



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

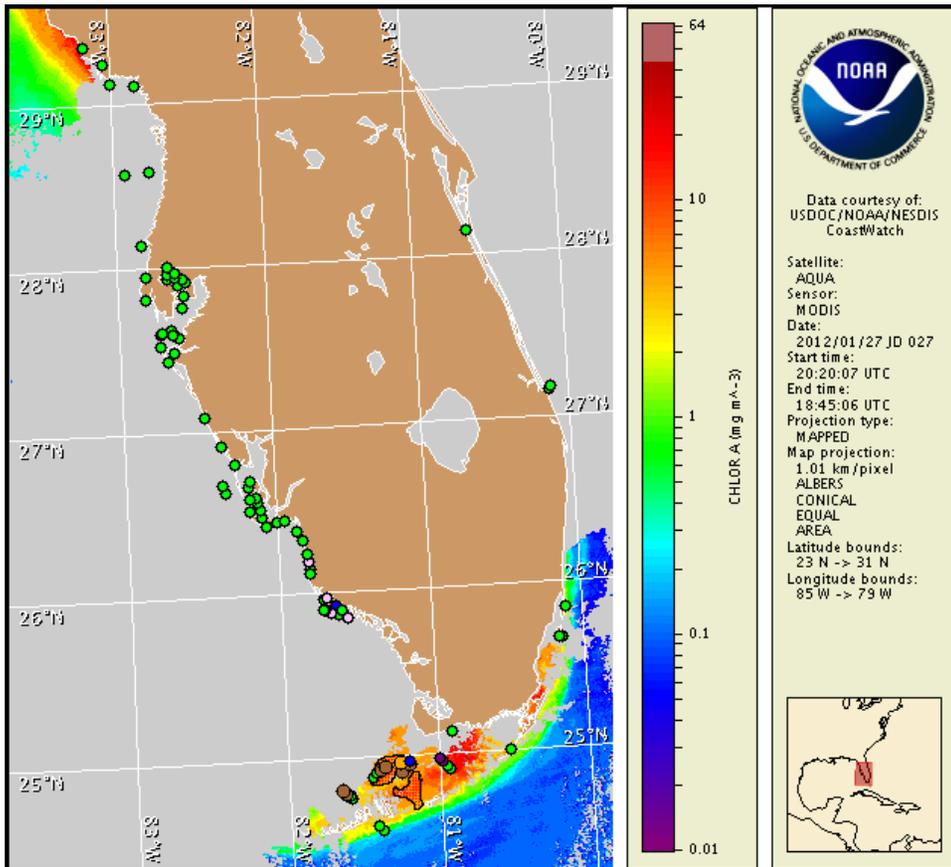
Monday, 30 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, January 26, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from January 20 to 27 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

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 harmful algal bloom continues alongshore and offshore central to southern Collier County in the Marco Island region, northern Monroe County and offshore in the Gulf side region of the Florida Keys. Patchy very low impacts are possible in the Marco Island region of central to southern Collier County and patchy low impacts are possible in the Gulf side region of the Lower Florida Keys today through Wednesday. No other impacts are expected elsewhere alongshore southwest Florida or in the Florida Keys region today through Wednesday, February 1. Reports of respiratory irritation were received last week offshore southern Collier County.

Analysis

Florida Keys: A harmful algal bloom was identified offshore in the Gulfside region of the Lower to Middle Keys last week. Samples collected last week identified 'low a' *Karenia brevis* concentrations 5-8 miles northwest of Sawyer Key and 'very low' concentrations 10-12 miles offshore Cape Sable at Oxfoot Key (1/23-1/25; MML). No *K. brevis* was identified south of Summerland Key on 1/27 (MML).

MODIS imagery (1/27; shown left) remains cloudy throughout much of the Florida Keys region; however, elevated to high chlorophyll (2-12 $\mu\text{g/L}$) continues to be visible in patches north of the Lower and Middle Keys, approximately 8-12 miles northeast of Grassy Key, approximately 2-6 miles north to northeast of Upper Harbor Key, and from Big Pine Key to the Honda Keys. Chlorophyll levels southeast of Cape Sable are very high (8 to >30 $\mu\text{g/L}$) and may indicate the presence of a mixed bloom. Continued sampling is recommended. Strong north to northeast winds may transport the bloom closer to shore in the Middle and Lower Florida Keys today through Tuesday.

Southwest Florida: Recent samples indicate that the bloom continues to dissipate at the coast in Lee and Collier counties. Samples collected last week continued to identify background to 'very low' concentrations of *K. brevis* in the Marco Island region of central to southern Collier County. Background concentrations of *K. brevis* were detected alongshore northern Collier County at Clam Pass and alongshore in the Ten Thousand Islands region of southern Collier County (1/23-1/26; CCPCPD, FWRI). 'Very low' to 'medium' *K. brevis* concentrations were detected in samples taken 0.7 to 9 miles offshore of Pavilion Key on 1/18 (MML). Respiratory irritation reports were received offshore Marco Island in central to southern Collier County last week. All other samples collected alongshore southwest Florida from Pinellas to Collier counties indicates that *K. brevis* is not present (1/20-1/27; FWRI, MML, SCHD, CCPCPD)

Recent MODIS imagery is predominantly cloudy alongshore southwest Florida, limiting analysis. However, imagery on 1/29 (not shown) indicates that chlorophyll levels have decreased substantially south of Sanibel Island where it is presently 2-3 $\mu\text{g/L}$. No further imagery information is presently available for Collier or Monroe counties.

Northerly to northeasterly winds forecasted for Monday through Wednesday may promote southern transport of the blooms and will decrease the potential for impacts along the coast of southwest Florida.

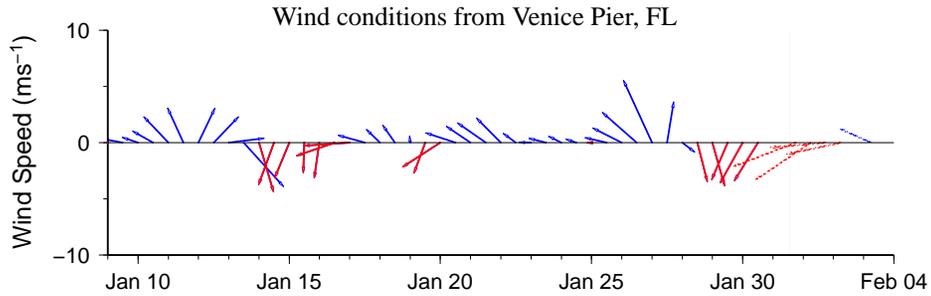
Burrows, Fisher

Wind Analysis

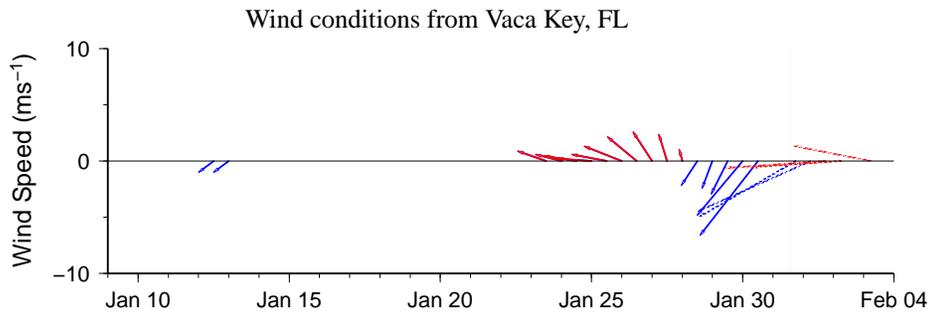
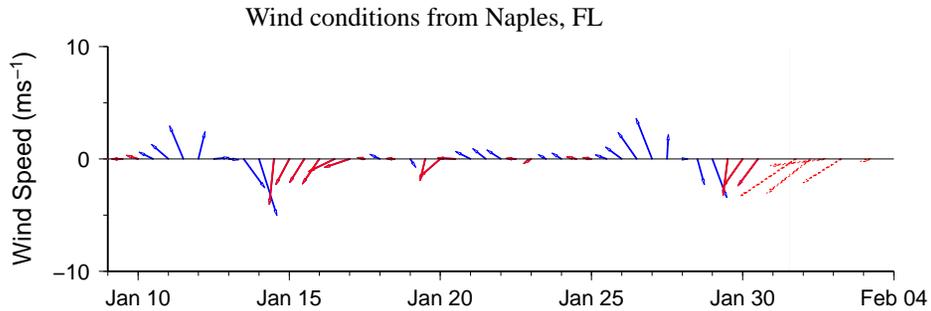
Charlotte and Lee counties: Northeast winds (15kn, 8 m/s) today through tonight becoming east winds Tuesday through Tuesday night (15kn). Northeast winds Wednesday (10kn, 5 m/s) becoming southeast Wednesday night (10kn)

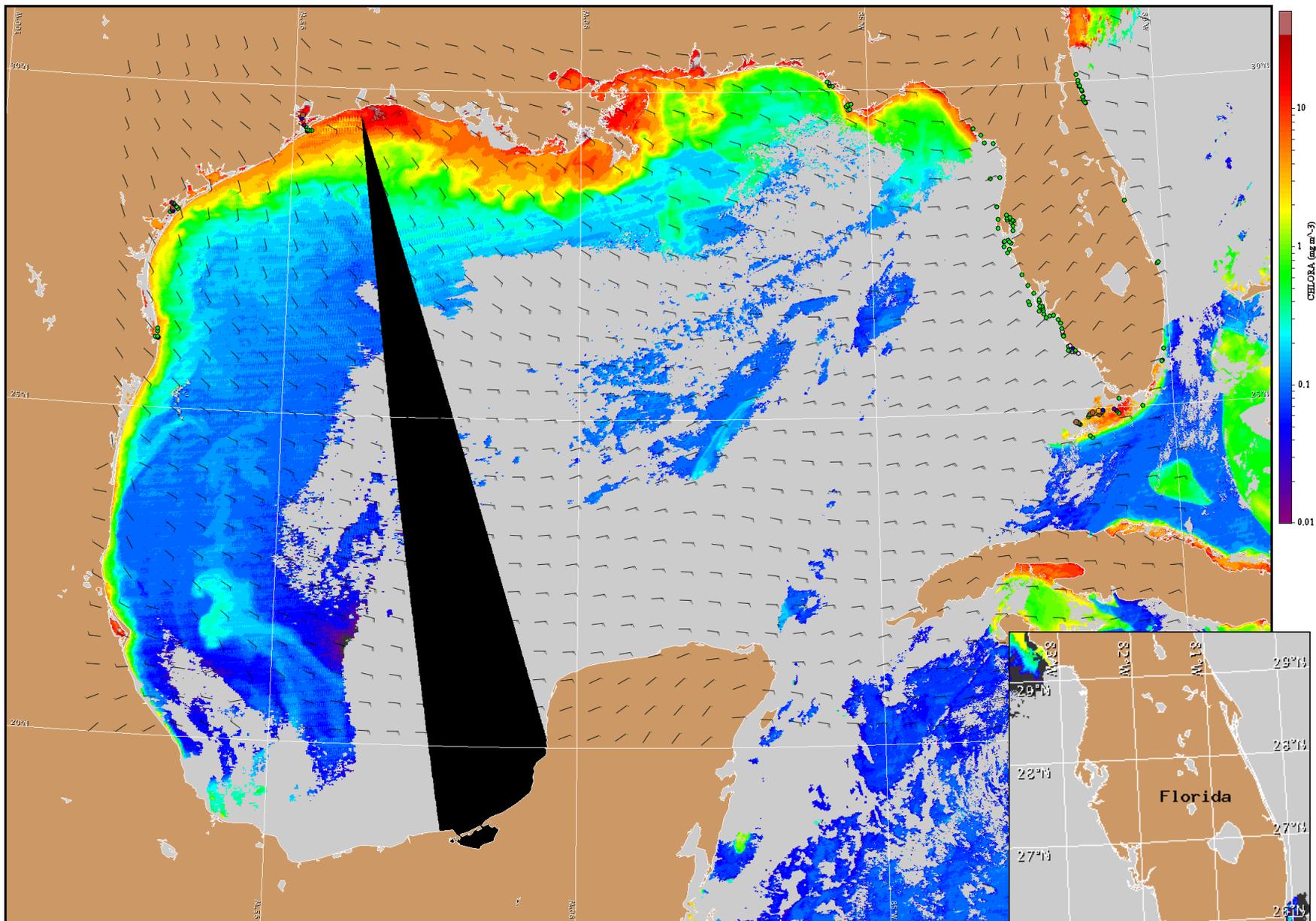
Collier and Monroe counties: East northeast winds (16-21kn, 8-11m/s) today and tonight becoming east winds (14-19kn, 7-10 m/s) Tuesday through Tuesday night. Wednesday and Wednesday night east southeast winds 13-16kn, 7-8 m/s).

Gulf side of Florida Keys: Northeast winds (20-25kn, 10-13 m/s) today becoming north-east to east through Tuesday. Tuesday night through Wednesday east winds 15-20kn (8-10 m/s).



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 January 31, 2012 12Z with cell concentration sampling data from January 20 to 27 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).