

Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

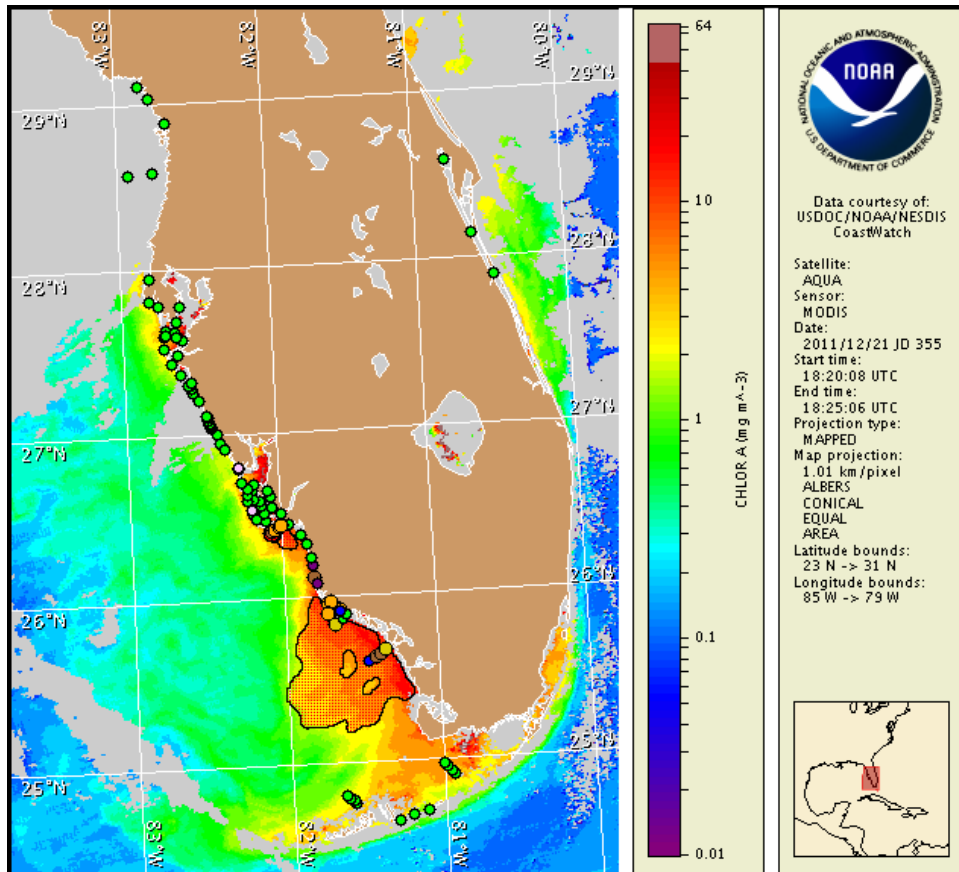
Thursday, 22 December 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 19, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 12 to 21 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). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habofs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:
<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

A patchy harmful algal bloom persists in the San Carlos Bay region of Lee County, and alongshore and offshore central and southern Lee County, Collier County and northern Monroe County. In the coastal Sanibel Island regions of Lee County, patchy high impacts are possible today through Monday. In central Collier County, patchy moderate impacts are possible today through Monday. In the San Carlos Bay region of Lee County, southern Lee County, northern Collier County, and northern Monroe County, patchy very low impacts are possible today through Monday. No additional respiratory impacts are expected elsewhere at the coast in southwest Florida or in the Florida Keys today through Monday, December 26.

Analysis

Due to the upcoming Federal Holiday, the next regularly scheduled bulletin will be issued on Tuesday, December 27.

A patchy harmful algal bloom persists in the San Carlos Bay region of Lee County and alongshore and offshore central and southern Lee County, Collier County and northern Monroe County. The most recent MODIS satellite imagery (12/21, shown left) indicates elevated to high levels of chlorophyll (3 to >10 $\mu\text{g/L}$) alongshore southwest Florida from central Lee County to central Collier County. The bloom appears to have separated into two patches: one patch extends from eastern Sanibel Island in central Lee County southeastward to Barefoot Beach in northern Collier County; the other patch extends from Naples in central Collier County southeastward to Cape Sable in Monroe County. An elevated chlorophyll feature (2-3 $\mu\text{g/L}$) is also visible near the Lower Florida Keys, approximately 3-4 miles north of Sawyer Key. Samples collected on the westernmost edge of this feature on 12/16 (MML) contained no *Karenia brevis*. Continued sampling is recommended.

The most recent sample results indicate 'medium' concentrations of *K. brevis* in San Carlos Bay and 'medium' and 'high' concentrations south and east of Sanibel Island near shore Lee County (FWRI 12/16-17). In the Marco Island region of central Collier County, 'low b' and 'very low b' concentrations of *K. brevis* were identified (FWRI 12/20). Near Pavilion Key in northern Monroe County, sample results indicate up to 'low b' concentrations of *K. brevis* (MML 12/21). In Pinellas, Manatee, and Sarasota counties, sample results indicate that *K. brevis* is 'not present' (FWRI 12/19-20; SCHD 12/19) and in Charlotte County one 'not present' and one 'background' concentration of *K. brevis* were identified (FWRI 12/20). No additional sample information is available near shore in southern Lee County where the patch of elevated to high chlorophyll levels remains visible and is likely to contain *K. brevis*. Additional sampling is recommended throughout the bloom regions.

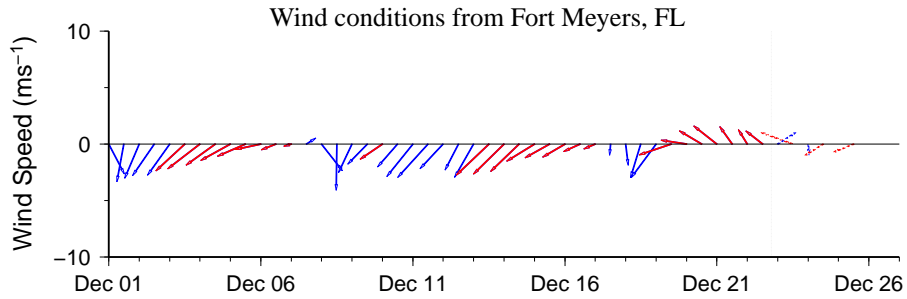
Forecast winds today through Monday will increase the potential for impacts in the Sanibel Island region of central Lee County and in the Marco Island region of central Collier County. In southern Lee County and northern Collier County, conditions are slightly favorable for bloom intensification. Continued southerly transport of the bloom is possible today through Monday.

Urizar, Fisher

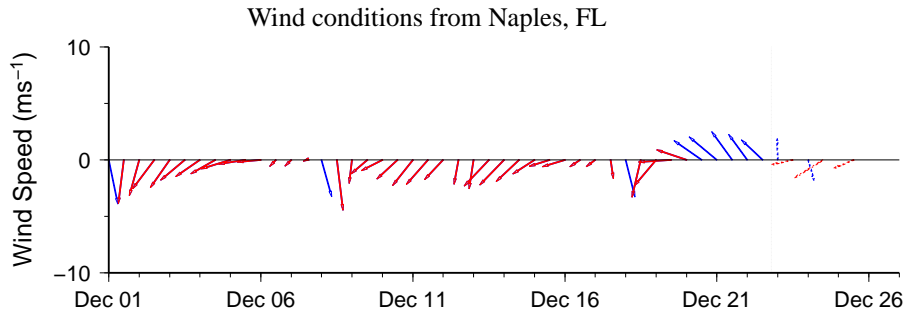
Wind Analysis

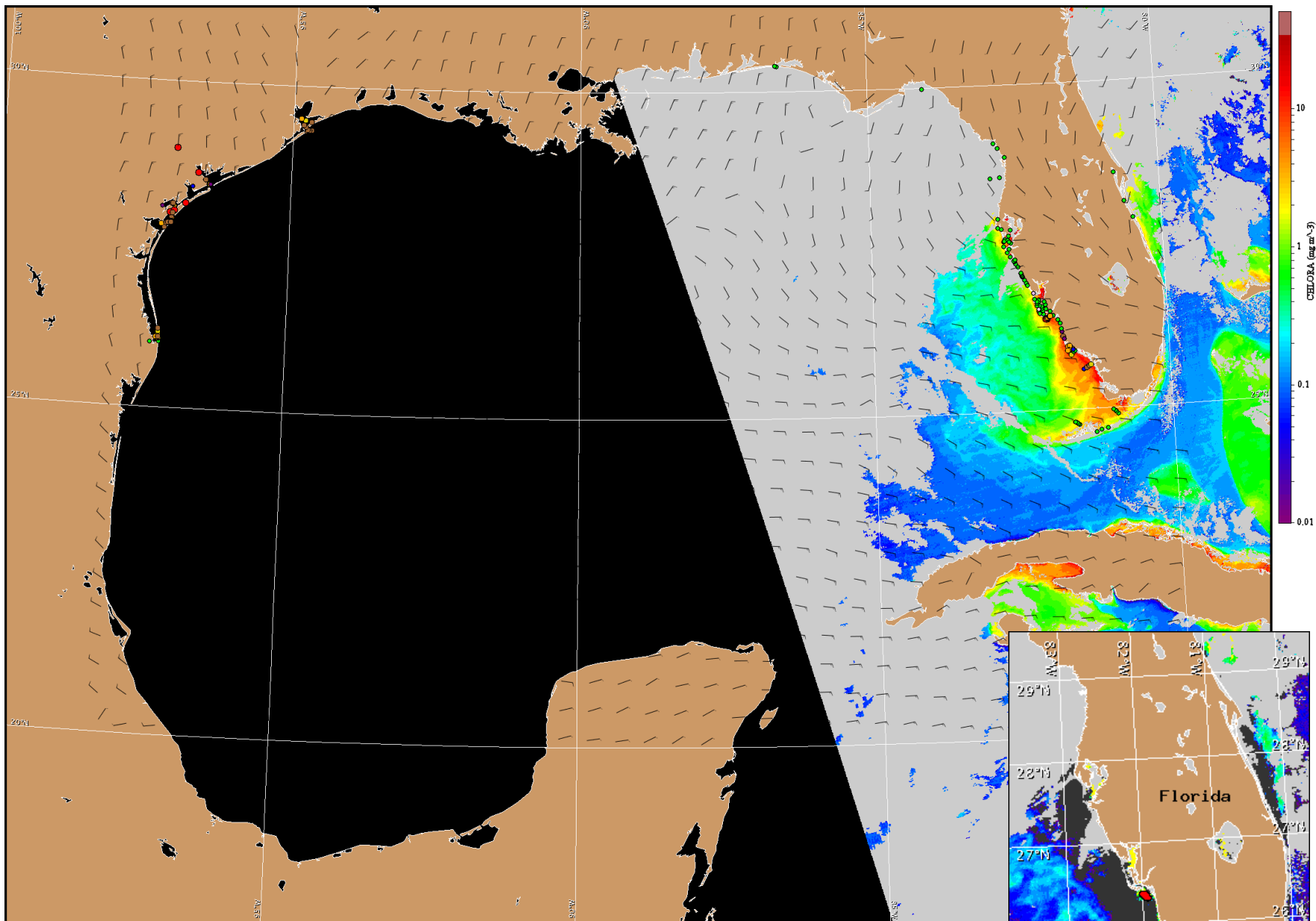
Lee County: Southerly to westerly winds (5-10 kn, 3-5 m/s) today. Southeasterly to northeasterly winds (10 kn) Friday. Northeasterly to easterly winds (10 kn) Saturday. Easterly to northerly winds (10-15 kn, 5-8 m/s) Sunday. Northeasterly winds (15 kn, 8 m/s) Monday.

Collier County: Southeasterly to easterly winds (11-14 kn, 6-7 m/s) today. Easterly winds (7-15 kn, 4-8 m/s) Friday through Sunday. Northeasterly winds (8-11 kn, 4-6 m/s) Sunday night and Monday.



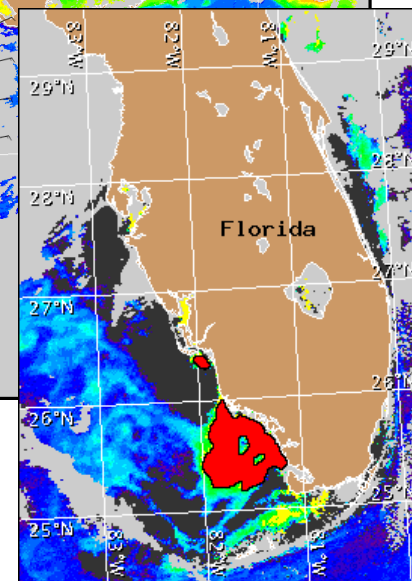
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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





Satellite chlorophyll image and forecast winds for December 23, 2011 12Z with cell concentration sampling data from December 12 to 21 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). For a list of cell count data 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).