



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

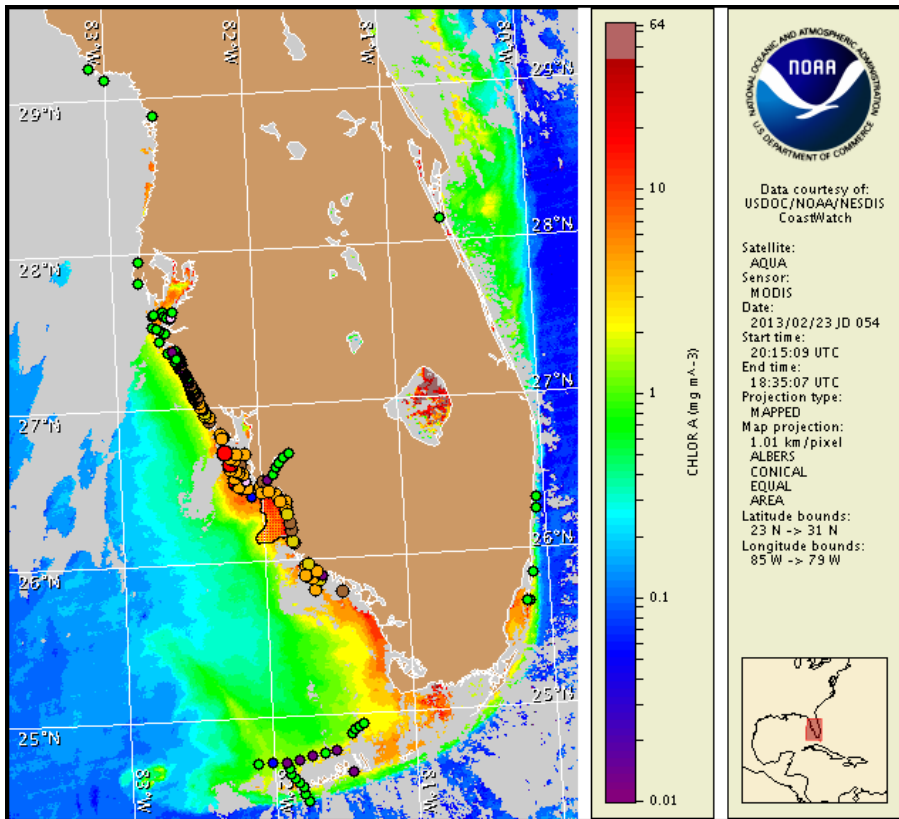
Monday, 25 February 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, February 21, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from February 15 to 22 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

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 northern Sarasota County, patchy low respiratory impacts are possible today through Thursday. Alongshore southern Sarasota County, patchy moderate respiratory impacts are possible today through Thursday. Alongshore Charlotte County, patchy low respiratory impacts are possible today through Thursday. Alongshore Lee County and in the bay regions of southern Charlotte and Lee counties, patchy moderate respiratory impacts are possible today, Wednesday, and Thursday, with patchy high respiratory impacts possible on Tuesday. Alongshore northern Collier County, patchy very low respiratory impacts are possible today, with patchy moderate respiratory impacts possible Tuesday through Thursday. Alongshore and in the bay regions of central Collier County, patchy moderate respiratory impacts are possible today, Wednesday, and Thursday, with patchy high respiratory impacts possible on Tuesday. Alongshore southern Collier and northern Monroe counties, patchy low respiratory impacts are possible today and Tuesday, with patchy very low respiratory impacts possible Wednesday and Thursday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Thursday, February 28. Over the past several days, reports of respiratory irritation were received from Sarasota, Charlotte, Lee and Collier counties. Reports of dead fish were received from Lee and Collier counties.

Analysis

A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from Sarasota to Collier counties, with *K. brevis* concentrations ranging from 'not present' to 'high'. Harmful algae has also been identified offshore the lower Florida Keys.

Recent samples from Lee County identified 'medium' to 'high' *K. brevis* concentrations throughout the Pine Island Sound region, 'very low b' and 'high' concentrations alongshore Sanibel and Captiva Islands, respectively, and 'medium' concentrations alongshore Lighthouse Beach (Sanibel Island) and several locations alongshore southern Lee County (FWRI; 2/20-21). 'Low a' to 'low b' concentrations were identified alongshore northern Collier County, with 'medium' concentrations identified alongshore South Marco Beach (FWRI, CCPCPD; 2/21). Several samples collected alongshore and in the bay regions of Manatee County indicated that *K. brevis* is not present, with only one sample indicating background concentrations (FWRI; 2/19-21). Respiratory irritation was reported along several beaches in Lee County, as well as Nokomis and Manasota Beaches in Sarasota County, along the GI South Bridge in Charlotte County, and Johnson Bay in Collier County (MML, CCPCPD; 2/22-24). Dead fish have been reported in Lee and Collier counties (FWRI; 2/20-24). No *K. brevis* was identified in samples collected offshore Oxford and Harbor Keys on 2/14 and 2/20 (MML).

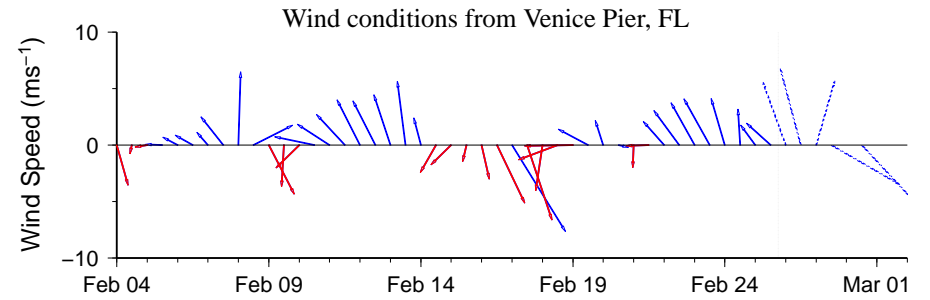
In recent MODIS Aqua imagery (2/23, shown left), elevated chlorophyll (4-10 $\mu\text{g/L}$) is visible stretching along- and offshore the southwest Florida coastline from Sarasota to Collier counties, with patches of high to very high chlorophyll (11 to >20 $\mu\text{g/L}$) visible alongshore southern Lee to Collier counties in imagery from 2/23 and 2/24 (not shown). In MODIS imagery from 2/22 (not shown) patches of high to very high chlorophyll (12 to >20) were visible along- and offshore Collier to Monroe counties. These regions will continue to be monitored as imagery becomes available. Imagery throughout the Florida

Keys has been mostly obscured by clouds, however elevated chlorophyll (2-6 $\mu\text{g/L}$) is visible offshore the lower Florida Keys.

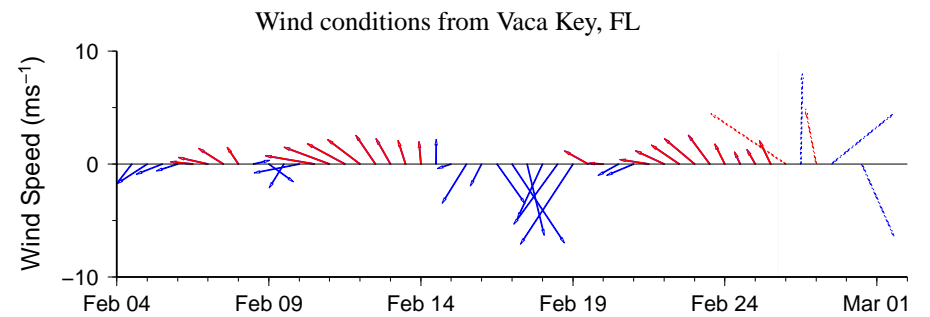
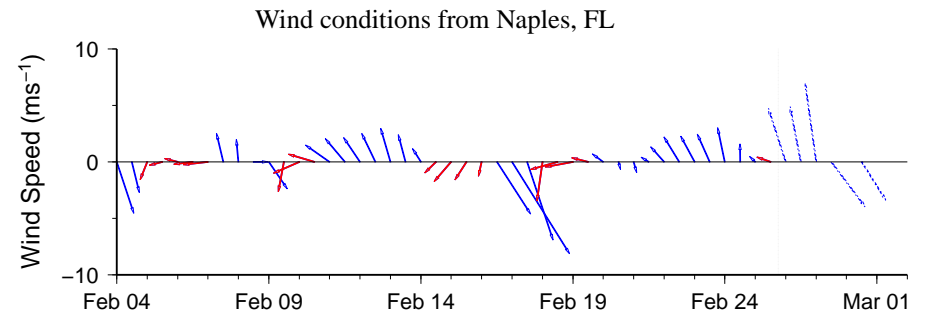
Onshore winds forecast over the next several days may increase the potential for onshore transport of the bloom alongshore southwest Florida through Wednesday. Onshore winds may also increase the potential for respiratory impacts along the coast and in the bay regions of southwest Florida over the next several days. Forecast winds today through Thursday will minimize transport of harmful algae in the lower Florida Keys.

Derner, Davis

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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).

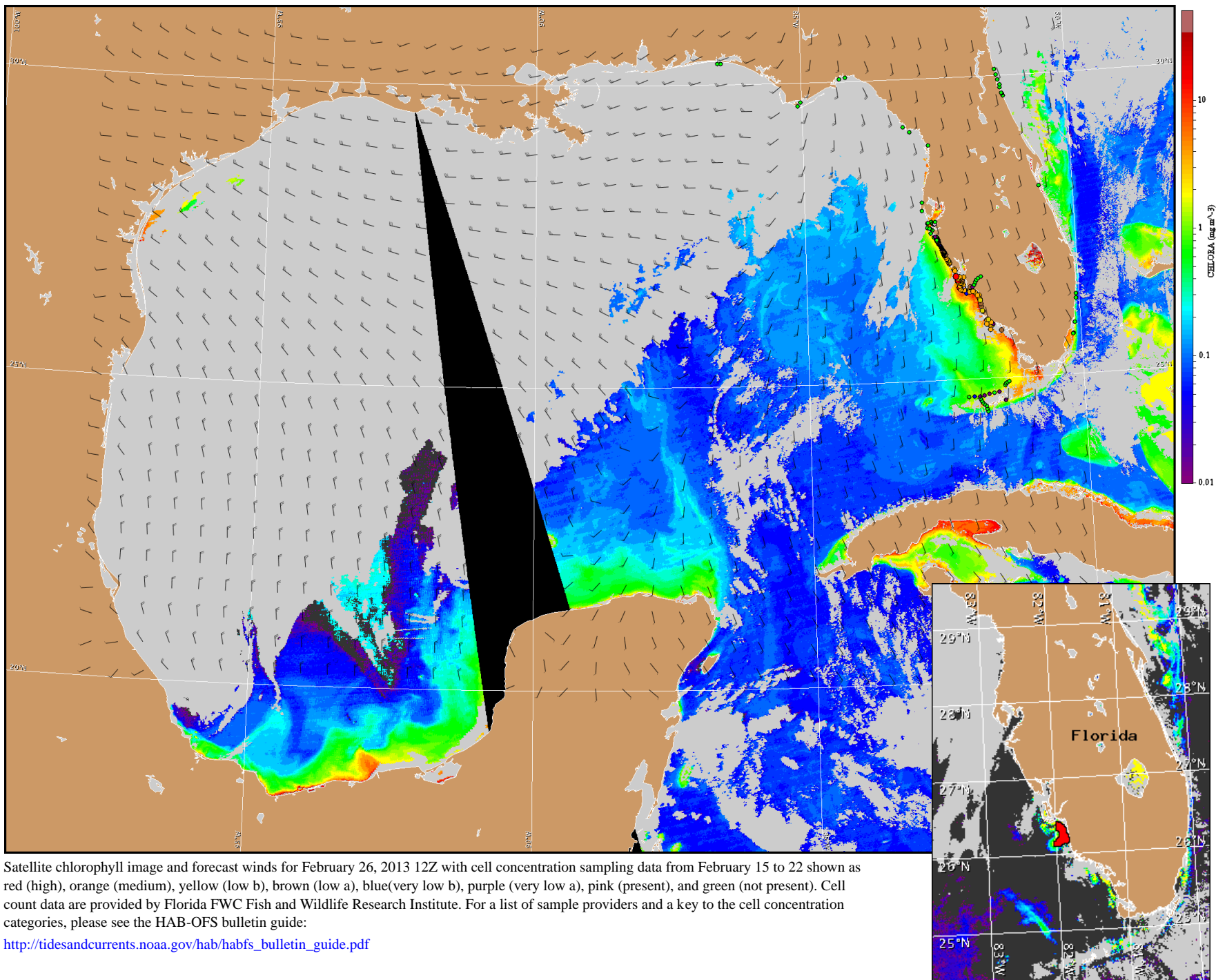


Wind Analysis

Pinellas to Lee counties: South winds (10-15kn, 5-8m/s) today. South winds (20kn, 10m/s) Tuesday becoming southwest in the afternoon. West winds (15kn, 8m/s) Tuesday night. Northwest winds (10-15kn) Wednesday through Thursday.

Collier and Monroe counties: South winds (8-13kn, 4-7m/s) today becoming south southeast winds (12-17kn, 6-9m/s) tonight. South to southwest winds (8-18kn, 7-9m/s) Tuesday becoming west northwest (5-10kn, 3-5m/s) Tuesday night. Northwest winds (5-11kn, 3-6m/s) Wednesday and Thursday.

Gulf side of lower Florida Keys: Southeast to south winds (10-15kn) today. South winds (15kn) Tuesday becoming southwest (10-15kn) Tuesday afternoon through evening. West to northwest winds (10-15kn) late Tuesday night. Northwest winds (10-15kn) Wednesday. Northwest to north winds (10-15kn) Thursday.



Satellite chlorophyll image and forecast winds for February 26, 2013 12Z with cell concentration sampling data from February 15 to 22 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).