



## Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

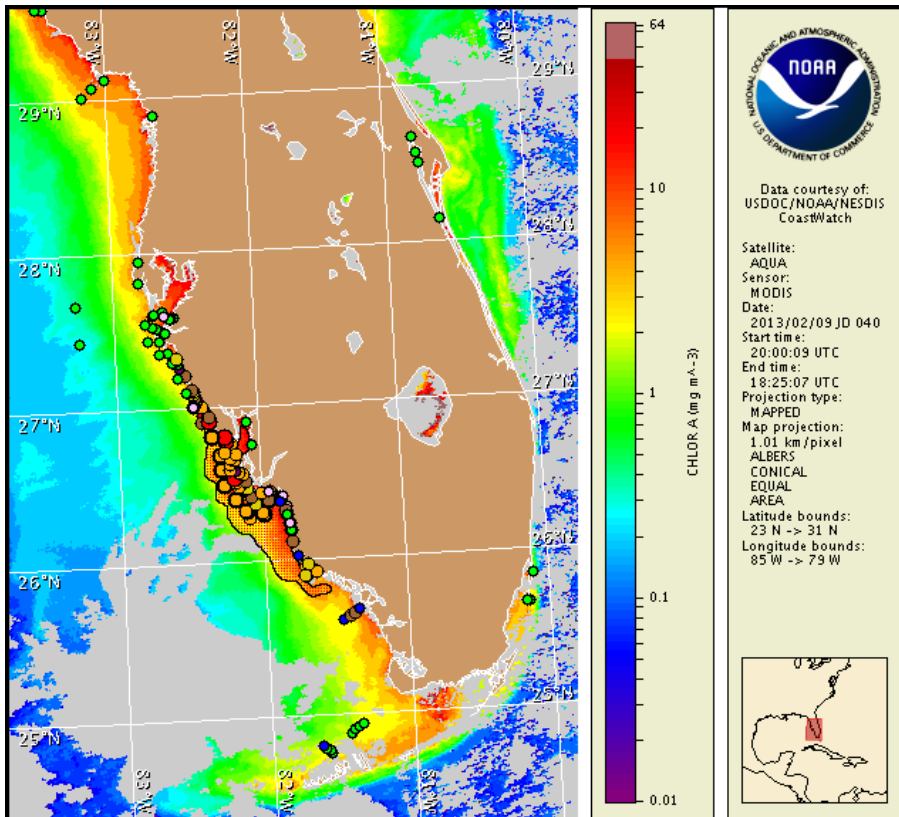
Monday, 11 February 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, February 7, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from February 1 to 8 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. In northern Sarasota County, patchy low respiratory impacts are possible today through Wednesday, with patchy very low respiratory impacts possible Thursday. Alongshore southern Sarasota, Charlotte and Lee counties, patchy high respiratory impacts are possible today through Wednesday, with patchy low respiratory impacts possible Thursday. In the bay regions of southern Charlotte and northern and central Lee counties, patchy high respiratory impacts are possible today through Thursday. Alongshore northern Collier County, patchy very low respiratory impacts are possible today and Tuesday, patchy high respiratory impacts are possible Wednesday, and patchy low respiratory impacts are possible Thursday. Alongshore and in the bay regions of central Collier County, patchy moderate respiratory impacts are possible today, Tuesday and Thursday, with patchy high respiratory impact possible Wednesday. Alongshore northern Monroe County, patchy low respiratory impacts are possible today through Thursday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Thursday, February 14. Over the past few days, reports of respiratory irritation were received from Sarasota and Lee counties. Reports of dead fish were also received from Lee County.

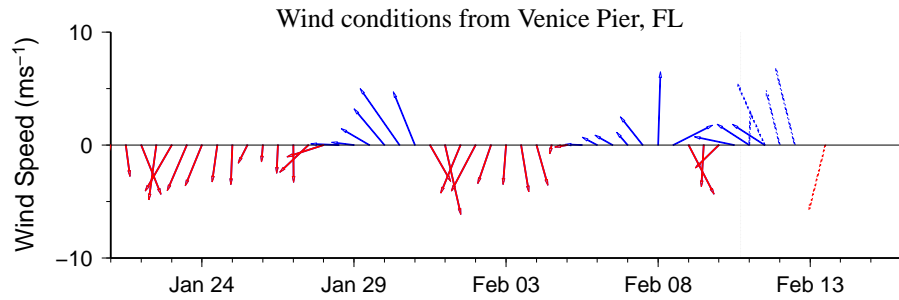
## Analysis

A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from Sarasota to Monroe counties, with *K. brevis* concentrations ranging from 'not present' to 'high'. Recent samples collected alongshore, offshore and in the bay regions of Sarasota County indicate that *K. brevis* concentrations range from not present to 'low a' concentrations, with the highest concentrations in southern Sarasota County (FWRI; 2/1-6). Samples collected from the bay regions of Lee County continue to indicate 'very low a' to 'high' concentrations of *K. brevis* (FWRI; 2/6). Alongshore central and southern Lee County, samples now indicate *K. brevis* concentrations range from 'background' to 'medium' (FWRI; 2/6), with 'medium' to 'high' concentrations identified offshore (FWRI; 2/5). In the bay regions of central Collier County, 'very low b' concentrations of *K. brevis* were identified (FWRI; 2/4). In the Florida Keys, samples collected offshore the Lower Keys indicate *K. brevis* concentrations range from not present to 'very low b' concentrations (MML; 2/6-8). Over the past few days, respiratory irritation was reported in southern Sarasota County and in several locations in Lee County (FWRI, MML; 2/6-8). Fish kills have also been reported in the last several days in southern Lee County (MML; 2/8).

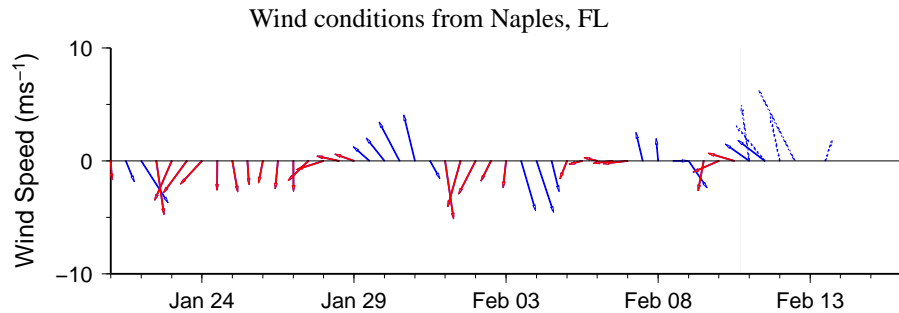
In recent MODIS Aqua imagery from 2/8 to 2/10 (2/9, shown left), elevated chlorophyll (2-7  $\mu\text{g/L}$ ) continues to be visible stretching along- and offshore the coast of southwest Florida from Pinellas to Monroe counties and offshore the gulf-side of the Lower and Middle Keys, with patches of high to very high chlorophyll (>10 to >20  $\mu\text{g/L}$ ) visible alongshore from Charlotte to northern Monroe counties. Patches of anomalously high chlorophyll now stretch from alongshore southern Sarasota to along- and offshore northern Monroe counties (27°01'25"N 82°25'59"W to 25°43'41"N 81°35'25"W). The widest patch extends approximately 25 miles offshore southern Lee County (26°19'57"N 81°50'35"W to 26°20'6"N 82°17'47"W). Continued sampling of these areas is recommended.

Forecasted onshore winds may increase the likelihood of respiratory impacts alongshore southwest Florida. Forecasted winds today through Wednesday may also promote onshore transport of the bloom, with slight northerly movement possible. Onshore transport of *K. brevis* concentrations in the Florida Keys is unlikely through Wednesday.

Kavanaugh, Yang



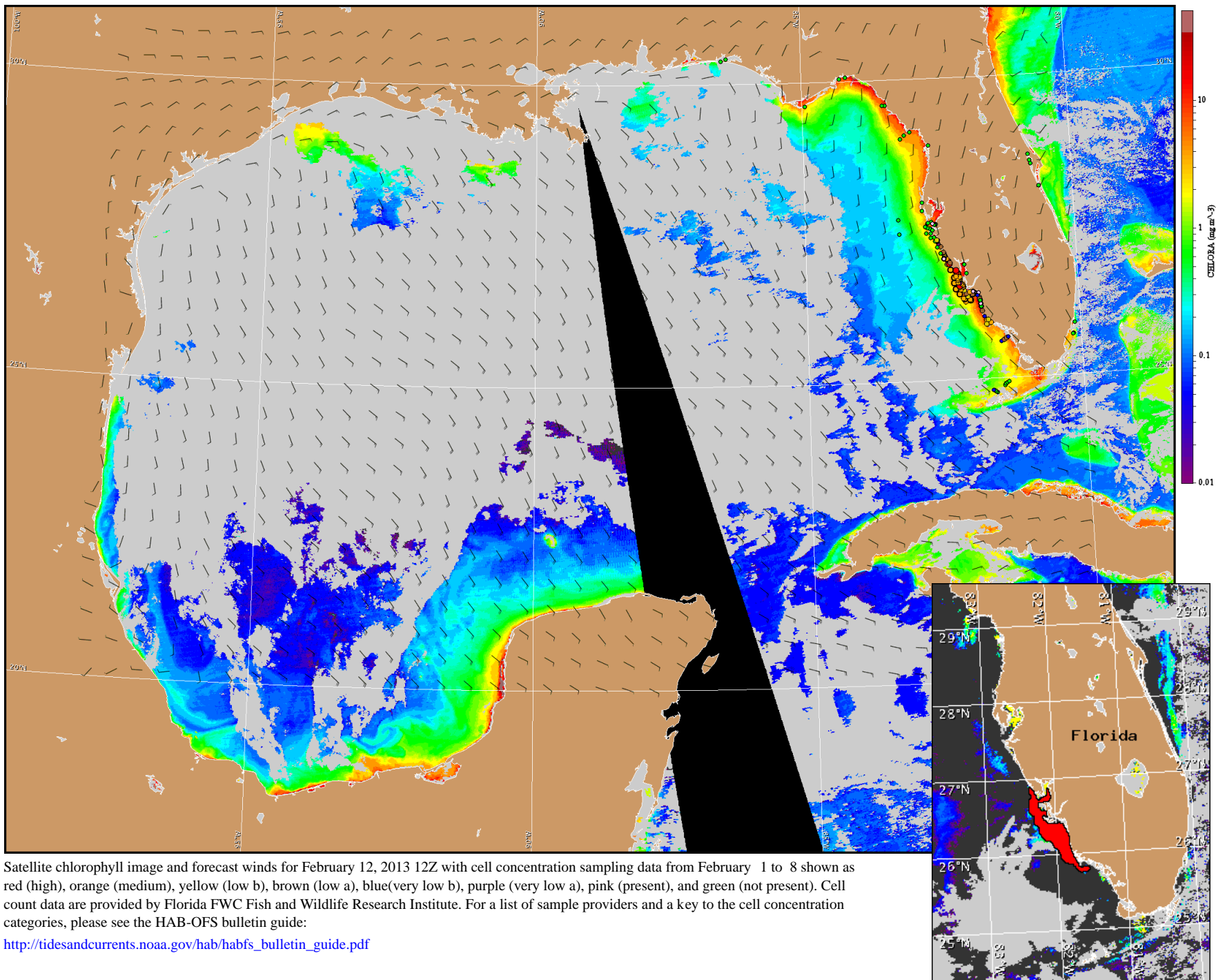
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



## Wind Analysis

**Pinellas to Collier County:** South to southeast winds (10-15 kn, 5-8 m/s) today through Wednesday becoming southwest to west winds (15-20 kn, 8-10 m/s) late Wednesday afternoon. North to northeast winds (10-15 kn) Thursday.

**Collier and Monroe counties:** Southeast to south southeast winds (6-15 kn, 3-8 m/s) today through Tuesday. South winds (10-15 kn) Wednesday becoming southwest to west winds (8-14 kn, 4-7 m/s) Wednesday night. Northwest winds (8-13 kn, 4-7 m/s) Thursday becoming east northeast winds (6-11 kn, 3-6 m/s) Thursday night.



Satellite chlorophyll image and forecast winds for February 12, 2013 12Z with cell concentration sampling data from February 1 to 8 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).