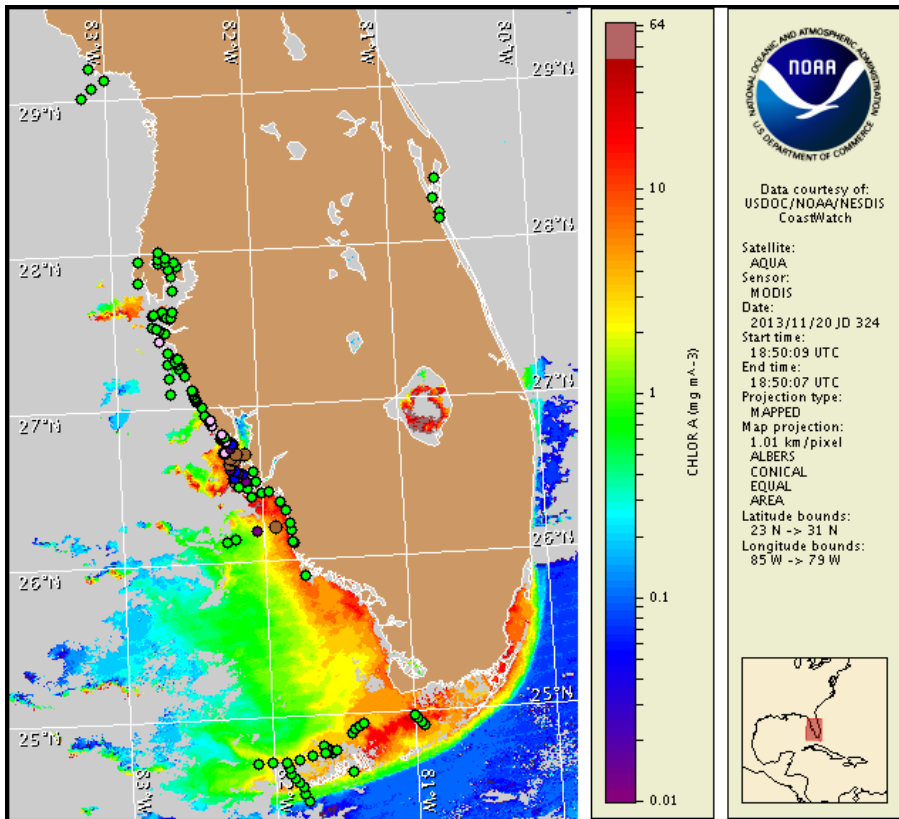
Thursday, 21 November 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 18, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 11 to 19: 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 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, November 21 to Monday, November 24 is listed below:

County Region: Forecast (Duration)

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

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

All Other SWFL County Regions: None (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 several days, no reports of respiratory irritation or dead fish were received from southwest Florida.

Analysis

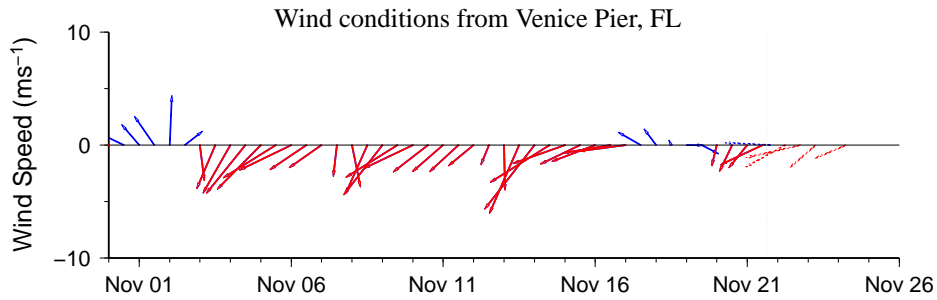
Samples collected from alongshore and offshore southwest Florida over the past 10 days indicate that *Karenia brevis* concentrations range from 'not present' to 'medium' (FWRI, MML, SCHD; 11/12-11/19). Recent samples collected from bay regions of northern and southern Charlotte County indicate 'low a' concentrations of *K. brevis* at the mouth of Bull Bay and 'very low a' concentrations approximately 3 miles northeast of Boca Grande Pass; while all other samples collected in this region indicated either background or not present concentrations (FWRI; 11/19). Recent samples collected from bay regions of northern to central Lee County indicate 'low a' concentrations of *K. brevis* at six locations in the far northern bay regions, three 'very low a' and three 'very low b' concentrations in the northern bay regions, and four not present concentrations in the central bay regions of Lee County (FWRI; 11/18). Recent samples collected from alongshore northern and central Collier County indicate that *K. brevis* is not present; however, samples collected from offshore Naples in northern Collier County indicate 'low a' concentrations of *K. brevis* 6.1 miles offshore, 'very low a' concentrations 14.8 miles offshore and not present concentrations 24.5 and 28.6 miles offshore (FWRI; 11/18). All other samples collected from northern and southern Manatee, alongshore Sarasota, and from offshore the Florida Keys indicate that *K. brevis* is not present (FWRI, MML, SCHD; 11/18-19).

MODIS Aqua imagery (11/20) is only partially obscured by clouds. Chlorophyll levels alongshore and offshore Lee through Monroe County appear to have increased since our last bulletin. Elevated to high (6 to >20 $\mu\text{g/L}$) levels of chlorophyll are visible alongshore and offshore northern and southern Lee County with the greatest levels centered about 26°29'9"N 82°13'3"W and 26°28'58"N 82°8'47"W. Elevated to high (9 to >20 $\mu\text{g/L}$) levels of chlorophyll are visible alongshore northern Collier County and elevated (4-8 $\mu\text{g/L}$) levels are visible alongshore central Collier County. Elevated chlorophyll is not necessarily indicative of the presence of *K. brevis* and could also be an artifact of clouds in the imagery. Additional sampling is recommended in these regions to confirm the presence or absence of *K. brevis*. These regions will continue to be monitored as imagery

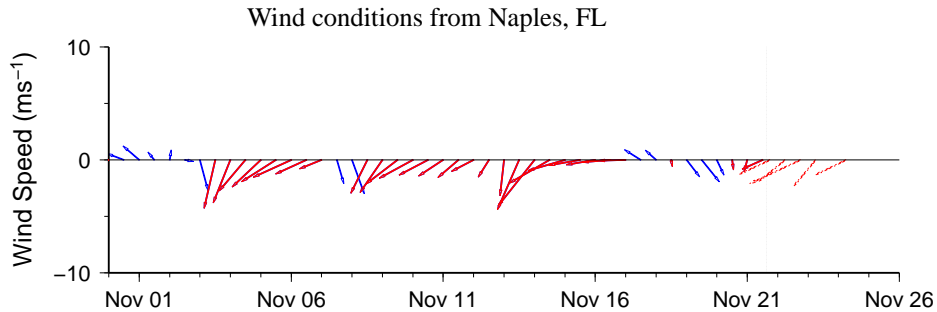
becomes available.

Medium to high winds forecasted over the next few days may increase the potential for respiratory irritation in bay regions of Charlotte and Lee counties. Winds forecasted over the next few days may decrease the potential for further bloom formation and intensification alongshore southwest Florida.

Urizar, Fenstermacher



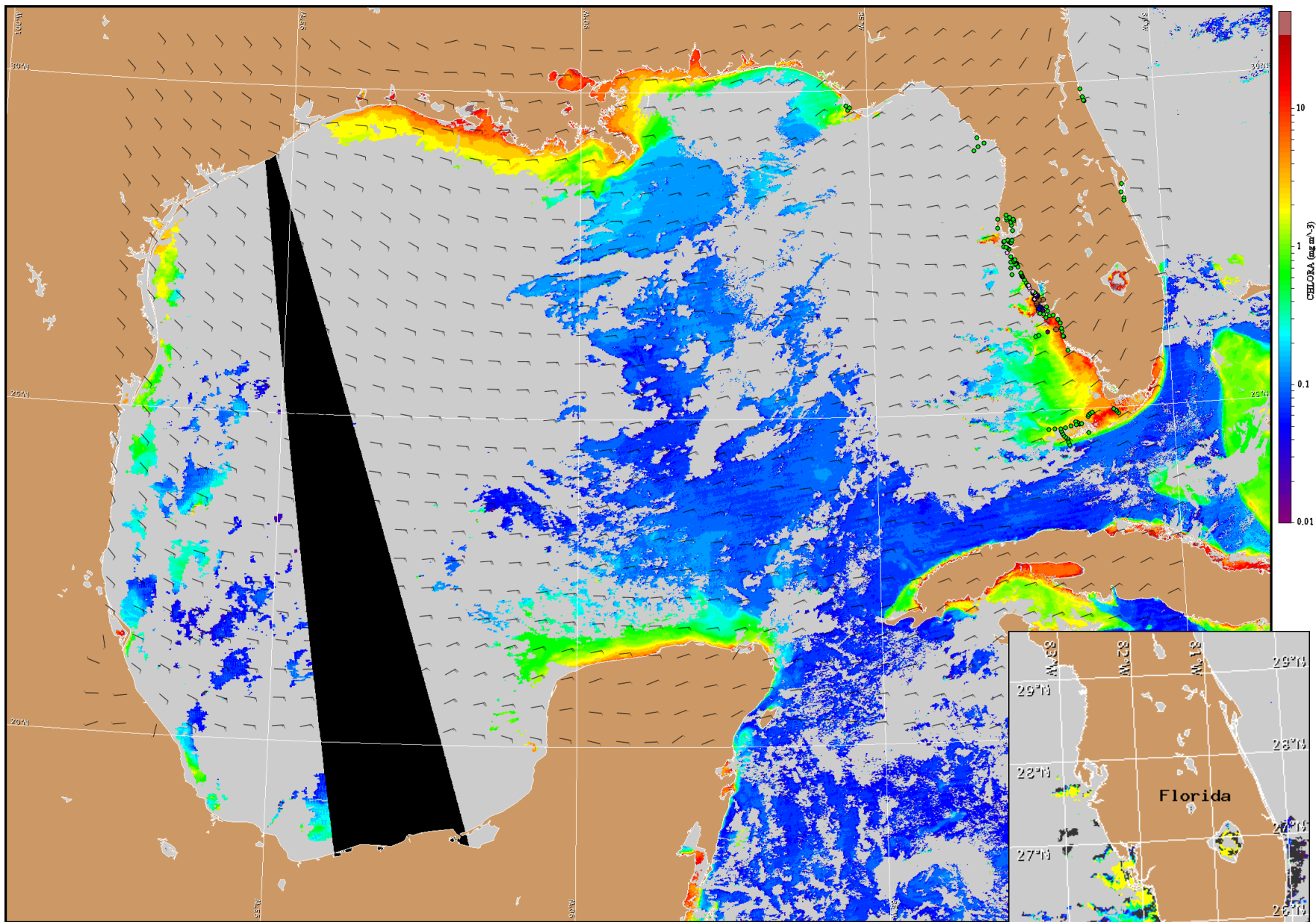
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



Wind Analysis

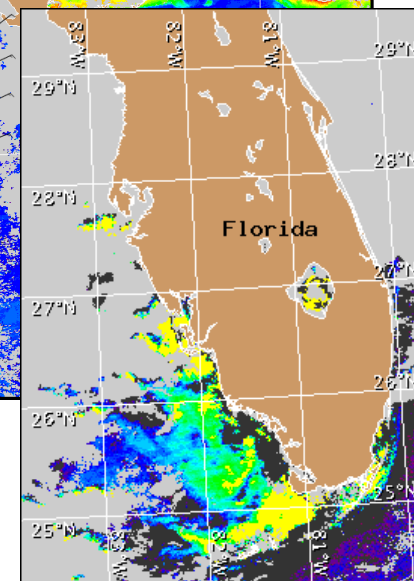
Pinellas to Sarasota: Northeasterly winds (5-15 kn, 3-8 m/s) today and Friday becoming northerly Friday afternoon. Easterly winds (10-15 kn, 5-8 m/s) Friday night. Northeasterly winds (10 kn, 5 m/s) Saturday becoming northerly (10-15 kn) Saturday afternoon and night. Northeasterly winds (15-10 kn, 8-10 m/s) Sunday becoming northwesterly (20 kn, 10 m/s) Sunday night. Easterly winds (15-20 kn) Monday.

Charlotte to Collier: Northeasterly winds (10-15 kn) today and Friday becoming northerly (5-10 kn) in the afternoon. Easterly winds (10-15 kn) Friday night. Easterly winds (10-15 kn) Saturday becoming northeasterly in the afternoon and northerly (10-15 kn) Saturday night. Northerly winds (10-15 kn) Sunday becoming northeasterly (15-20 kn) Sunday afternoon and night. Easterly winds (15-20 kn) Monday.



Satellite chlorophyll image and forecast winds for November 22, 2013 06Z with points representing cell concentration sampling data from November 11 to 19: 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).