

Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

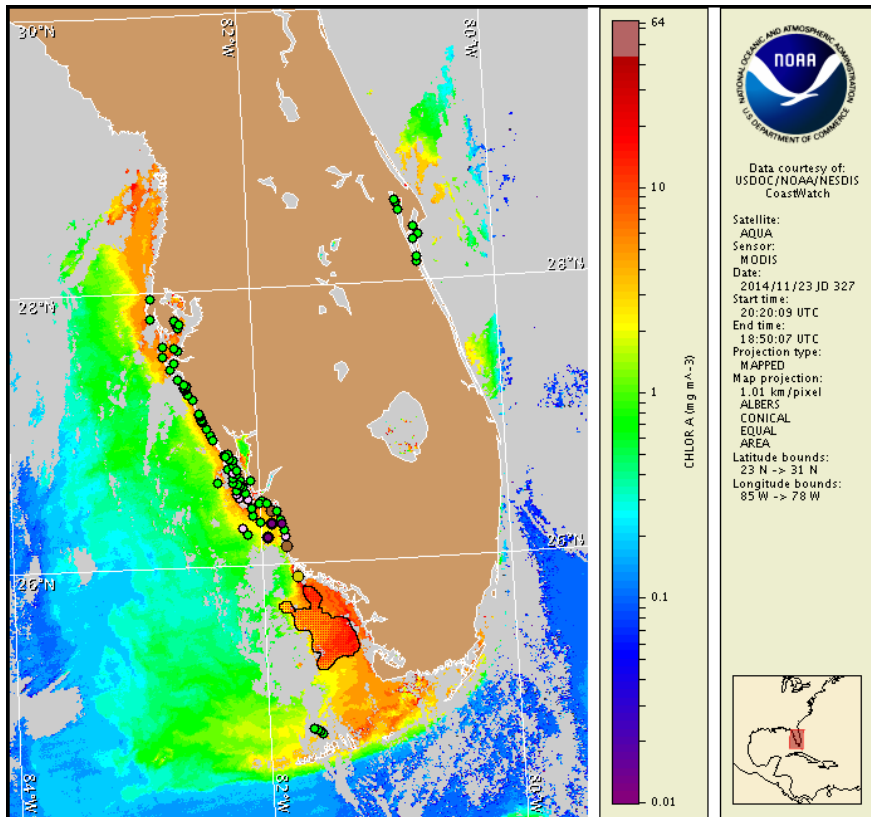
Monday, 24 November 2014

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, November 20, 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 14 to 21: 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 Monday, November 24 to Wednesday, November 26 is listed below:

County Region: Forecast (Duration)

Southern Lee: Moderate (M-W)

Northern Collier: Very Low (M-Tu), Low (W)

Central Collier: Moderate (M-W)

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

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. Late last week, reports of respiratory irritation were received from southern Lee County and reports of dead fish were received from central Collier County.

Analysis

****Due to the upcoming federal holiday, the next bulletin will be issued on Wednesday, November 26.****

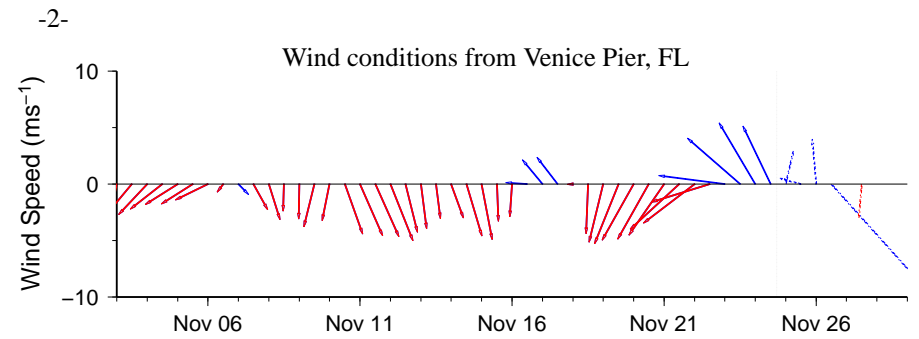
Not present to medium concentrations of *Karenia brevis* are present along- and offshore portions of southwest Florida from Pinellas to Collier counties (FWRI, SCHD, MML, CCPCPD; 11/16-20). Recent samples collected from Charlotte and Lee counties continue to indicate that *K. brevis* concentrations have dissipated, with only not present to 'background' concentrations identified in the Gasparilla and Pine Island Sound regions and along the coast over the past week (FWRI; 11/17-19). Alongshore northern Collier County, *K. brevis* concentrations have increased in several locations since the last sample collection. While samples collected at Vanderbilt Beach continue to indicate that *K. brevis* is not present, 'background' concentrations were detected at Sea Gate, and 'very low a' and 'low a' concentrations were identified at Barefoot Beach and Naples Pier, respectively, where not present to 'background' concentrations were previously identified (FWRI; 11/17-20). Recent samples did, however, indicate a decrease to 'low b' concentrations along South Marco Beach in central Collier County, where 'medium' concentrations were previously identified (FWRI; 11/17-20). All other samples collected along- and offshore from Pinellas to Collier counties indicate that *K. brevis* is not present (FWRI, SCHD, CCPCPD; 11/17-20). Late last week, respiratory irritation was reported at Lynn Hall Park Beach along southern Lee County and dead fish were reported at South Marco Beach in Collier County (FWRI, MML; 11/20).

Recent MODIS Aqua imagery (11/23, shown left) is patchy along- and offshore southwest Florida, but indicates that the *K. brevis* bloom area has continued to move southward. Elevated chlorophyll (2-10 $\mu\text{g/L}$) is visible in patches along- and offshore Pinellas to Monroe counties, with patches of high chlorophyll (10-16 $\mu\text{g/L}$) visible stretching along- and offshore the Marco Island region in central Collier County and along- and

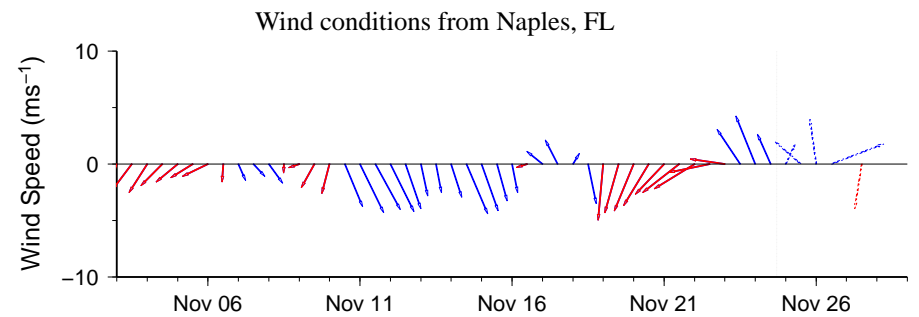
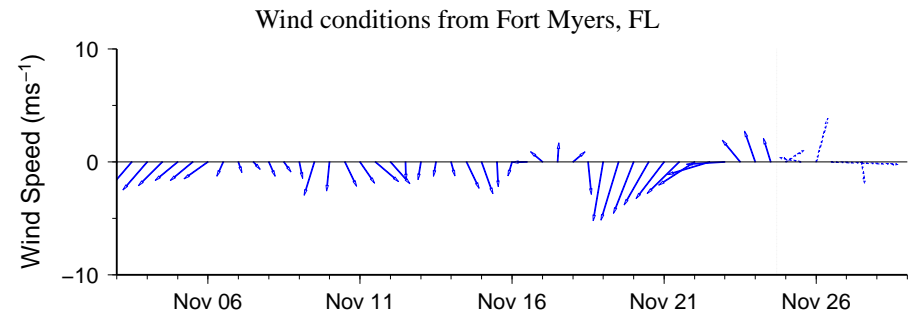
offshore Monroe County. Elevated chlorophyll along- and offshore Monroe County is common and not necessarily indicative of the presence of *K. brevis*, and some elevated chlorophyll may also be due to the resuspension of benthic chlorophyll and sediments along the coast.

Observed winds over the past few days may have maintained the location of surface *K. brevis* concentrations. Southerly winds forecasted today through Tuesday may promote bloom intensification at the coast.

Derner, Davis



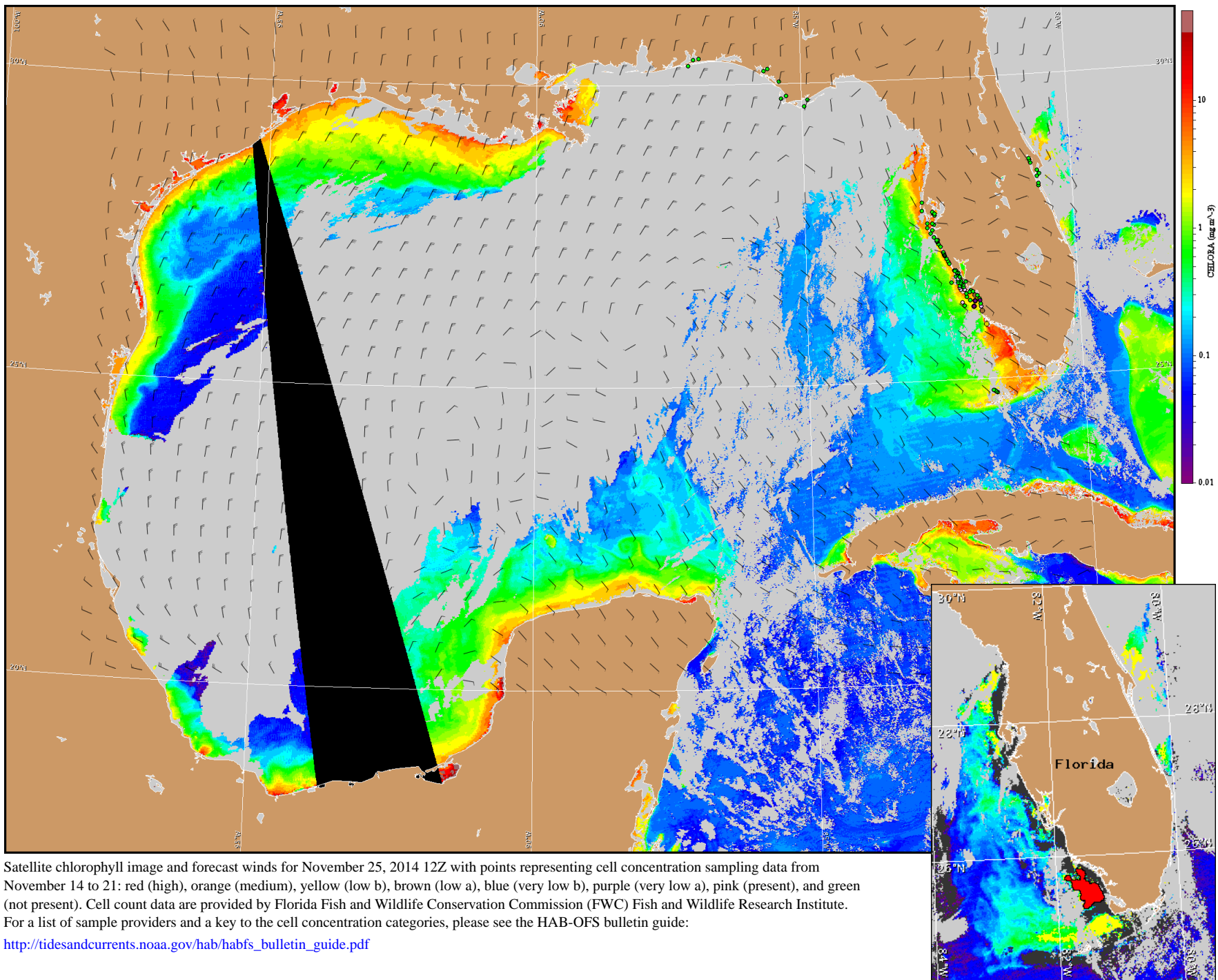
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



Wind Analysis

Bonita Beach to Englewood (Fort Myers): South winds (5-10kn, 3-5m/s) today and tonight. Southeast winds (10kn, 5m/s) Tuesday. South winds (10-15kn, 5-8m/s) Tuesday night becoming west winds after midnight. Northwest winds (20kn, 10m/s) Wednesday.

Chokoloskee to Bonita Beach (Naples): South winds (5-10kn) today becoming southeast (5-10kn) tonight through Tuesday. South southeast winds (5-10kn) Tuesday night. West southwest winds (5-10kn) Wednesday becoming north northwest (15-20kn, 8-10m/s) Wednesday afternoon.



Satellite chlorophyll image and forecast winds for November 25, 2014 12Z with points representing cell concentration sampling data from November 14 to 21: 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).