



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

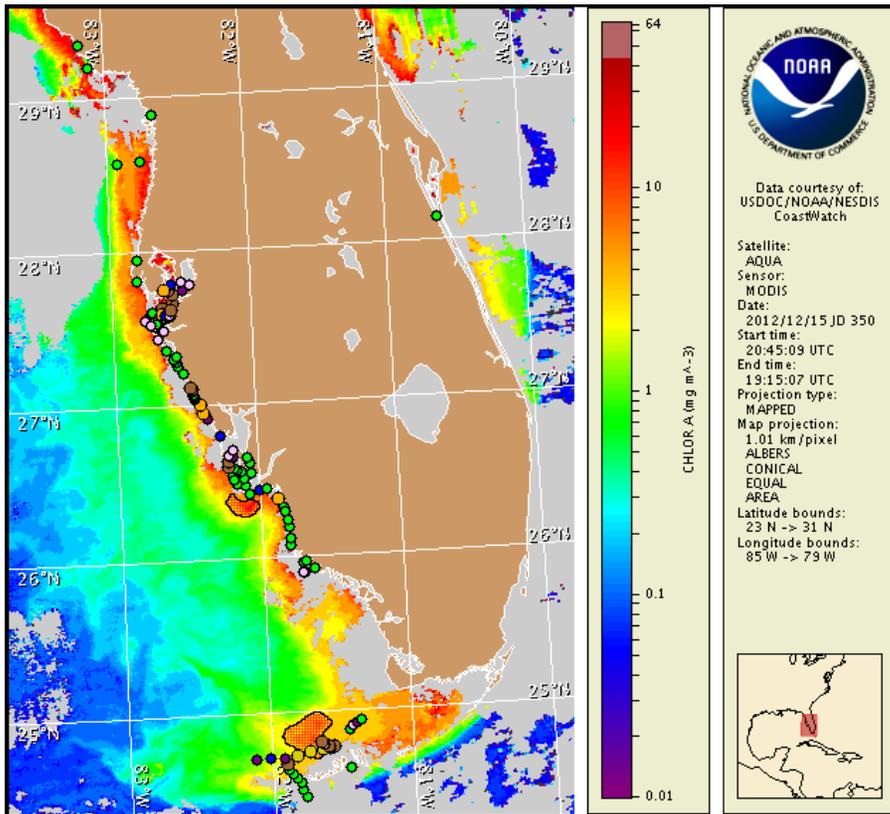
Monday, 17 December 2012

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, December 13, 2012



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from December 7 to 13 shown as 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 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 the Florida FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/research/redtide/events/status/statewide/>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Very low to medium concentrations of *Karenia brevis* (commonly known as Florida Red Tide) are present along- and offshore southwest Florida from southern Pinellas to northern Lee counties as well as offshore the gulfside of the lower Florida Keys (Monroe County). Patchy moderate respiratory impacts are possible today through Wednesday and patchy high impacts are possible Thursday in the bay regions of southern Pinellas/northern Manatee counties. Patchy moderate respiratory impacts are possible today through Thursday in the bay regions of southern Manatee/northern Sarasota counties. Patchy moderate respiratory impacts are possible today, patchy very low impacts are possible Tuesday and Wednesday, and patchy high impacts are possible Thursday in Sarasota County and southern Lee County. Patchy very low respiratory impacts are possible today and Thursday in northern Charlotte County. Patchy low respiratory impacts are possible today through Thursday in the bay regions of southern Charlotte/northern Lee counties. Patchy very low respiratory impacts are possible today and Thursday and patchy low impacts are possible Tuesday and Wednesday in the gulfside of the lower Florida Keys. No respiratory impacts are expected elsewhere alongshore southwest Florida today through Thursday, December 20.

Analysis

Southwest Florida: A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from southern Pinellas to bay regions of northern Lee County. The most recent sample results indicate 'very low a' to 'medium' concentrations of *K. brevis* in the bay regions of southern Pinellas and northern Manatee counties (FWRI; 12/10-12/12). Sample results also indicate 'very low b' concentrations at Lighthouse Beach and 'medium' concentrations in Lovers Key State Park in southern Lee County where *K. brevis* was previously not present (FWRI; 12/12). Additionally, *K. brevis* was either not present or at background concentrations in samples collected alongshore northern Collier County (FWRI; 12/10-12/13). Recent MODIS imagery (12/15; shown left) is cloudy alongshore portions of southwest Florida. Where visible imagery indicates that chlorophyll levels have remained at similar levels to those found in the 12/8 imagery seen on the 12/10 bulletin. Chlorophyll levels range from 4 to 10 $\mu\text{g/L}$ alongshore southern Pinellas, southern Manatee and central and southern Lee counties. A patch of elevated to high chlorophyll levels (up to 14 $\mu\text{g/L}$) is located offshore southern Lee County and centered at 26°20'5"N 82°5'37"W. Sampling in this region is recommended. Forecasted variable winds today through Thursday may decrease the potential for southerly transport of the bloom.

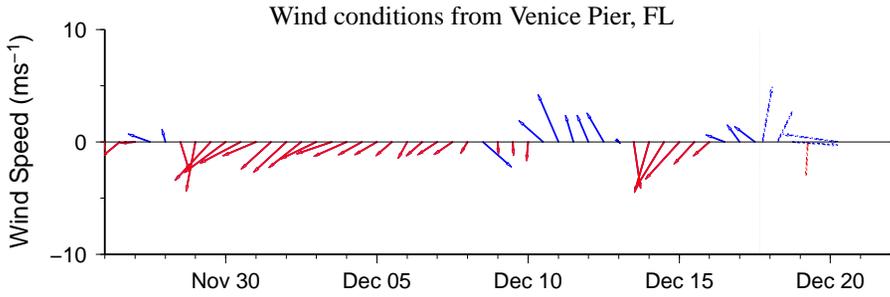
Florida Keys: A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys. There are currently no new samples results from this region. MODIS imagery is patchy alongshore the Florida Keys; however offshore the gulfside of the lower Florida Keys, imagery indicates elevated levels (2-4 $\mu\text{g/L}$) of chlorophyll. Forecasted winds today through Thursday may decrease the potential for further southerly transport of the bloom.

Urizar, Fenstermacher

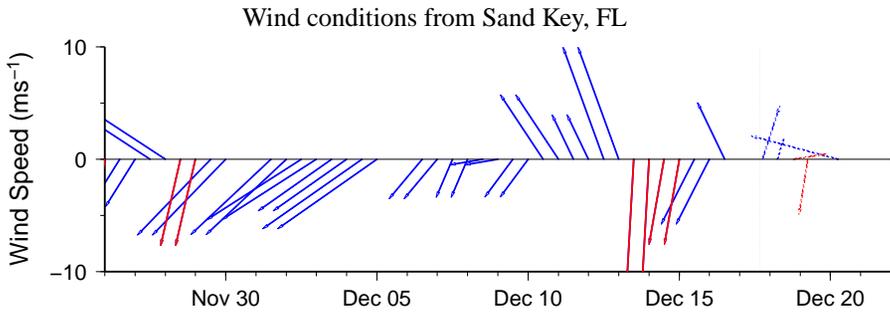
Wind Analysis

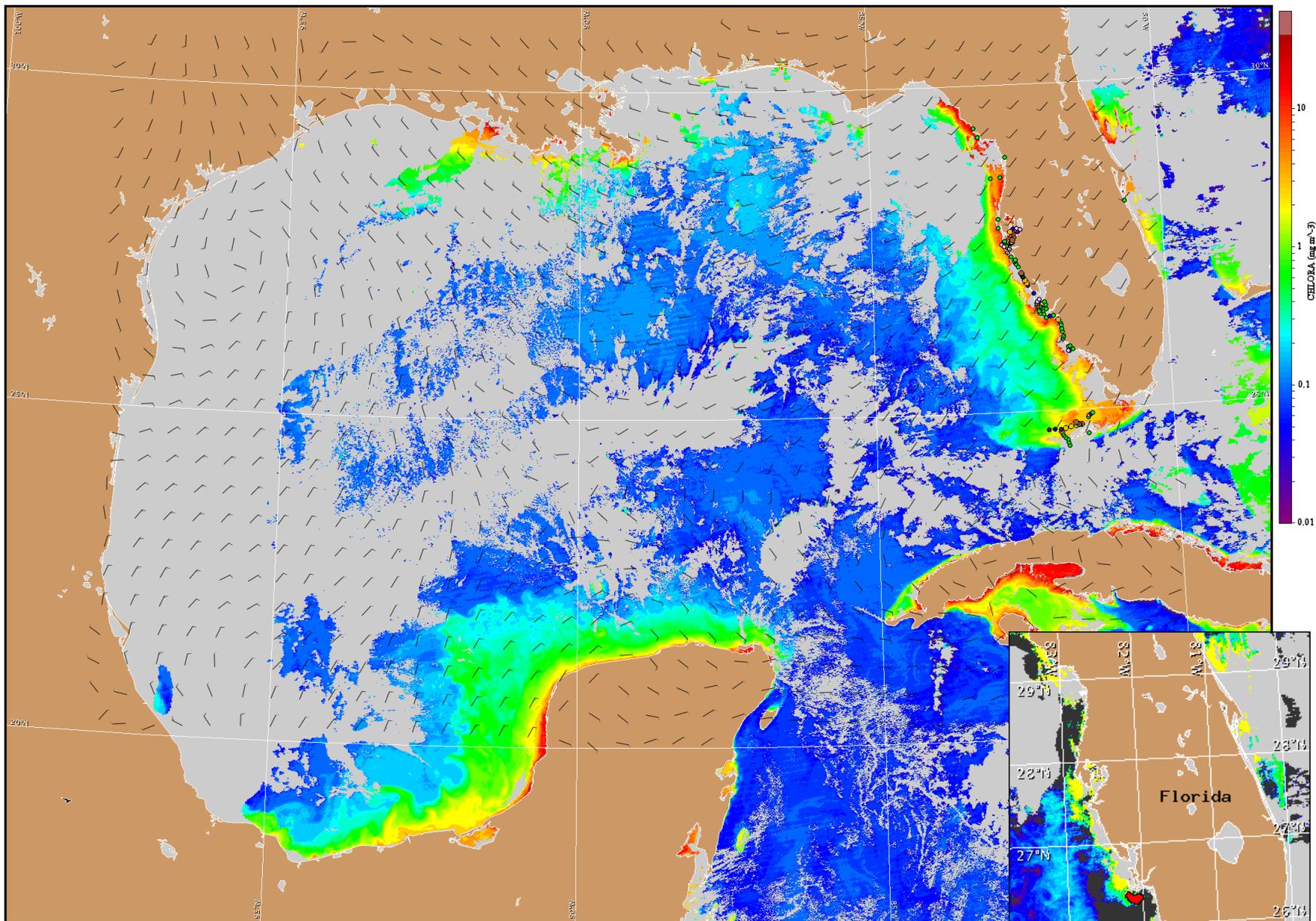
Pinellas to Lee counties: Southerly winds today becoming southwesterly in the afternoon (10-15 kn, 5-8 m/s). Northwesterly winds (15 kn, 8 m/s) tomorrow becoming northerly tomorrow night. Easterly winds (10 kn, 5 m/s) Wednesday becoming southeasterly Wednesday night. Southerly winds (10-20 kn, 5-10 m/s) Thursday.

Gulfside of lower Florida Keys: Southerly winds today and southerly to southwesterly winds tonight (5-10 kn, 3-5 m/s). Variables winds tomorrow (5-10 kn). Northeasterly to easterly winds Wednesday (15 kn). Easterly to southeasterly winds (10-15 kn) Wednesday night and Thursday.



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, 2012 06Z with cell concentration sampling data from December 7 to 13 shown as 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 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).