



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

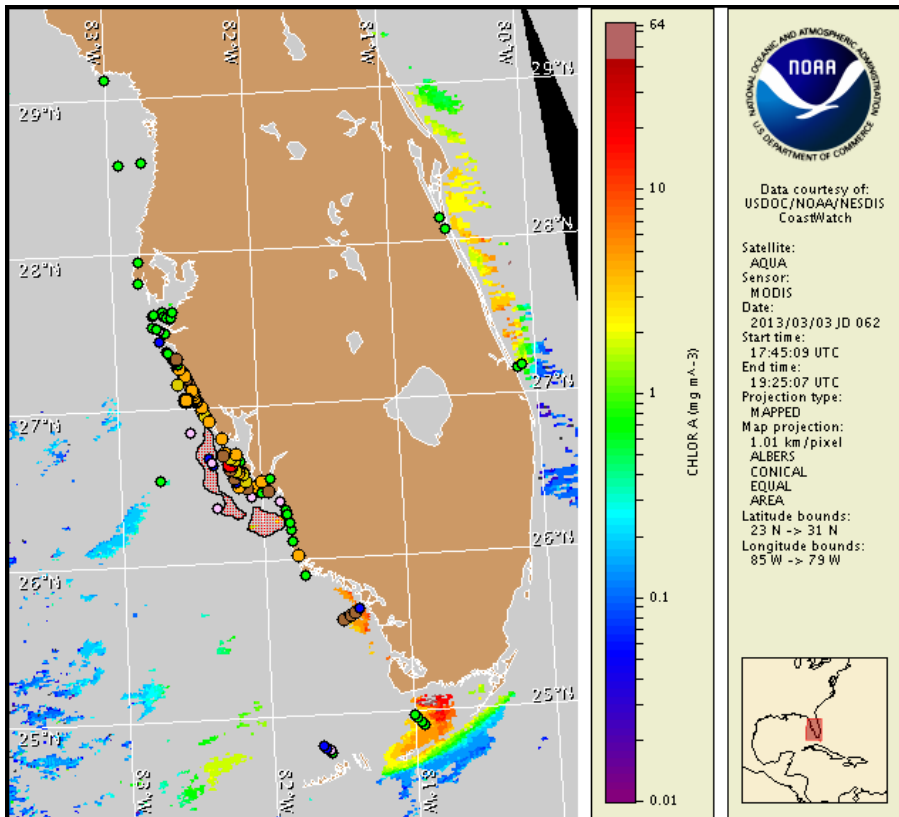
Monday, 04 March 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Friday, March 1, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from February 22 to March 1 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](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 high concentrations of *Karenia brevis* (commonly known as Florida Red Tide) are present along- and offshore southwest Florida, as well as offshore the lower Florida Keys. Alongshore Sarasota and Charlotte counties, patchy moderate respiratory impacts are possible today and Tuesday, with patchy high respiratory impacts possible Wednesday and patchy very low respiratory impacts possible Thursday. Alongshore Lee County, patchy very low respiratory impacts are possible today and Thursday with patchy low respiratory impacts possible Tuesday and Wednesday. In the bay regions of Charlotte, Lee, and central Collier counties, patchy moderate respiratory impacts are possible today, Tuesday, and Thursday, with patchy high respiratory impacts possible Wednesday. Alongshore northern Collier County, patchy very low respiratory impacts are possible today, with patchy moderate respiratory impacts possible Tuesday and Thursday, and patchy high respiratory impacts possible Wednesday. Alongshore southern Collier and northern Monroe counties, patchy very low respiratory impacts are possible today, with patchy low respiratory impacts possible Tuesday through Thursday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Thursday, March 7. Over the last several days, reports of respiratory irritation and dead fish were received from Sarasota, Charlotte, Lee, and Collier counties.

## Analysis

Concentrations of *Karenia brevis* are present along- and offshore southwest Florida from Manatee to Monroe counties, and range from 'not present' to 'high'. Harmful algae is also present offshore the lower Florida Keys.

Alongshore Captiva and Sanibel islands in central Lee County, sampling from South Seas Plantation indicated 'very low b' concentrations of *K. brevis* while Tarpon Road and Lighthouse beaches indicated 'background' and 'not present' concentrations respectively (FWRI; 2/27). Sampling from Lynn Hall Park indicated 'low a' concentrations of *K. brevis* (FWRI; 2/27). Recent sampling alongshore northern Collier County, from Barefoot Beach to Naples Beach, indicates that *K. brevis* is 'not present' (FWRI; 2/28). Sampling along- and offshore of the Pavilion Key in the Ten Thousand Island region indicated *K. brevis* concentrations between 'very low b' and 'low a' (MML; 2/27). Offshore Oxfoot Key in the Florida Bay region, recent sampling indicates *K. brevis* is 'not present' (MML; 2/28). No additional sampling has been received from the lower Florida Keys since sampling on 2/25 indicated 'very low b' concentrations of *K. brevis* (MML). Over the past several days, respiratory irritation and dead fish were reported alongshore Sarasota County, from the Causeway Islands in Lee County, Manasota Key and the Gasparilla region of Charlotte County, and from Naples in Collier County (FWRI, MML; 2/28-3/4).

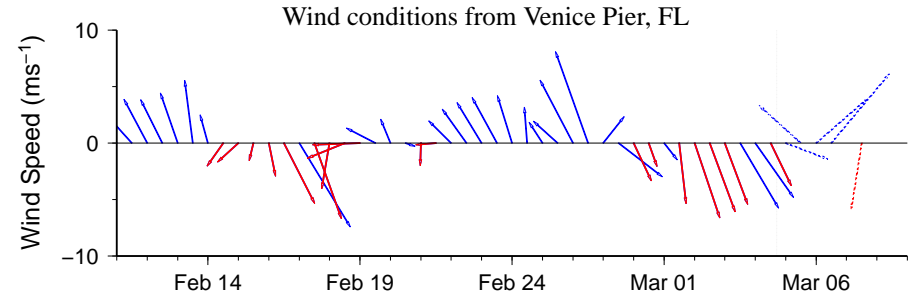
MODIS Aqua imagery (3/3; shown left) of southwest Florida is completely obscured by clouds, preventing analysis. MODIS AQUA imagery (2/28; not shown) shows elevated chlorophyll stretching along- and offshore the southwest Florida coastline from Sarasota to Collier counties, with patches of high to very high chlorophyll (11 to >20  $\mu\text{g/L}$ ) visible alongshore from northern Sarasota to northern Lee counties. While sampling along the beaches of Lee and Collier counties indicates *K. brevis* concentrations between 'not present' and 'very low b', a patch of anomalously high chlorophyll is present offshore Lee and Collier counties from 26°57'6"N 82°26'30"W to 26°10'48"N 81°50'55"W.

Variable winds forecast today through Thursday alongshore southwest Florida may decrease the potential for transport of the bloom. Onshore winds may also increase the potential for respiratory impacts along the coast and in the bay regions of southwest Florida over the next several days. In the lower Florida Keys region, variable winds may decrease the potential for transport of the bloom.

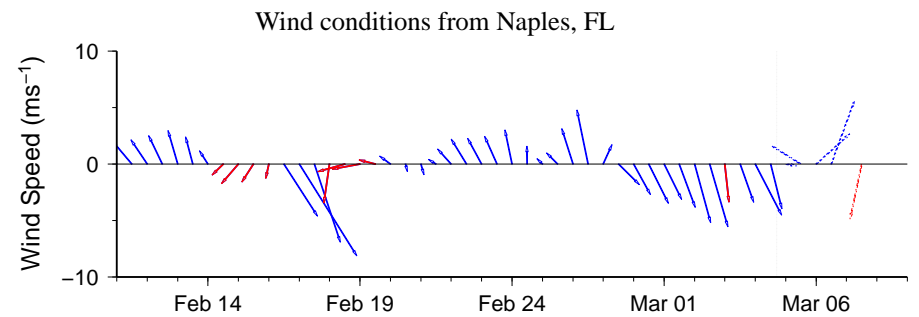
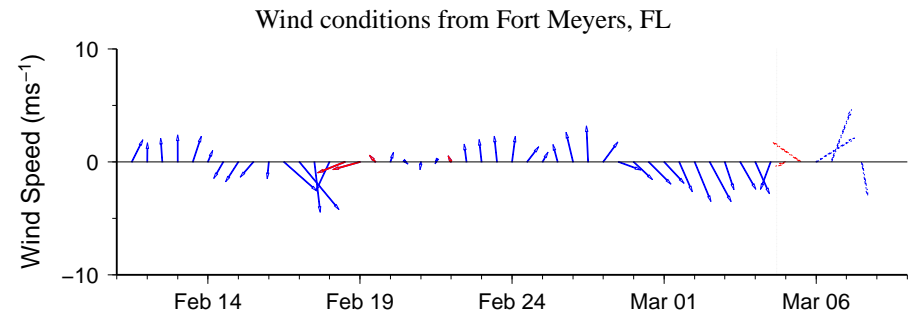
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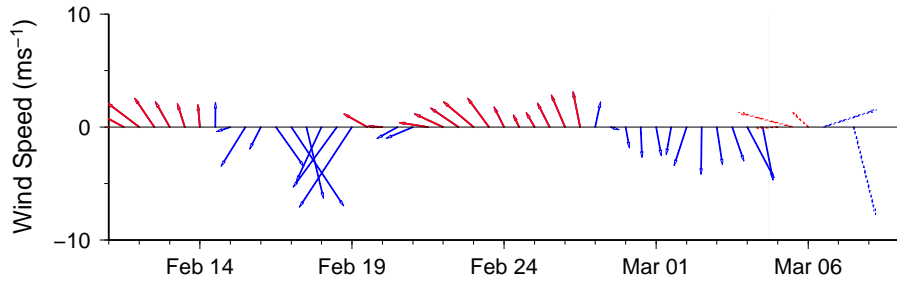
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Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical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



Wind conditions from Vaca Key, FL

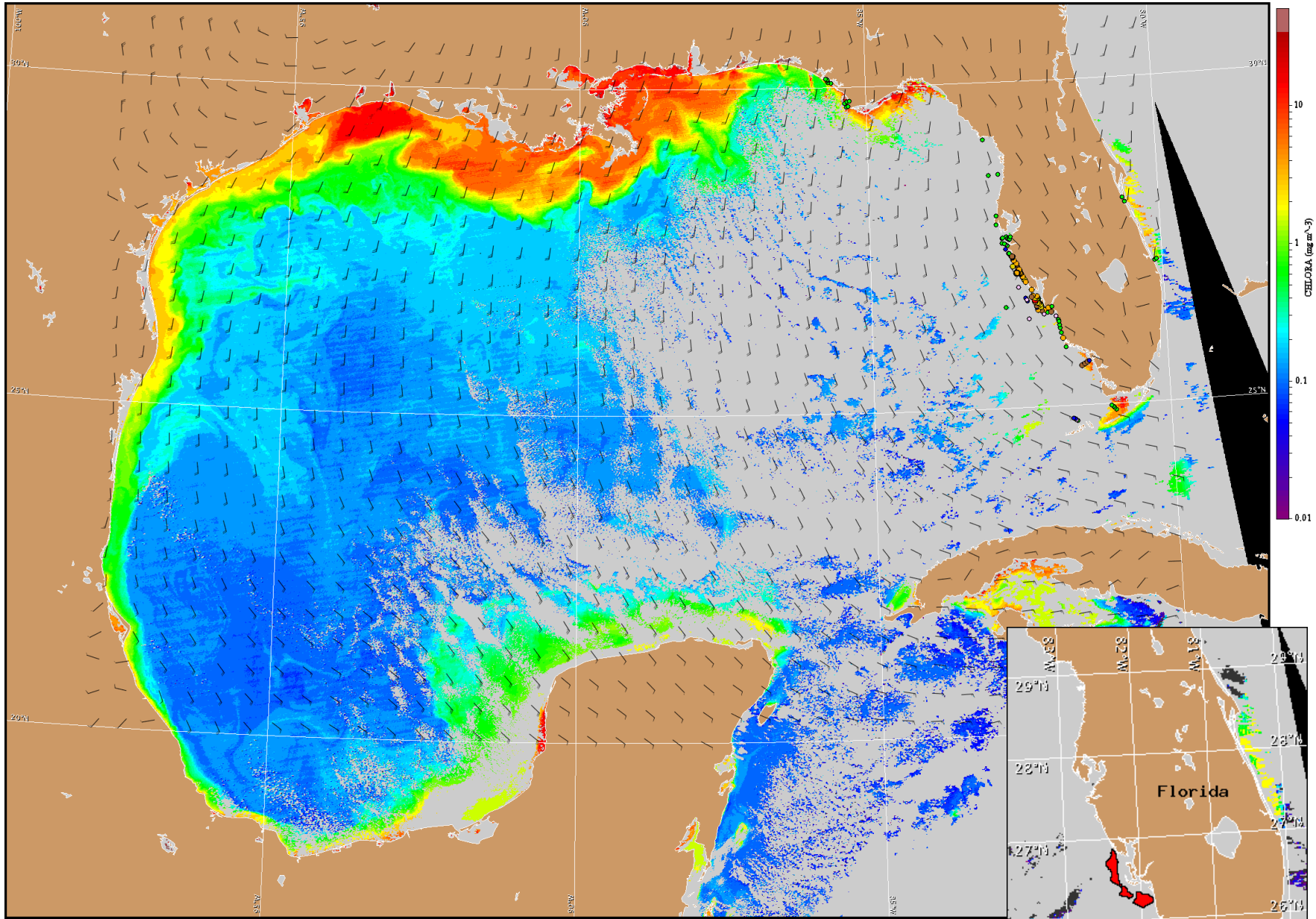


## Wind Analysis

**Pinellas to Lee counties:** Northeast winds (10 kn, 5 m/s) becoming northwest winds (5 kn, 3 m/s) today. South winds (5 kn) tonight becoming southeast winds (15 kn, 8 m/s) after midnight. South winds (15 kn) Tuesday becoming southwest to west winds (20 kn, 10 m/s) Tuesday night. Northwest winds (20 kn) Wednesday. North winds (15 kn) Thursday.

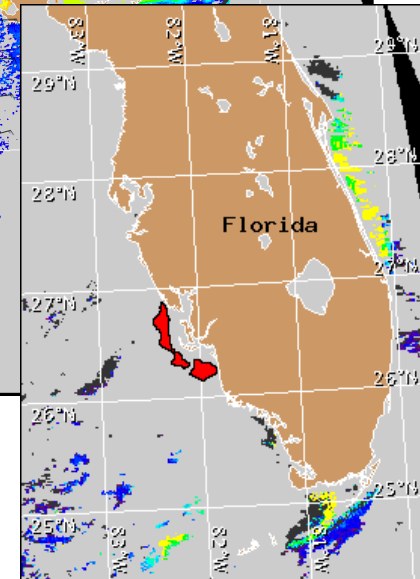
**Collier and Monroe counties:** North winds (8-13 kn, 4-7 m/s) today. Northeast winds (5 kn) becoming southeast winds (5-9 kn, 3-5 m/s) tonight. Southeast to south winds (6-13 kn, 3-7 m/s) Tuesday. Southwest winds (5-14 kn, 3-7 m/s) Tuesday night. West to northwest winds (13-23 kn, 7-12 m/s) Wednesday becoming north northwest winds (18-23 kn, 9-12 m/s) Wednesday night. North northwest winds (10-15 kn) Thursday becoming north northeast (9-14 kn, 5-7 m/s) Thursday night.

**Gulf side of lower Florida Keys:** Northeast winds (10-15 kn, 5-8 m/s) today. Northeast to east winds (5-10 kn) tonight and Tuesday becoming southeast winds Tuesday afternoon. Southeast to south winds (10 kn) Tuesday night becoming south to southwest after midnight. Building west to northwest winds (10-20 kn, 5-10 m/s) Wednesday. Northwest to north winds (20 kn) Wednesday night. North winds (10-20 kn) Thursday becoming north to northeast winds (10-20 kn) Thursday night.



Satellite chlorophyll image and forecast winds for March 5, 2013 12Z with cell concentration sampling data from February 22 to March 1 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).