



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

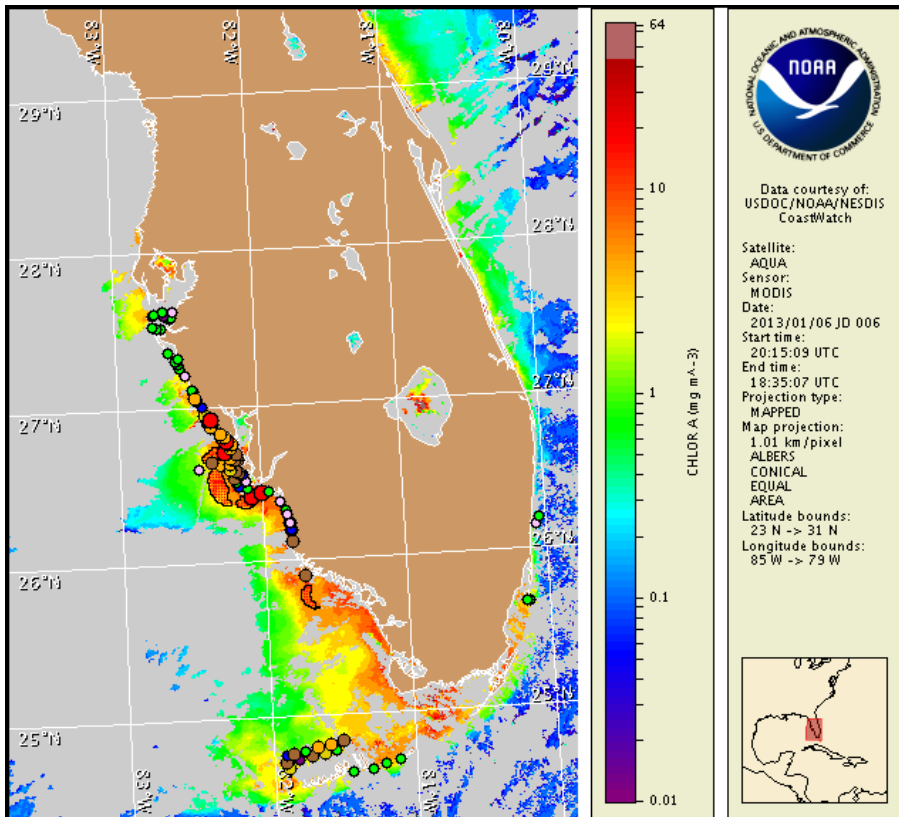
Monday, 07 January 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, January 3, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from December 28 to January 3 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. Alongshore southern Sarasota County, very low respiratory impacts are possible today through Thursday. Alongshore northern Charlotte County, low respiratory impacts are possible today through Thursday. In the bay regions of Charlotte, Lee and central Collier counties, high respiratory impacts are possible today through Thursday. In the southern Sanibel Island region of Lee County, low respiratory impacts are possible today through Thursday. Alongshore northern Collier County, very low respiratory impacts are possible today through Thursday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Thursday, January 10. Over the past few days, reports of respiratory irritation were received from Charlotte and Collier counties. Reports of dead fish were also received from Charlotte County.

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'. In the bays of Pinellas and Manatee counties, recent sampling continues to indicate *K. brevis* concentrations between 'not present' and 'very low a' (FWRI; 1/2). In Charlotte County, 'high' concentrations of *K. brevis* were identified in the Lemon Bay region of Manasota Key, and from Sandfly Key in Gasparilla Bay (FWRI; 1/3). In Lee County, several samples from the Pine Island Sound region continue to indicate 'medium' to 'high' concentrations of *K. brevis* (FWRI; 1/3). Recent sampling in Collier County indicated *K. brevis* concentrations between 'very low b' and 'low a' where previous sampling indicated concentrations between 'low a' and 'medium' (FWRI, CCPCPD; 12/31-1/3). Over the past few days, reports of respiratory irritation were received from Manasota Key in Charlotte County and Royal Harbor in Collier County (FWRI, MML, CCPCPD; 1/3-4).

Recent MODIS Aqua imagery (1/6, shown left) is partially obscured by clouds along- and offshore the southwest Florida coast, limiting analysis. 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 Lee County (26°45'17"N 82°24'01"W to 26°12'32"N 81°55'10"W) as well as along- and offshore central Collier County (25°56'07"N 81°55'35"W to 25°38'09"N 81°26'10"W). Continued sampling of these areas is recommended.

Upwelling favorable winds present alongshore southwest Florida over the past weekend may promote bloom intensification at the coast early this week. Offshore winds forecast today through Thursday may decrease the potential for onshore transport of the bloom and decrease the likelihood of respiratory impacts alongshore southwest Florida, except for in the bays regions of Charlotte, Lee and Collier counties.

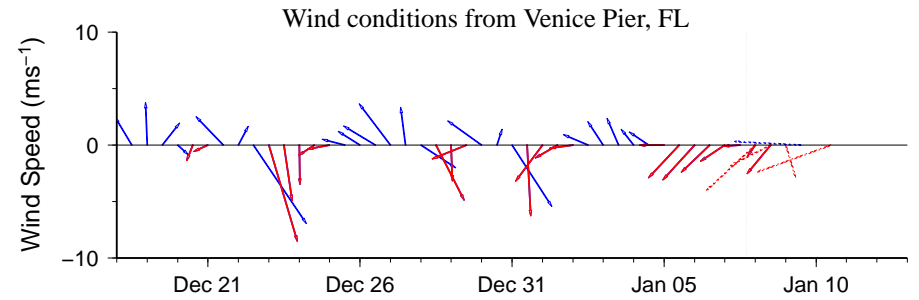
Florida Keys: A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys. No recent samples have been received since 12/29, when *K. brevis* concentrations ranging from 'very low a' to 'medium' were identified extending

from approximately 10 miles northwest of Key West to 4.5 miles north of Content Keys (MML).

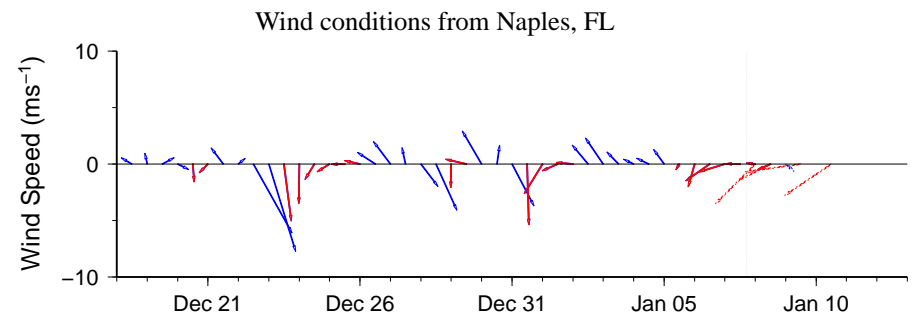
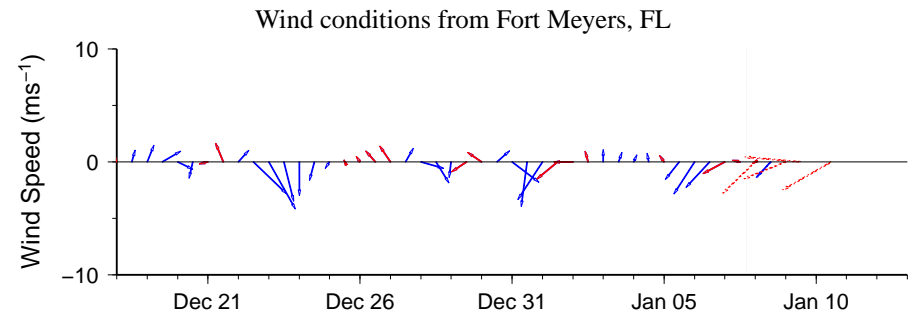
MODIS Aqua imagery (1/6; shown page 1) is partially obscured by clouds along- and offshore the Florida Keys, limiting analysis. Elevated chlorophyll concentrations (2-7 $\mu\text{g/L}$) are visible along- and offshore the lower and middle Keys. Forecasted winds today through Thursday may promote the potential for westward transport of the bloom and decrease the likelihood of onshore transport.

Davis, Derner

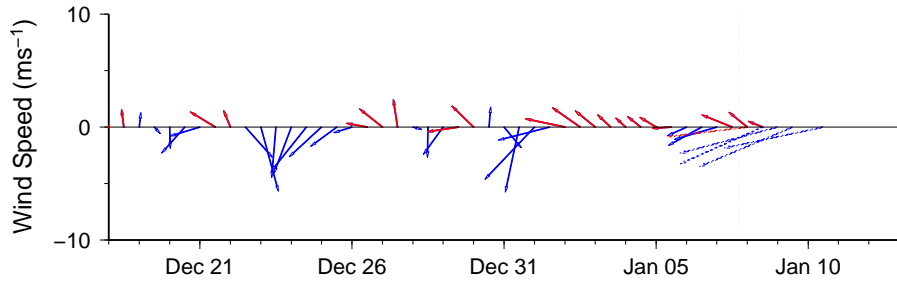
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Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical 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



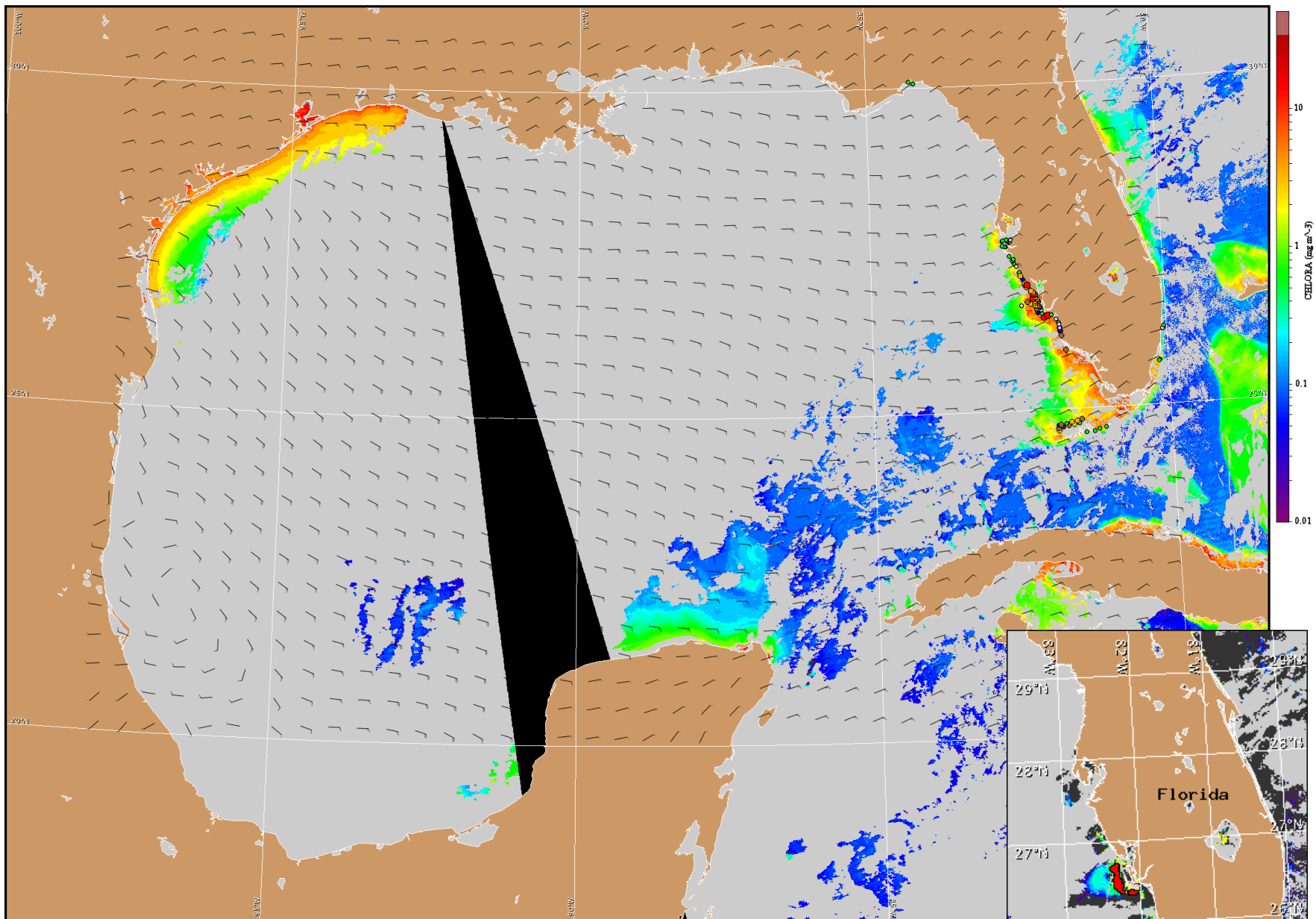
Wind Analysis

Pinellas to Charlotte counties: Northeast winds (15 kn, 8 m/s) today. East winds (10-15 kn, 5-8 m/s) Tuesday becoming northeast winds (5-10 kn, 3-5 m/s) Tuesday afternoon through evening. East winds (5-15 kn, 3-8 m/s) Wednesday. Southeast winds (5-15 kn) Thursday.

Charlotte to Lee counties: Northeast winds (10-15 kn) today becoming east winds (15-20 kn, 8-10 m/s) tonight. East winds (10-15 kn) Tuesday becoming northeast winds (5-10 kn) in the afternoon through evening. East winds (10-15 kn) Wednesday through Thursday.

Collier and Monroe counties: East winds (7-12 kn, 4-6 m/s) today becoming east northeast winds (11-16 kn, 6-8 m/s) tonight. East winds (11-18 kn, 6-9 m/s) Tuesday. East southeast winds (15-20 kn) Wednesday through Thursday.

Gulf side of lower Florida Keys: East to southeast winds (5-15 kn) today. East winds (15 kn) tonight through Tuesday. East to southeast winds (15-20 kn) Tuesday night through Thursday.



Satellite chlorophyll image and forecast winds for January 8, 2013 12Z with cell concentration sampling data from December 28 to January 3 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).