



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

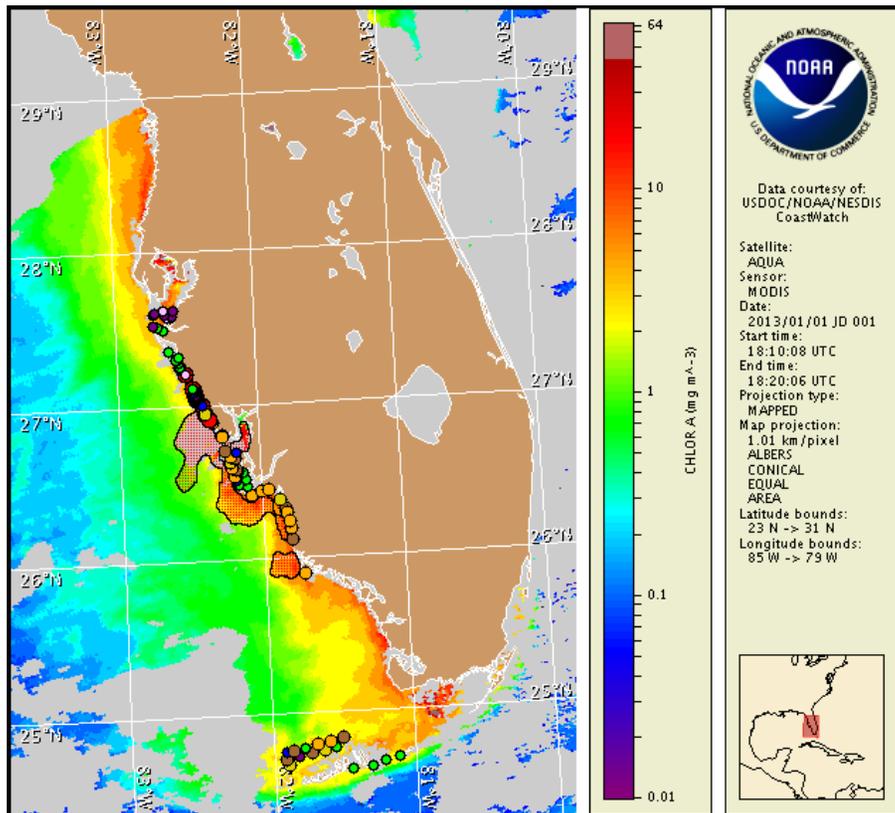
Thursday, 03 January 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 31, 2012



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from December 26 to 31 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, Manatee and northern Sarasota counties, patchy very low respiratory impacts are possible today through Monday. Alongshore Sarasota County, low respiratory impacts are possible today through Monday. Alongshore northern Charlotte County, high respiratory impacts are possible today and Sunday, with low respiratory impacts Friday, Saturday and Monday. In the bay regions of Charlotte and Lee counties, moderate respiratory impacts are possible today through Monday. Alongshore southern Lee and northern Collier counties, moderate respiratory impacts are possible today and Sunday, with very low respiratory impacts Friday, Saturday and Monday. In the bay regions of central Collier County, moderate respiratory impacts are possible today through Sunday, with high respiratory impacts Monday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Monday, January 7. Over the past few days, reports of respiratory irritation were received from Sarasota, Charlotte, and Collier counties. Reports of dead fish were also received from Sarasota and Charlotte 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 'very low a' to 'high'. Recent samples indicate *K. brevis* may not be present in the bay regions of northern Sarasota County where background to 'medium' concentrations were previously identified (FWRI, MML, SCHD; 12/24-31). Alongshore Sarasota County, samples indicate *K. brevis* concentrations may have decreased to a range of not present to 'low b' concentrations where 'very low a' to 'high' concentrations were previously identified (FWRI, SCHD; 12/26-31). In Charlotte County, 'high' concentrations of *K. brevis* were identified alongshore Englewood Beach, while several samples from the bay regions indicate 'medium' to 'high' concentrations (FWRI; 12/28-31). In Collier County, *K. brevis* concentrations increased to a range between 'low a' and 'medium' where previous sampling indicated concentrations ranging between background and 'medium' (FWRI, CCPCPD; 12/27-31). Reports of respiratory irritation were received from southern Sarasota, the bay regions of Charlotte (MML; 1/2-3) and central Collier County (CCPCPD; 12/27). Dead fish were reported alongshore southern Sarasota County (MML; 12/31) and northern Charlotte County (FWRI; 1/1-3).

Recent MODIS Aqua imagery (12/31, not shown; 1/1, shown left) is partially obscured by clouds along- and offshore the southwest Florida coast, from Pinellas to Lee counties, 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 from southern Sarasota to central Collier counties (26°59'52"N -82°26'21"W to 25°49'28"N -81°40'22"W). The northern boundary of the feature is obscured by clouds, but it may extend into northern Sarasota County. Continued sampling of this area is recommended.

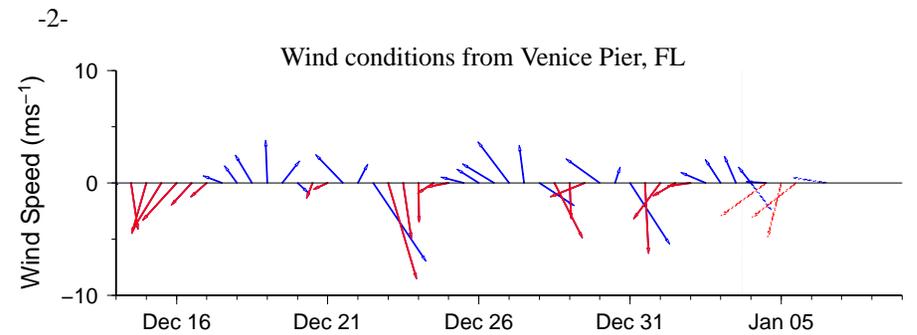
Variable winds forecasted today through Monday may maintain the location of the bloom. Forecasted onshore winds today and Sunday may intensify respiratory impacts

along the coast from northern Charlotte to Collier counties.

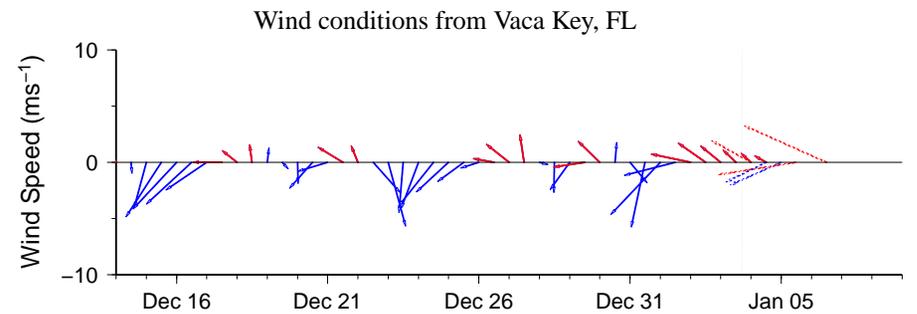
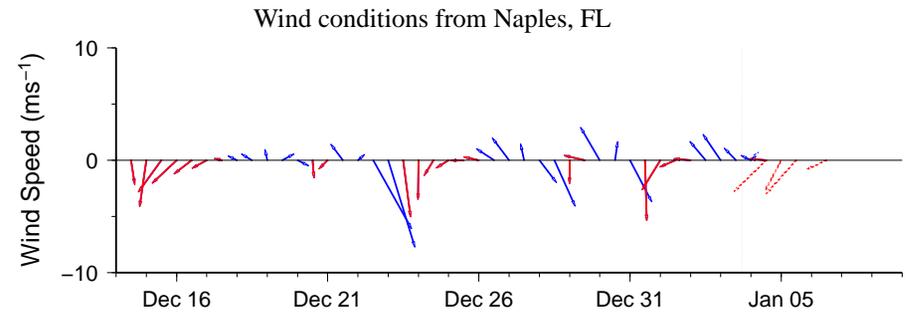
Florida Keys: A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys. No recent samples have been received since *K. brevis* concentrations ranging from 'very low a' to 'medium' were identified extending from approximately 10 miles northwest of Key West to 4.5 miles north of Content Keys (MML; 12/29).

MODIS Aqua imagery (1/1; 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 Monday may promote the potential for westward transport of the bloom and decrease the likelihood of onshore transport.

Kavanaugh, Davis



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).



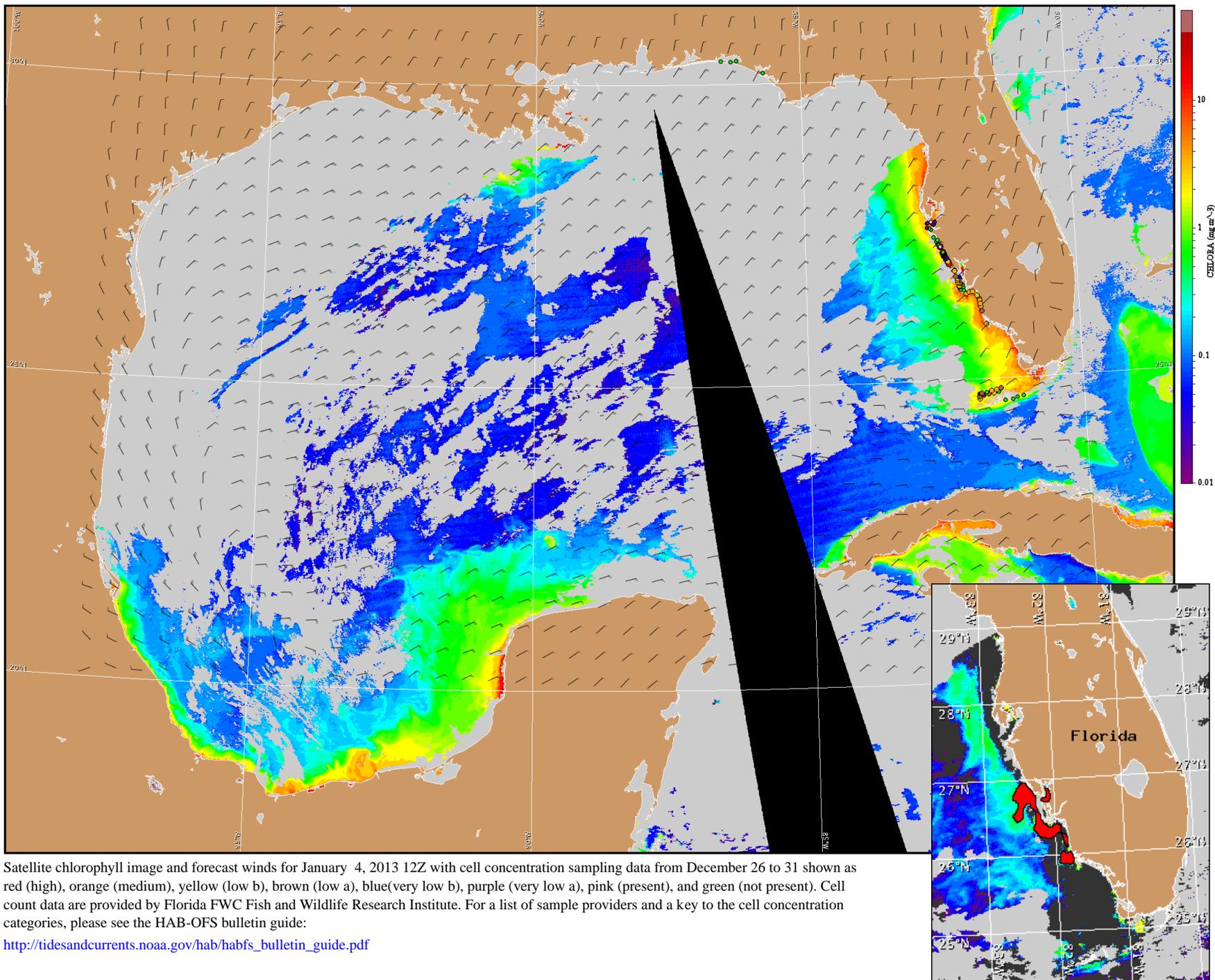
Wind Analysis

Pinellas to Charlotte counties: Northeast to east winds (5-15 kn, 3-8 m/s) today through Sunday becoming north winds (15 kn, 8 m/s) Sunday night. Northeast winds (15 kn) Monday.

Charlotte to Lee counties: South winds (5-10 kn, 3-5 m/s) today becoming north winds (5-10 kn) tonight. Northeast winds (10-15 kn, 5-8 m/s) Friday. East to southeast winds (5-15 kn) Saturday through Sunday becoming south winds (10 kn, 5 m/s) Sunday afternoon. Southwest winds (10 kn) Sunday night becoming northwest winds (10 kn) after midnight. North winds (15 kn) Monday.

Collier and Monroe counties: East southeast to south winds (5-9 kn, 3-5 m/s) today becoming northeast winds (5-10 kn) tonight through Friday. East northeast winds (8-13 kn, 4-7 m/s) Friday night. East southeast to southeast winds (7-14 kn, 4-7 m/s) Saturday through Sunday. Sunday night south winds (5-10 kn) becoming west southwest winds (5-8 kn, 3-4 m/s). North winds (11-16 kn, 6-8 m/s) Monday.

Gulf side of Lower Florida Keys: East to southeast winds (5-15 kn) today through Friday. Northeast to east winds (15-20 kn, 8-10 m/s) Friday night through Saturday. East to southeast winds (10-15 kn) Saturday night through Sunday. Northeast winds (10-15 kn) Sunday night through Monday.



Satellite chlorophyll image and forecast winds for January 4, 2013 12Z with cell concentration sampling data from December 26 to 31 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).