Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

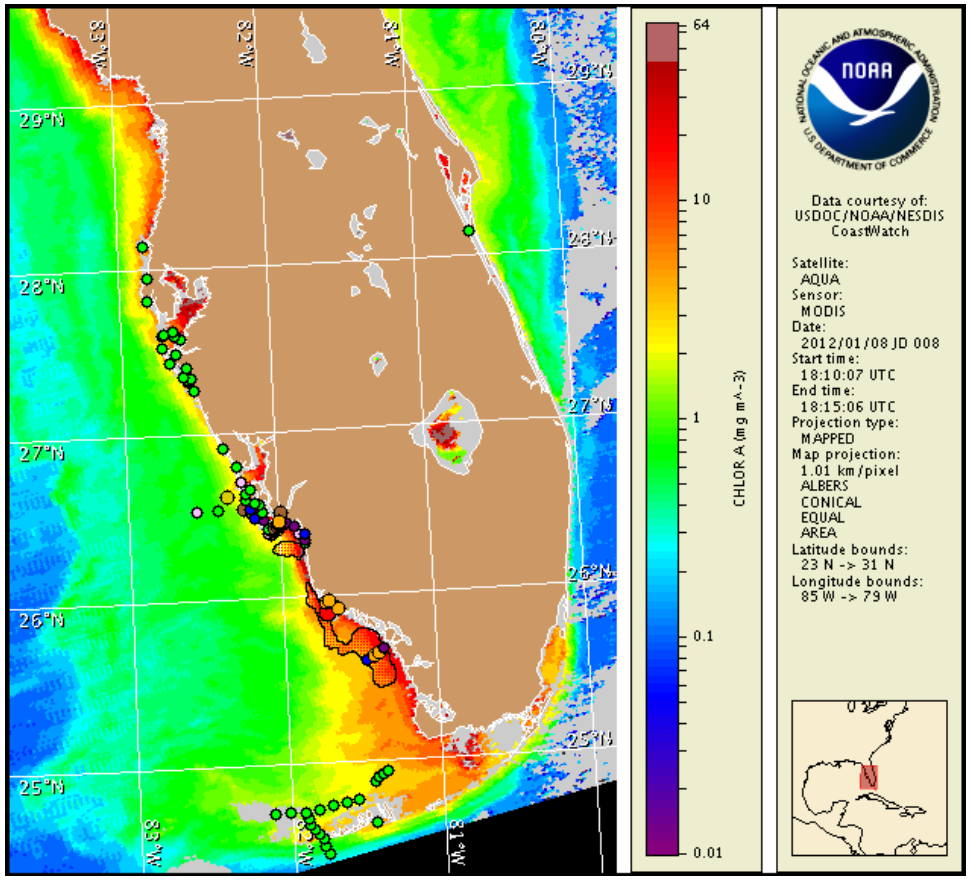
Monday, 09 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, January 5, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 30 to January 6 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/habfs_bulletin_guide.pdf

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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. A harmful algal bloom was also last identified on 12/12 on the Atlantic side of the Florida Keys. In the San Carlos Bay region and the coastal Sanibel Island region of Lee County, patchy high impacts are possible today through Tuesday with patchy medium impacts possible on Wednesday. In the Estero Bay region of southern Lee County, patch very low impacts today through Wednesday. In northern Collier County, patchy very low impacts possible today through Tuesday with patchy high impacts possible on Wednesday. In the Marco Island region of central Collier County, patchy high impacts possible today through Wednesday. In northern Monroe County, patchy very low impacts possible today through Tuesday with patchy high impacts possible on Wednesday, January 11.

Analysis

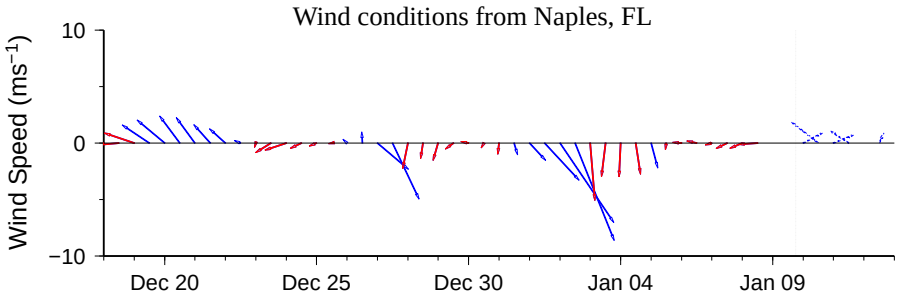
Southwest Florida: A patchy harmful algal bloom persists in the San Carlos Bay region of Lee County and alongshore and offshore central and southern Lee County, Collier County, and northern Monroe County. Samples last week show a general decrease of *Karenia brevis* concentrations in the San Carlos Bay and offshore eastern Sanibel Island region, where highest concentrations measured last week were 'medium' (FWRI, 12/31-1/5). 'Medium' to ' high' concentrations of *K. brevis* were detected in the Marco Island region of central Collier County (FWRI, CCPCPD, 1/3). 'Very low' to ' medium' concentrations were detected 3-9 miles southwest of Pavilion Key (MML, 1/6). 'Very low' to ' low' concentrations were also detected offshore and in the Pine Island Sound of central Lee County, alongshore and in Estero Bay of southern Lee County (FWRI,12/23-1/5). No *K. brevis* was detected in samples collected alongshore Pinellas, Manatee, Sarasota and Charlotte counties last week (FWRI, MML, 12/23-1/5). Additional sample information can be obtained through FWRI at http://myfwc.com/research/redtide/events/status/statewide/.

Recent MODIS imagery (1/8, shown left) indicates elevated chlorophyll levels (>3μg/L) alongshore southwest Florida from northern Lee County to Cape Sable in Monroe County with very high chlorophyll levels (>20μg/L) extending about 26 miles alongshore southern Lee and northern Collier counties. Chlorophyll levels in the San Carlos Bay and offshore east Sanibel Island remain elevated to high (3-12μg/L). Continued sampling in the San Carlos Bay region and alongshore and offshore Lee, Collier and northern Monroe counties is highly recommended.

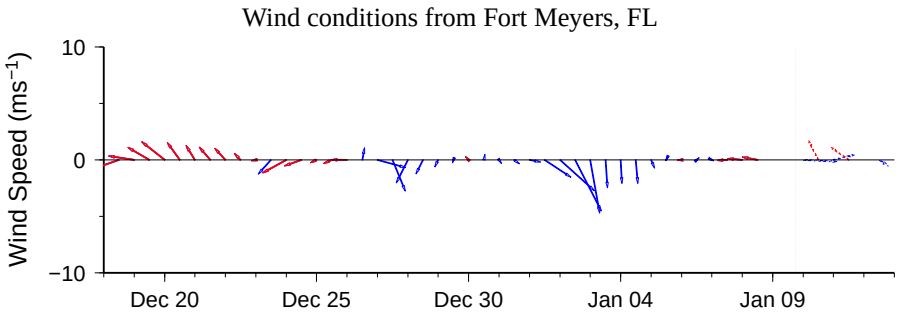
Florida Keys: Sampling from last week indicated background *K. brevis* along and offshore Lower Florida Keys (MML, 1/6). A very patchy bloom containing up to 'medium' *K. brevis* concentrations was detected along the Atlantic side of the Middle to Upper Florida Keys on 12/11-12/12 (FWRI, NOAA). No significant elevated chlorophyll features are visible south of the eastern Middle Keys or the Upper Keys

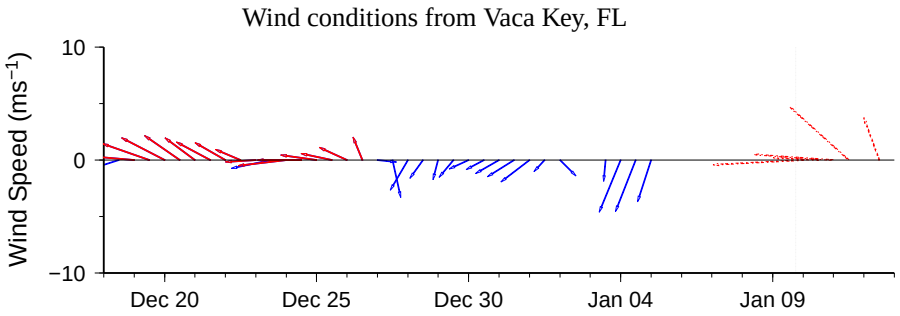
Forecasted variable winds may minimize the southward transport of bloom concentrations and maintain bloom location alongshore Lee, Collier and Monroe counties.

-Yang, Fenstermacher



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).



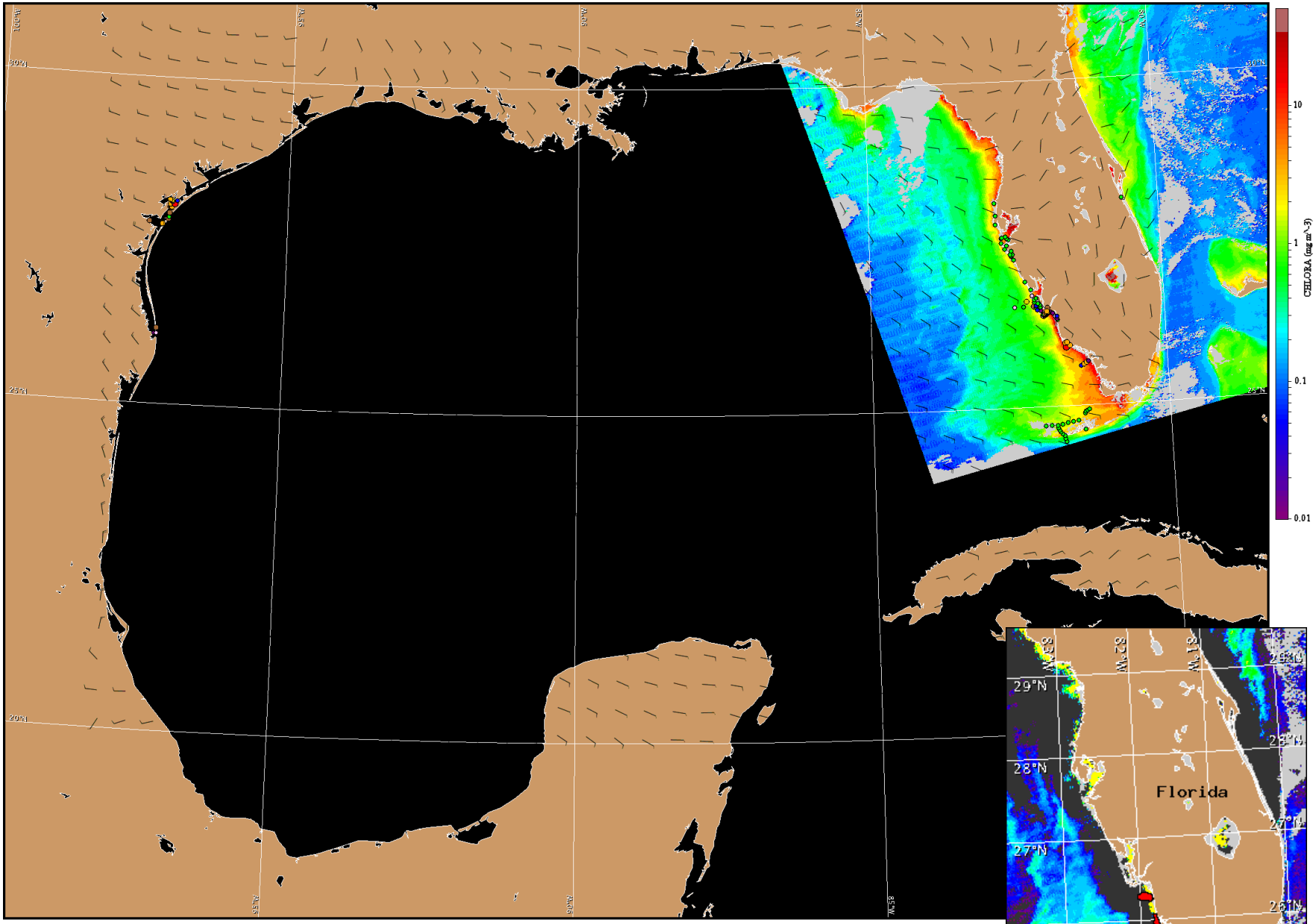


Wind Analysis

Pinellas to Lee Counties: South winds (10kn, 5m/s) becoming southeast (5-15kn, 3-8m/s) tonight and Tuesday. Southwest winds (20kn, 10m/s) Wednesday becoming west (15kn) later in the afternoon.

Collier and Monroe Counties: Southeast winds (11-14kn, 6-7m/s) today. East to southeast winds (6-14kn, 3-7m/s) tonight and Tuesday. South to southeast winds (6-14kn, 3-7m/s) Tuesday night. South southeast winds (14-17kn, 7-9m/s) Wednesday becoming southwest in the afternoon. West to northwest winds (13-16kn, 7-8m/s) Wednesday night.

Florida Keys: East winds (10-20kn, 5-10m/s) today. East to southeast winds (10-15kn) Tuesday. Southeast winds (15kn) Wednesday becoming south to southwest in the afternoon. Southwest to west winds (10-15kn) Wednesday evening becoming northwest.



Satellite chlorophyll image and forecast winds for January 10, 2012 12Z with cell concentration sampling data from December 30 to January 6 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/habfs_bulletin_guide.pdf

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).