



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

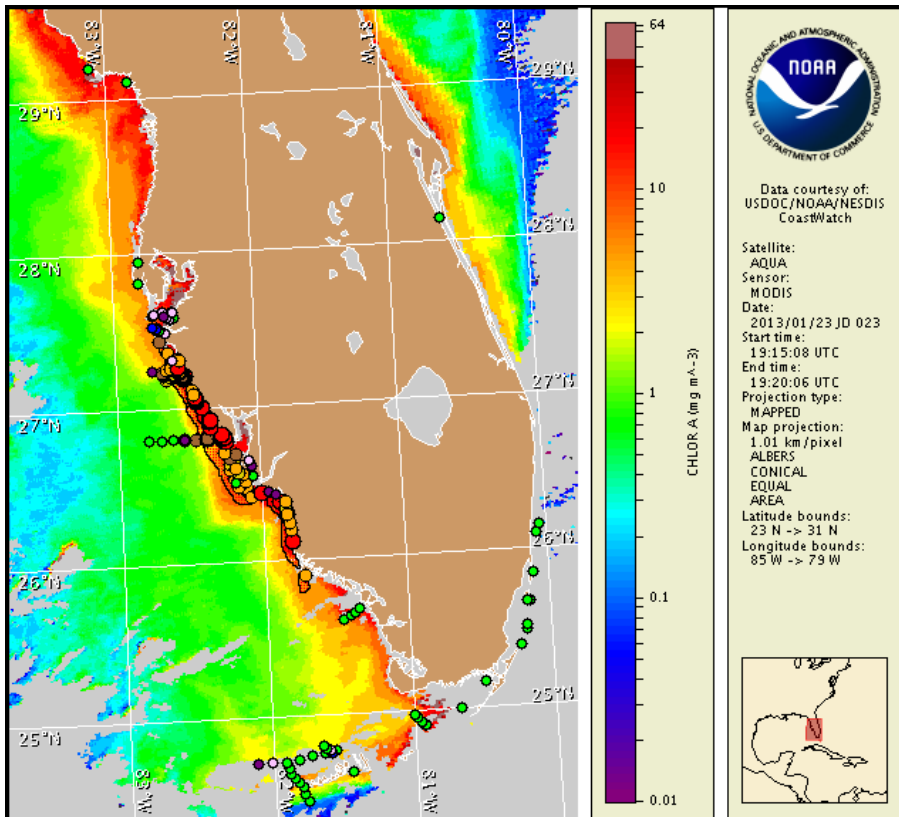
Thursday, 24 January 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, January 22, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from January 14 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 from southern Pinellas to Collier counties, as well as offshore the gulfside of the lower Florida Keys. In the bay regions of southern Pinellas and northern Manatee counties, patchy very low respiratory impacts are possible today through Monday. In the bay regions of southern Manatee and Sarasota counties, patchy moderate respiratory impacts are possible today through Sunday with patchy high respiratory impacts possible Monday. Alongshore Manatee, Sarasota, Charlotte, and southern Lee counties, patchy low respiratory impacts are possible today, and Saturday through Monday, with patchy moderate respiratory impacts possible Friday. In the bay regions of Charlotte and Lee counties, patchy high respiratory impacts are possible today through Monday. Alongshore northern Collier County, patchy low respiratory impacts are possible today through Monday. In the bay regions of central Collier County, patchy moderate respiratory impacts are possible Thursday through Saturday, with patchy high respiratory impacts possible Sunday and Monday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Monday, January 28. Over the past few days, reports of respiratory irritation were received from Sarasota and Charlotte counties. Reports of dead fish were received from Sarasota, Manatee, Lee, Charlotte and Collier counties.

Analysis

Southwest Florida: A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from southern Pinellas to Collier counties, with *K. brevis* concentrations ranging from 'not present' to 'high'. Recent sampling along- and offshore Sarasota County indicated *K. brevis* concentrations from 'very low a' to 'medium' (FWRI, SCHD; 1/22). Samples collected at Englewood Beach and in the Gasparilla Island region of Charlotte County identified 'high' concentrations of *K. brevis* (FWRI; 1/22). Samples collected in the Estero Bay region of southern Lee County identified 'very low a' to 'high' concentrations of *K. brevis* (FWRI; 1/22). Sampling alongshore Collier County identified 'medium' concentrations of *K. brevis* from Barefoot Beach to South Marco Beach and 'high' concentrations of *K. brevis* at Naples Pier in central Collier County (FWRI, CCPCPD; 1/22). Respiratory irritation continues to be reported at several beaches along Sarasota and Charlotte counties (MML; 1/22-24). Numerous fish kills have also been reported over the last several days in Manatee, Sarasota, Lee, Charlotte, and Collier counties (FWRI, MML; 1/22-24).

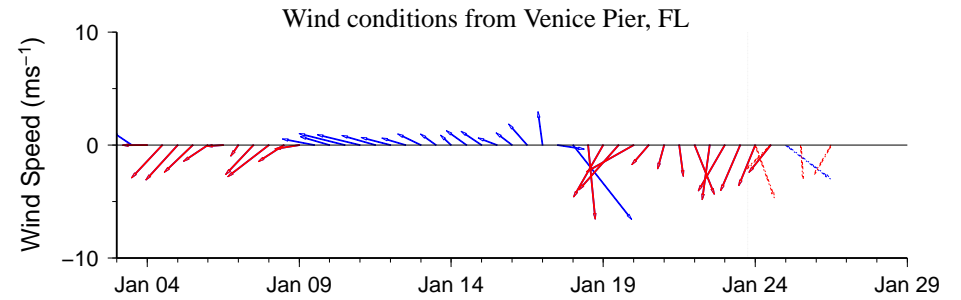
In recent MODIS Aqua imagery (1/23, shown left), elevated chlorophyll (2-6 $\mu\text{g/L}$) is visible stretching along- and offshore the coast of southwest Florida from Pinellas to Monroe counties. Patches of elevated to very high chlorophyll (3 to $>20 \mu\text{g/L}$) are also visible stretching along- and offshore northern Sarasota to southern Charlotte County, and alongshore from central Lee to central Collier County. A defined area of anomalously high chlorophyll is visible along- and offshore northern Sarasota to central Collier County from (27°08'49"N 82°29'48"W to 26°00'37"N 81°46'59"W). Continued sampling of this area is recommended.

Offshore winds forecast Saturday through Monday may decrease the likelihood of respiratory impacts alongshore southwest Florida except for in the bay regions of Charlotte, Lee, and Collier counties.

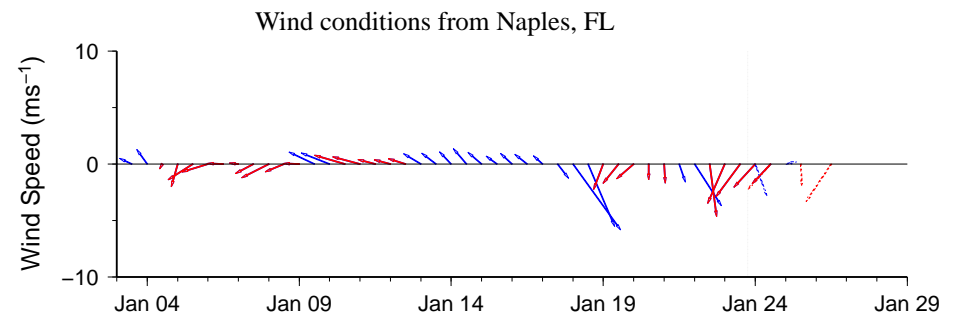
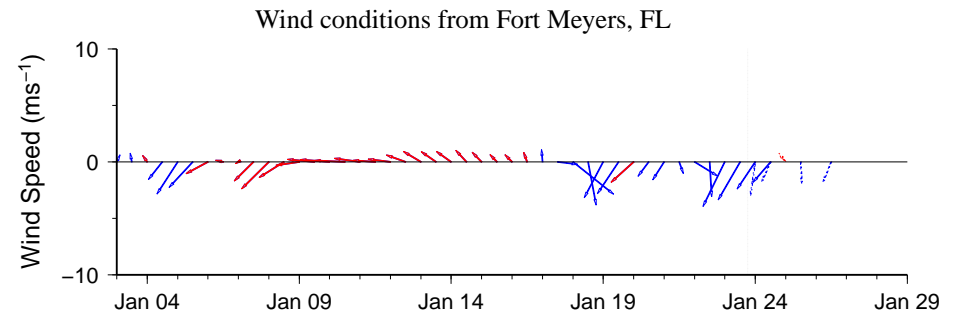
Florida Keys: A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys. No additional sampling has been received since previous samples indicated 'not present' to 'very low a' *K. brevis* concentrations offshore the lower Florida Keys (MML; 1/15-21). MODIS Aqua imagery (1/23, shown page 1) is partially obscured by clouds along- and offshore of the Florida Keys, limiting analysis. Elevated chlorophyll (2-6 $\mu\text{g/L}$) is visible from Florida Bay to Key West with patches of very high chlorophyll (3 to >20 $\mu\text{g/L}$) north of the middle Keys. Forecast winds through Monday may promote the potential of westerly transport of *K. brevis* concentrations.

Burrows, Davis, Kavanaugh

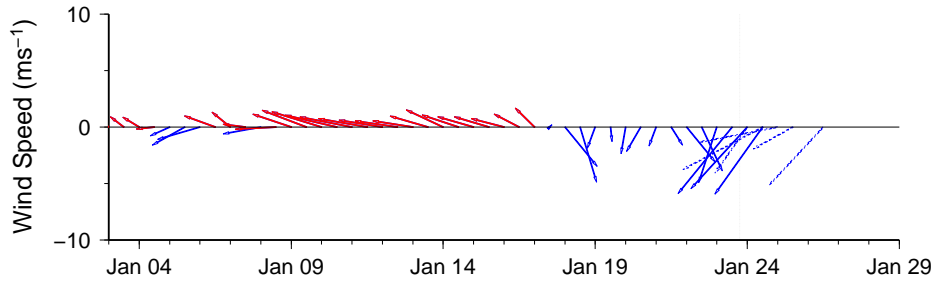
-2-



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

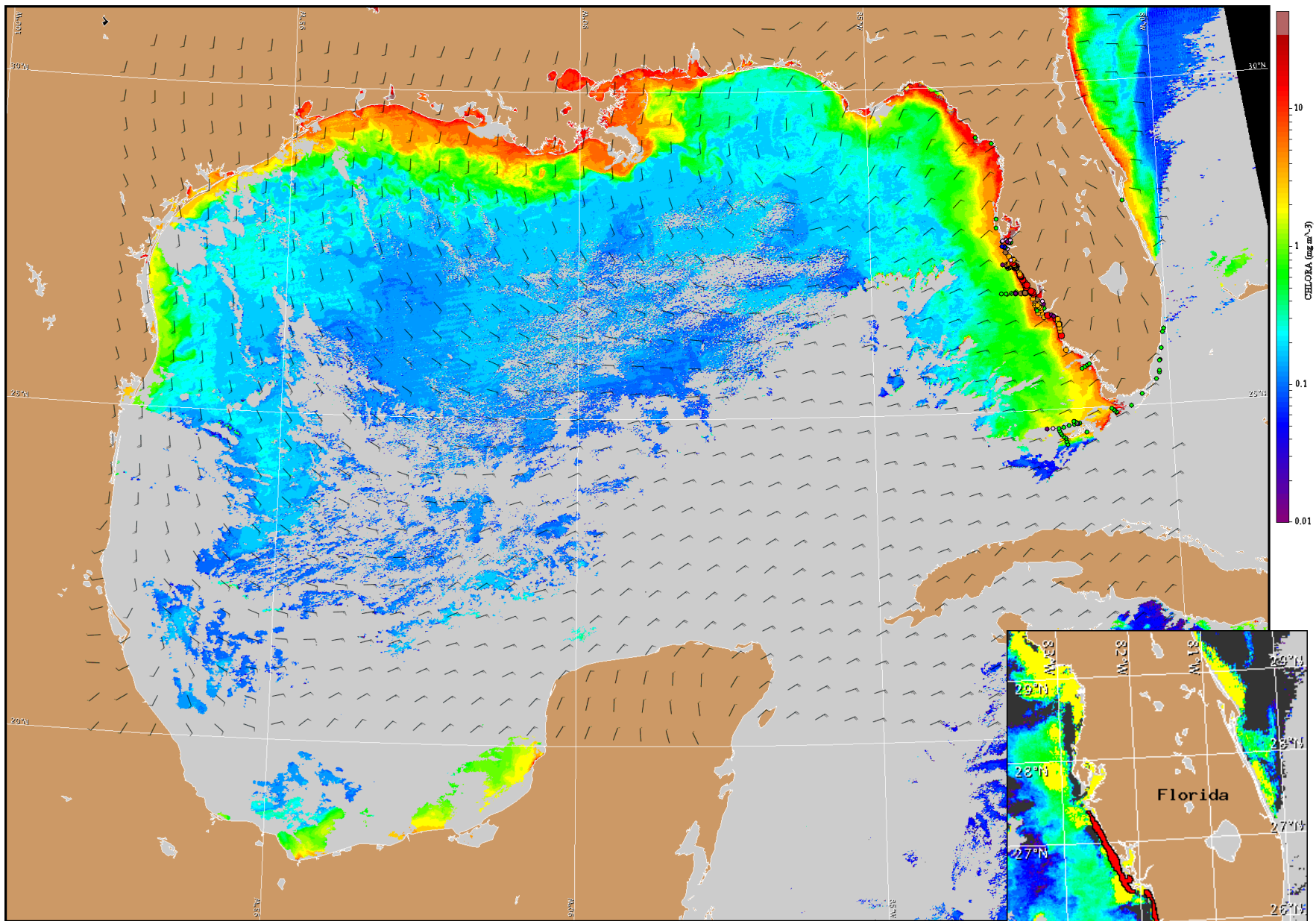


Wind Analysis

Pinellas to Lee counties: North to northeast winds (10kn, 5m/s) through tonight. East winds (15kn, 8m/s) Friday, becoming south winds (5-10kn, 3-5m/s) in the afternoon. Northwest winds (5kn, 3m/s) Friday night. North winds (5-10kn) Saturday. Northeast winds (10-15kn, 5-8m/s) Sunday. East winds (15-20kn, 8-10m/s) Monday becoming northeast winds (5-10kn) Monday afternoon.

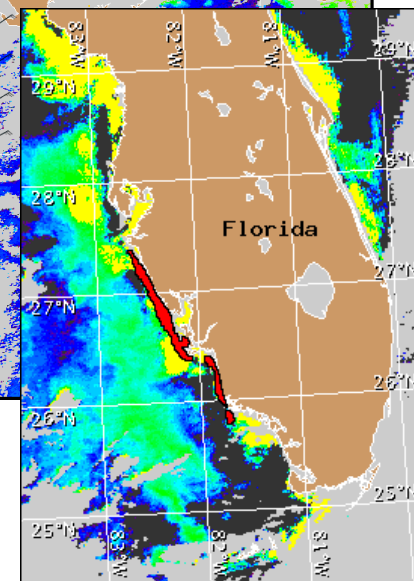
Collier and Monroe counties: Northeast winds (8-13kn, 4-7m/s) today becoming north in the afternoon. Northeast winds (12-17kn, 6-9m/s) tonight. East northeast winds (6-16kn, 3-8m/s) Friday. North northeast winds (6-10kn, 3-5m/s) Saturday becoming northeast winds (9-14kn, 5-7m/s) Saturday night. East winds (13-18kn, 7-9m/s) Sunday through Monday.

Gulf side of lower Florida Keys: Northeast winds (15kn) today becoming northeast to east winds tonight. Northeast to east winds (10-15kn) Friday through Saturday night. East winds (15-20kn, 8-10m/s) Sunday through Monday night.



Satellite chlorophyll image and forecast winds for January 25, 2013 12Z with cell concentration sampling data from January 14 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



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