# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

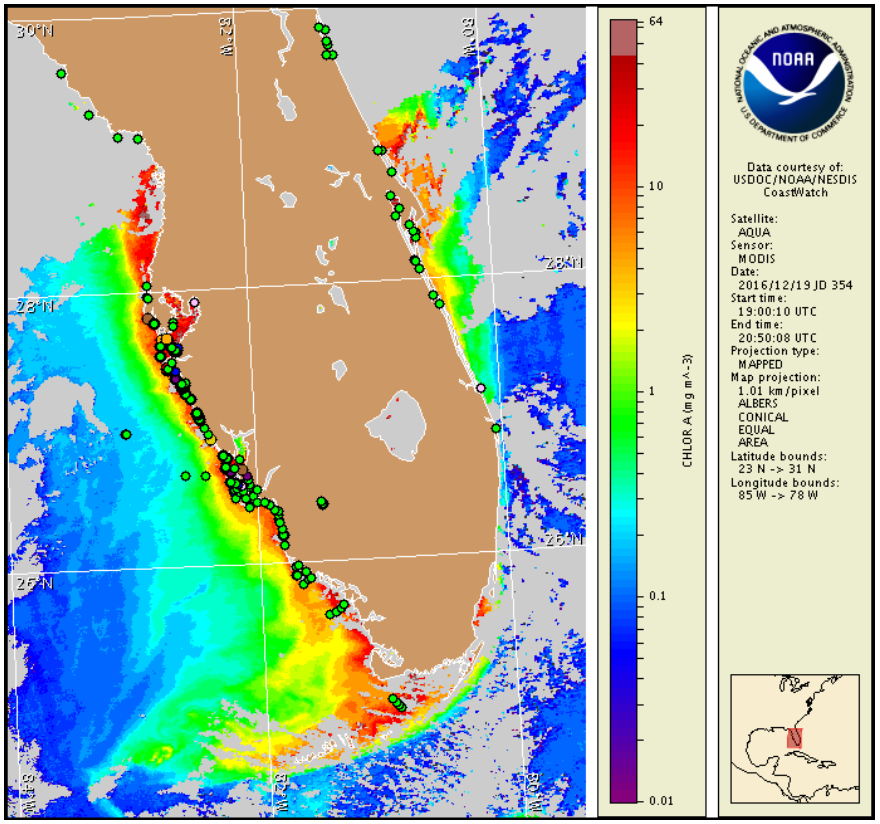
Thursday, 22 December 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 19, 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 12 to 20: 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

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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 22 through Tuesday, December 27 is listed below:

**County Region:** Forecast (Duration)
**Southern Pinellas:** Very Low (Th-Tu)
**Southern Pinellas, bay regions:** Low (Th-Tu)
**Northern Manatee, bay regions:** Moderate (Th-Tu)
**Southern Manatee:** Low (Th-Tu)
**Southern Manatee, bay regions:** Moderate (Th-Tu)
**Northern Sarasota:** Low (Th-Tu)
**Northern Sarasota, bay regions:** Moderate (Th-Tu)
**Southern Sarasota:** Very Low (Th-Tu)
**Northern Charlotte:** Very Low (Th-Tu)
**Southern Charlotte:** Very Low (Th-Tu)
**Southern Charlotte, bay regions:** Low (Th-Tu)
**Northern Lee:** Very Low (Th-Tu)
**Northern Lee, bay regions:** Low (Th-Tu)
**Central Lee, bay regions:** Low (Th-Tu)
**Northern Collier:** Very Low (Th-Tu)
**All Other SWFL County Regions:** None expected (Th-Tu)

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 and Sarasota counties. Dead fish have been reported from Pinellas and Lee counties.

## Analysis

***Due to the upcoming federal holiday, the next bulletin will be issued on Tuesday, December 27.***

Recent samples collected along- and offshore the coast of southwest Florida continue to indicate *Karenia brevis* concentrations are present from Pinellas to Collier counties, with up to 'high' concentrations located in the bay regions of Manatee County (FWRI, MML, SCHD; 12/12-12/20). Alongshore Sarasota County and in the Pine Island Sound region of Lee County, recently sampling indicates *K. brevis* concentrations have decreased to 'low a' where 'medium' concentrations were detected on 12/12 and 12/13 respectively (FWRI, SCHD; 12/16-19). 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, 12/19), patches of elevated to high chlorophyll (2-17$\mu$g/L) with the optical characteristics of *K. brevis* are visible alongshore

southwest Florida from Pinellas to Monroe counties, including the Florida Keys.

Offshore winds forecast tonight through Thursday (12/22-27) may reduce the potential for respiratory irritation at the coast.

Davis, Lalime

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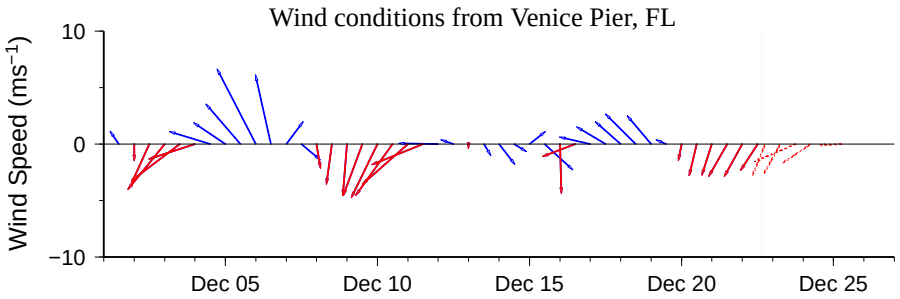
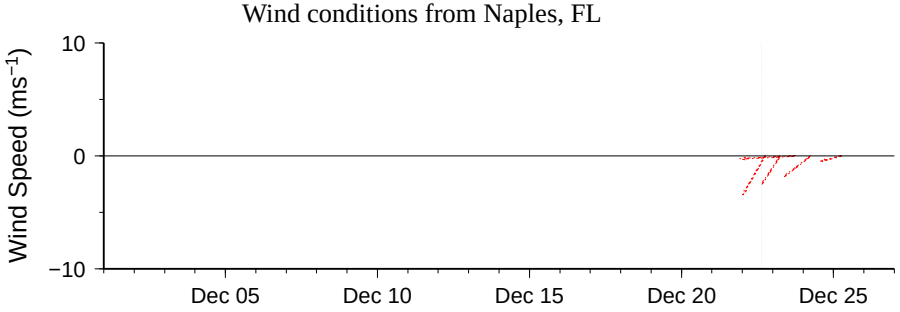


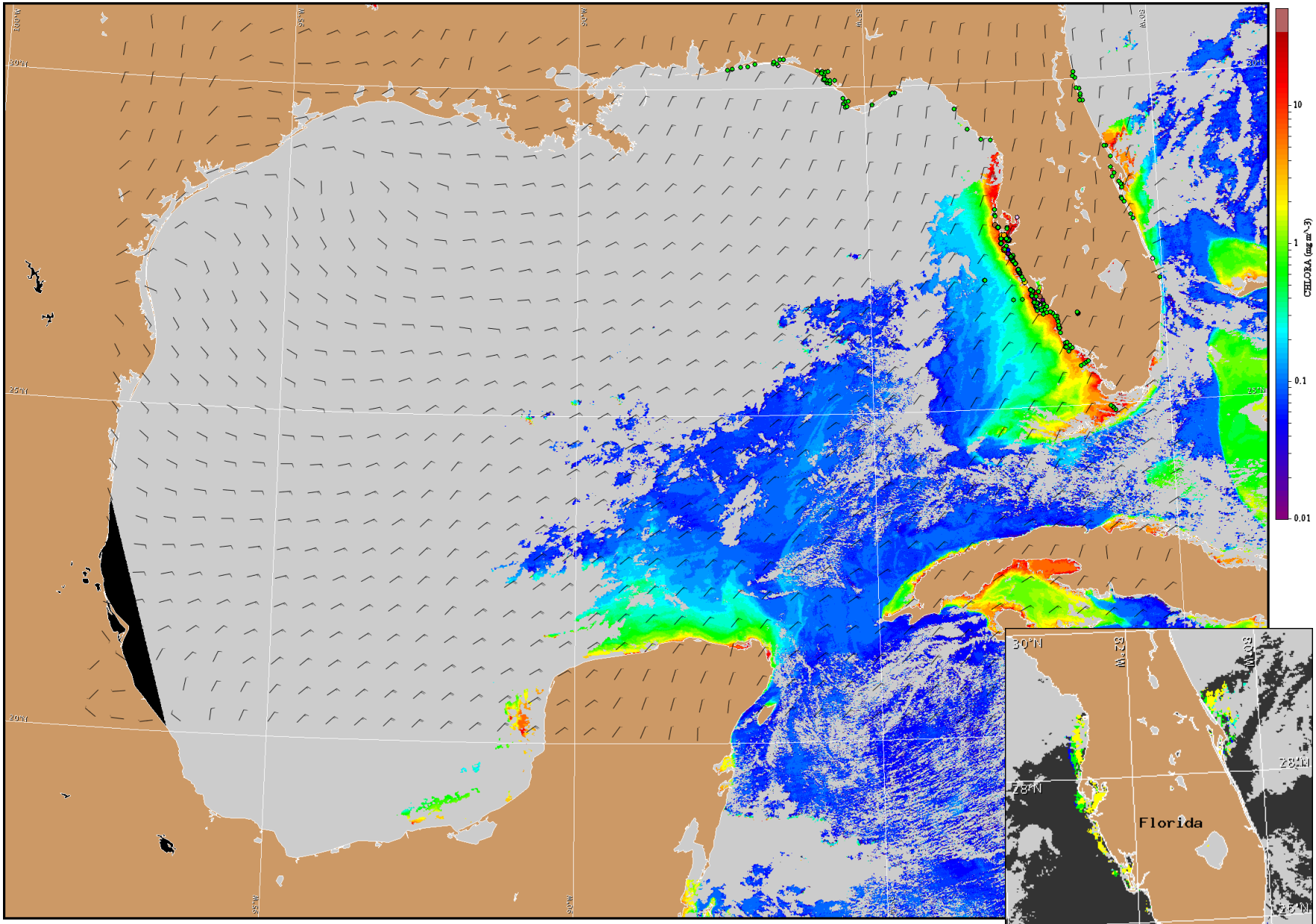

Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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




## Wind Analysis

**Englewood to Tarpon Springs (Venice)**: Northeast winds (10-15kn, 5-8m/s) today through Friday. East winds (5-10kn, 3-5m/s) Saturday becoming north in the afternoon. East winds (10kn, 5m/s) Saturday night through Monday.

**Chokoloskee to Bonita Beach**: Variable northeasterly winds (5-15kn, 3-8m/s) today through Friday becoming east winds (10-15kn) Friday night. East southeast winds (10-15kn) Saturday becoming east winds (10-15kn) Saturday night through Monday.




Satellite chlorophyll image and forecast winds for December 23, 2016 06Z with points representing cell concentration sampling data from December 12 to 20: 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).