



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

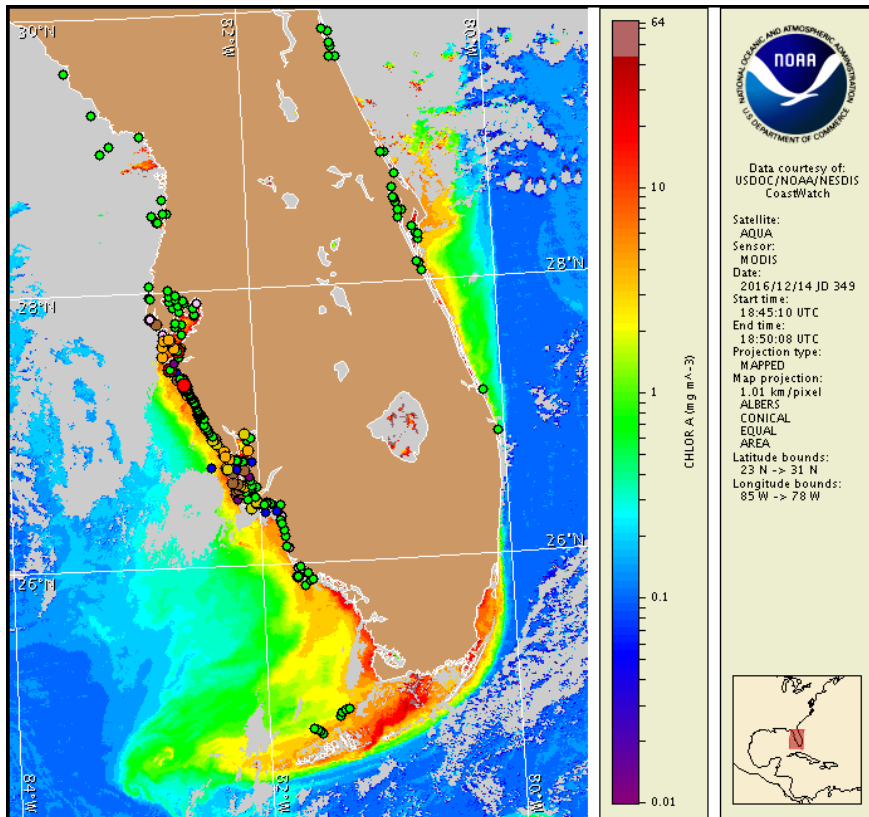
Thursday, 15 December 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 12, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from December 5 to 13: 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/hab_publication/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, December 15 through Monday, December 19 is listed below:

County Region: Forecast (Duration)

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

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

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

Southern Manatee: High (Th, Sa-Su), Moderate (F, M)

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

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

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

Southern Sarasota: Low (Th-M)

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

Northern Charlotte: Low (Th-M)

Northern Charlotte, upper harbor, bay regions: Low (Th-M)

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

Southern Charlotte: Low (Th-M)

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

Northern Lee: Low (Th-M)

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

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

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

Southern Lee: Very Low (Th-M)

Northern Collier: Very Low (Th-M)

Central Collier: 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 last few days, respiratory irritation has been reported from Manatee, Sarasota and Lee counties. Dead fish have been reported from Manatee and Sarasota counties.

Analysis

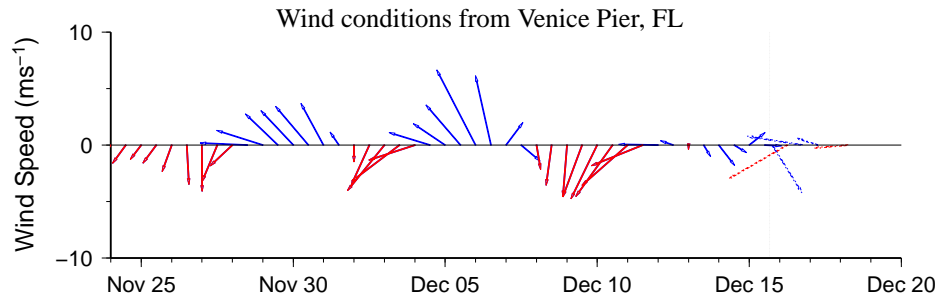
New samples collected along- and offshore the coast of southwest Florida continue to indicate up to 'high' concentrations of *Karenia brevis* are present from Pinellas to Collier counties, with 'high' concentrations located in the bay regions of Manatee County and 'medium' concentrations located in the bay regions of southern Pinellas, Manatee, southern Charlotte, northern Lee counties, and alongshore southern Pinellas County (FWRI, MML; 12/5-12/13). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>. Respiratory irritation has been reported from several locations in Manatee, Sarasota and Lee counties (MML; 12/12-12/15). Dead fish have been reported from Manatee and Sarasota counties (FWRI, MML; 12/12-12/15).

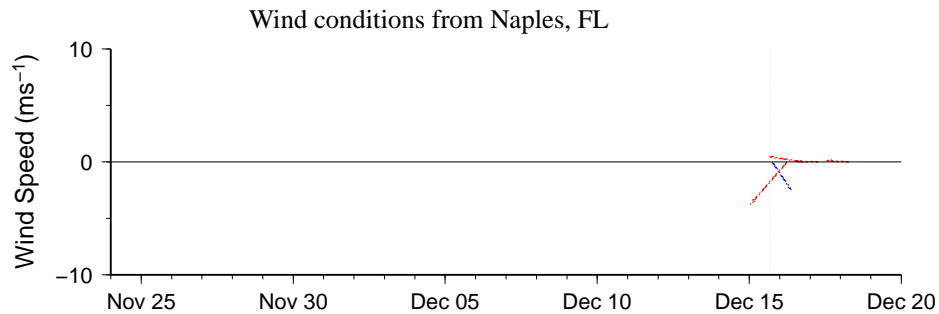
On recent ensemble imagery (MODIS Aqua, 12/14), patches of elevated to high (2 to 10 $\mu\text{g/L}$) chlorophyll with some of the optical characteristics of *K. brevis* are visible alongshore southwest Florida from southern Pinellas to central Lee County, where respiratory irritation and fish kills have recently been reported.

Variable winds forecast today through Monday (12/15-12/19) will minimize the potential for transport of *K. brevis* concentrations at the coast of southwest Florida.

Yang, Davis



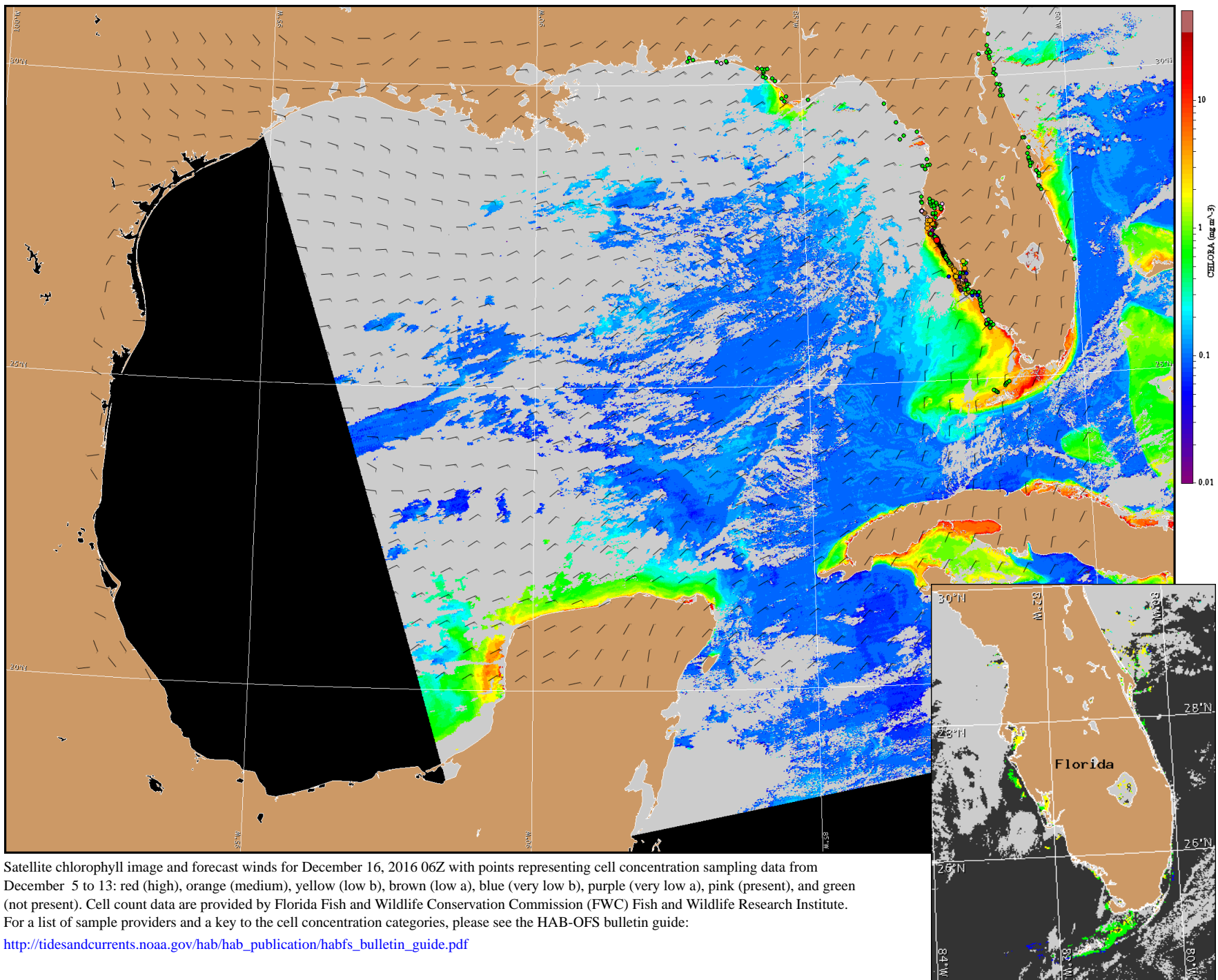
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



Wind Analysis

Englewood to Tarpon Springs (Venice): North to northeast winds (15kn, 8m/s) Thursday. East winds (10-15kn, 5-8m/s) Friday becoming southeast Friday night. South to southeast winds (10kn, 5m/s) Saturday through Sunday. East winds (5kn, 3m/s) Monday.

Chokoloskee to Bonita Beach: North northwest wind (10-15kn, 5-8m/s) Thursday. Northeast to east winds (10-15kn) Thursday night through Friday. Southeast to east winds (5-15kn, 3-8m/s) Saturday through Monday.



Satellite chlorophyll image and forecast winds for December 16, 2016 06Z with points representing cell concentration sampling data from December 5 to 13: 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).