



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

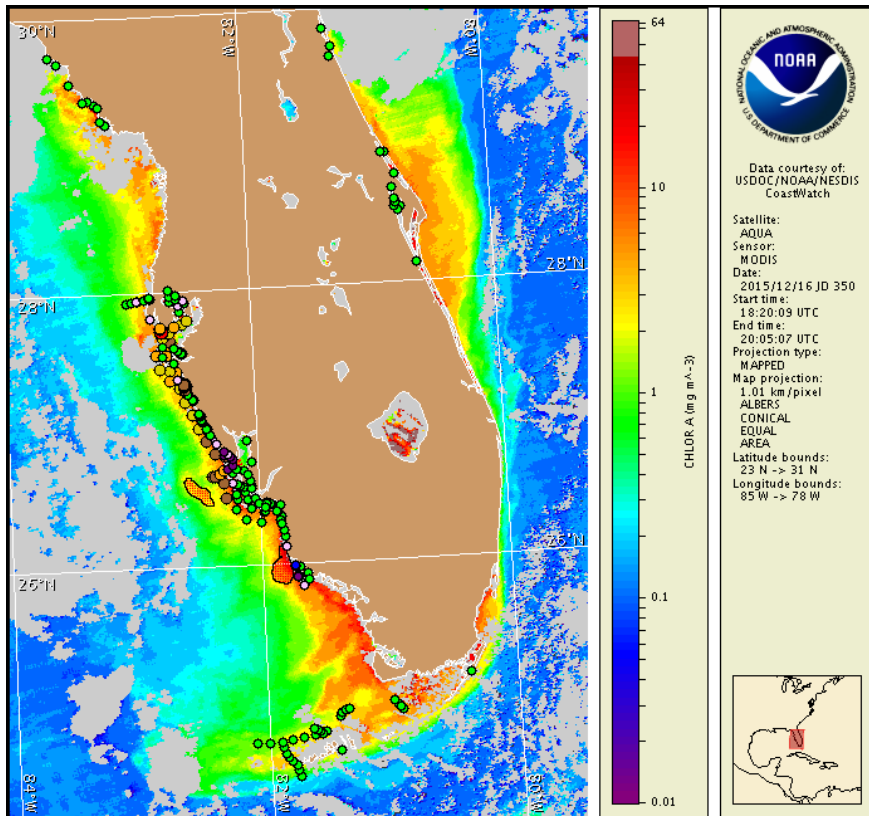
Thursday, 17 December 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 14, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from December 7 to 16: 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

Karenia brevis (commonly known as Florida red tide) ranges from not present to high concentrations along the coast of southwest Florida, and is 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, December 17 through Monday, December 21 is listed below:

County Region: Forecast (Duration)

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

Southern Pinellas, bay regions: High (Th-M)

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

Southern Manatee, bay regions: Moderate (Th-M)

Northern Sarasota: Low (Th-F), Very Low (Sa-M)

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

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

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

Central Collier: None (Th, Sa-M), Very Low (F)

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

All Other NWFL County Regions: Visit <http://tidesandcurrents.noaa.gov/hab/#nwfl>

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. Respiratory irritation has been reported in Sarasota County. Dead fish have been reported from Pinellas and Sarasota counties.

Analysis

Recent samples collected along- and offshore southwest Florida indicate background to 'medium' *Karenia brevis* concentrations from southern Pinellas to southern Collier counties, with the highest concentrations present alongshore southern Pinellas, northern Manatee, and within the bay regions of northern Sarasota (FWRI, SCHD; 12/10-16). Several samples collected early this week alongshore and within the bay regions of Sarasota County indicate an overall decrease in *K. brevis* concentrations, from mostly 'low b' and 'medium' to not present and 'very low' concentrations (SCHD; 12/14). Recent sampling also identified background to 'very low a' *K. brevis* concentrations throughout the Gasparilla Sound in Charlotte and Lee counties, and background to 'very low b' concentrations alongshore central Collier County, including the Marco Island region (FWRI; 12/11-15). Offshore sampling has identified up to 'medium' concentrations approximately 3-10 miles offshore Sarasota, Charlotte, and northern Lee counties (FWRI; 12/10). Respiratory irritation has been reported in Sarasota County, and dead fish have been reported at Fort Desoto in Pinellas County and Siesta Key in Sarasota County (MML; 12/14). 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, 12/16), patches of elevated to high chlorophyll (3-15 $\mu\text{g/L}$) with the optical characteristics of *K. brevis* are visible along- and offshore from Charlotte to Collier counties, including a large feature offshore northern Lee,

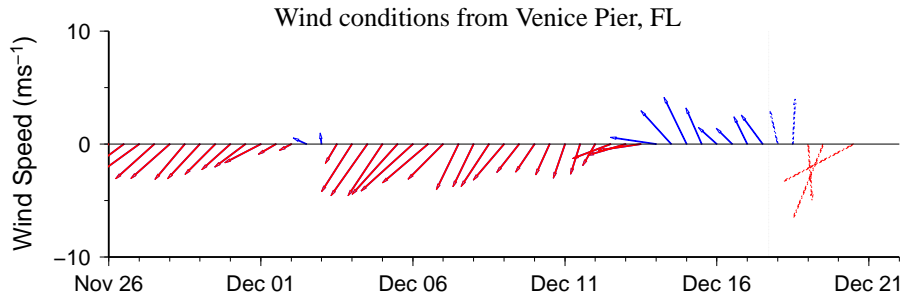
approximately 11 to 25 miles offshore Cayo Costa and Captiva islands, and a feature stretching approximately 8 miles offshore the Marco Island region.

Variable winds forecasted today through Monday may decrease the potential for transport of surface *K. brevis* concentrations alongshore southwest Florida.

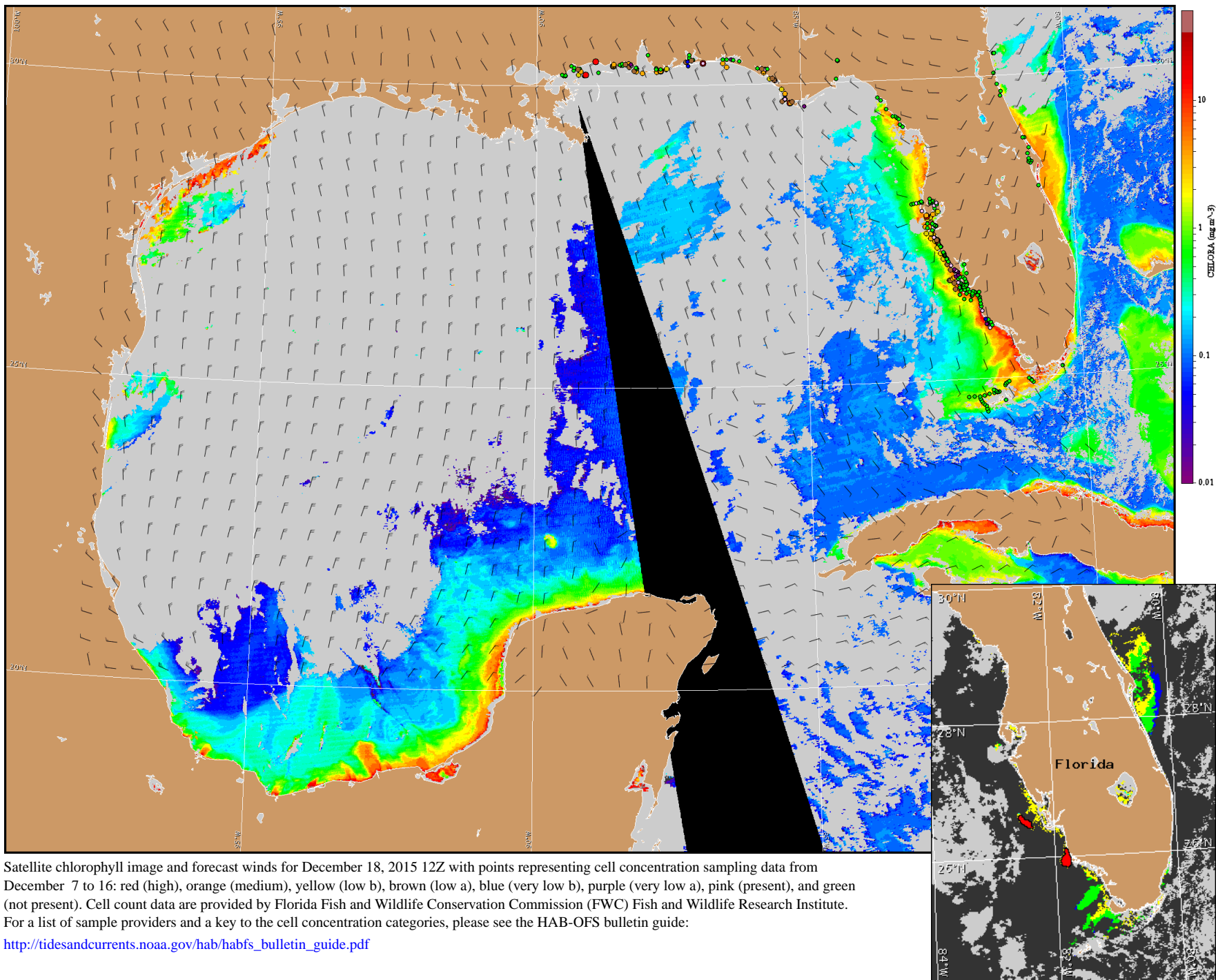
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Wind Analysis

Englewood to Tarpon Springs (Venice): South winds (10, 5m/s) today and tonight. West winds (15kn, 8m/s) Friday becoming north (15-25kn, 8-13m/s) Friday afternoon through early Saturday morning. Northeast winds (10-25kn, 5-13m/s) Saturday through Saturday night. East winds (5-15kn, 5-8m/s) Sunday and Monday.



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 December 18, 2015 12Z with points representing cell concentration sampling data from December 7 to 16: 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 with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).