



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

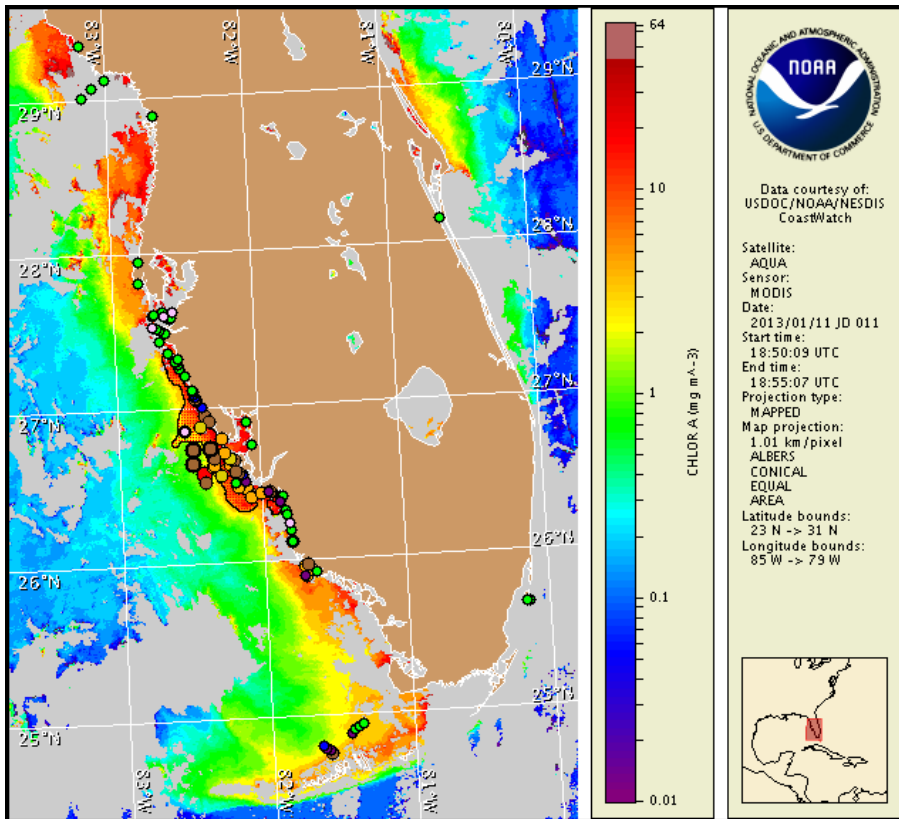
Monday, 14 January 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, January 10, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from January 4 to 10 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 from southern Pinellas to Collier counties, as well as offshore the gulfside of the lower Florida Keys. Alongshore Sarasota County, patchy high respiratory impacts are possible today and Tuesday, with patchy moderate respiratory impacts possible on Wednesday, and patchy low respiratory impacts possible on Thursday. Alongshore northern Charlotte County, patchy high respiratory impacts are possible today through Wednesday, with patchy low respiratory impacts possible on Thursday. In the bay regions of Charlotte and Lee County, patchy high respiratory impacts are possible today through Thursday. Alongshore southern Lee County, patchy low respiratory impacts are possible today, Tuesday, and Thursday, with patchy very low respiratory impacts possible on Wednesday. Alongshore northern Collier County, patchy low respiratory impacts are possible today through Thursday. In the bay regions of central Collier County, patchy moderate respiratory impacts are possible today through Thursday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Thursday, January 17. Over the past few days, reports of respiratory irritation were received from Sarasota and Collier counties. Reports of dead fish were received from Lee 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'. Samples received late last week continue to identify background to 'high' *K. brevis* concentrations 4-14 miles offshore Charlotte and Lee counties (FWRI; 1/9). Samples collected throughout Lee County indicated 'very low b' to 'low a' concentrations in central Pine Island Sound, 'medium' concentrations alongshore southern Sanibel Island, and not present to 'very low a' concentrations alongshore southern Lee County (FWRI; 1/9-10). Recent samples collected alongshore Collier County indicated not present to background concentrations of *K. brevis* alongshore northern Collier County and 'very low a' concentrations at South Marco Beach (FWRI; 1/10). Respiratory irritation was reported alongshore several beaches from northern to southern Sarasota County and from the Park Shore area of Collier County late last week (CCPCPD; 1/10). These areas will continue to be monitored as samples become available.

Recent MODIS Aqua imagery (1/11, shown left) is patchy along- and offshore the coast of southwest Florida. Elevated to high chlorophyll (5-20  $\mu\text{g/L}$ ) is visible stretching along- and offshore southern Pinellas to Collier counties, with patches of very high chlorophyll (>20  $\mu\text{g/L}$ ) visible along- and offshore Sarasota and northern Charlotte counties. Imagery is obscured by clouds alongshore much of southern Lee and Collier counties, limiting analysis in this region.

Variable winds forecast over the next several days will decrease the potential for onshore transport or bloom intensification; however, respiratory impacts are possible alongshore southwest Florida from Sarasota to Collier counties through Thursday.

**Florida Keys:** A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys. The most recent samples received indicate 'very low a' to 'low

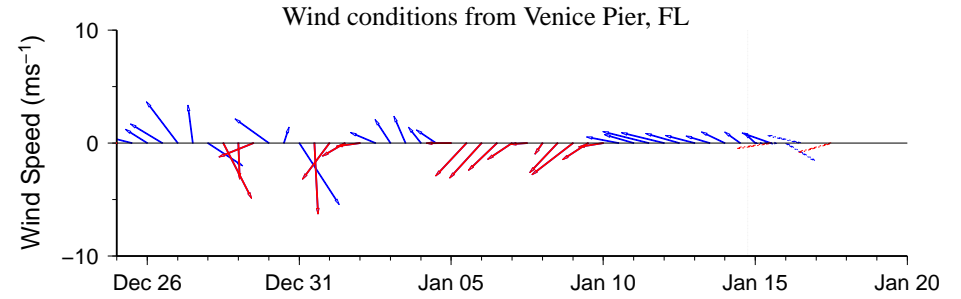
a' *K. brevis* concentrations offshore Sawyer Key and not present to 'very low a' concentrations offshore Harbor Key (MML; 1/4-7).

MODIS Aqua imagery (1/11; shown page 1) is partially obscured by clouds along- and offshore the Florida Keys, limiting analysis. Elevated chlorophyll concentrations (3-6  $\mu\text{g/L}$ ) are visible along- and offshore the lower and middle Keys. Forecasted winds today through Thursday may promote the potential for offshore transport of the bloom.

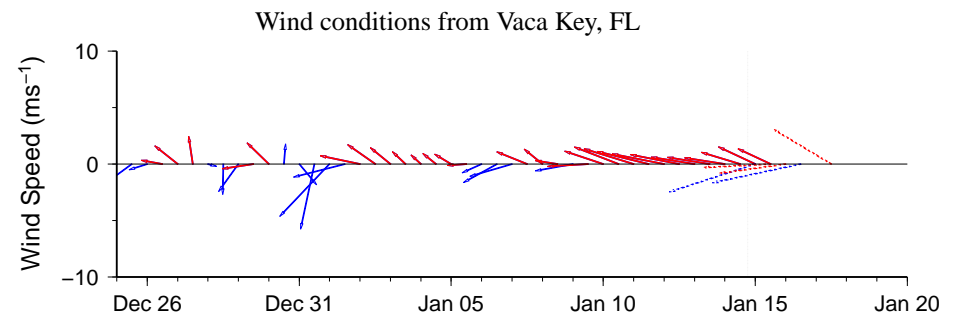
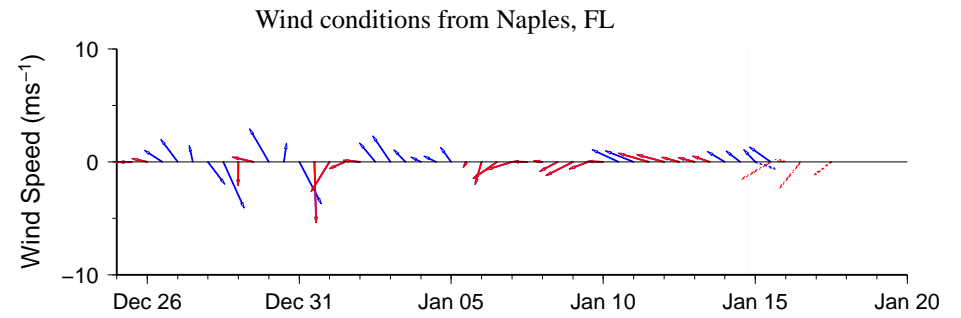
Derner, Burrows

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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).

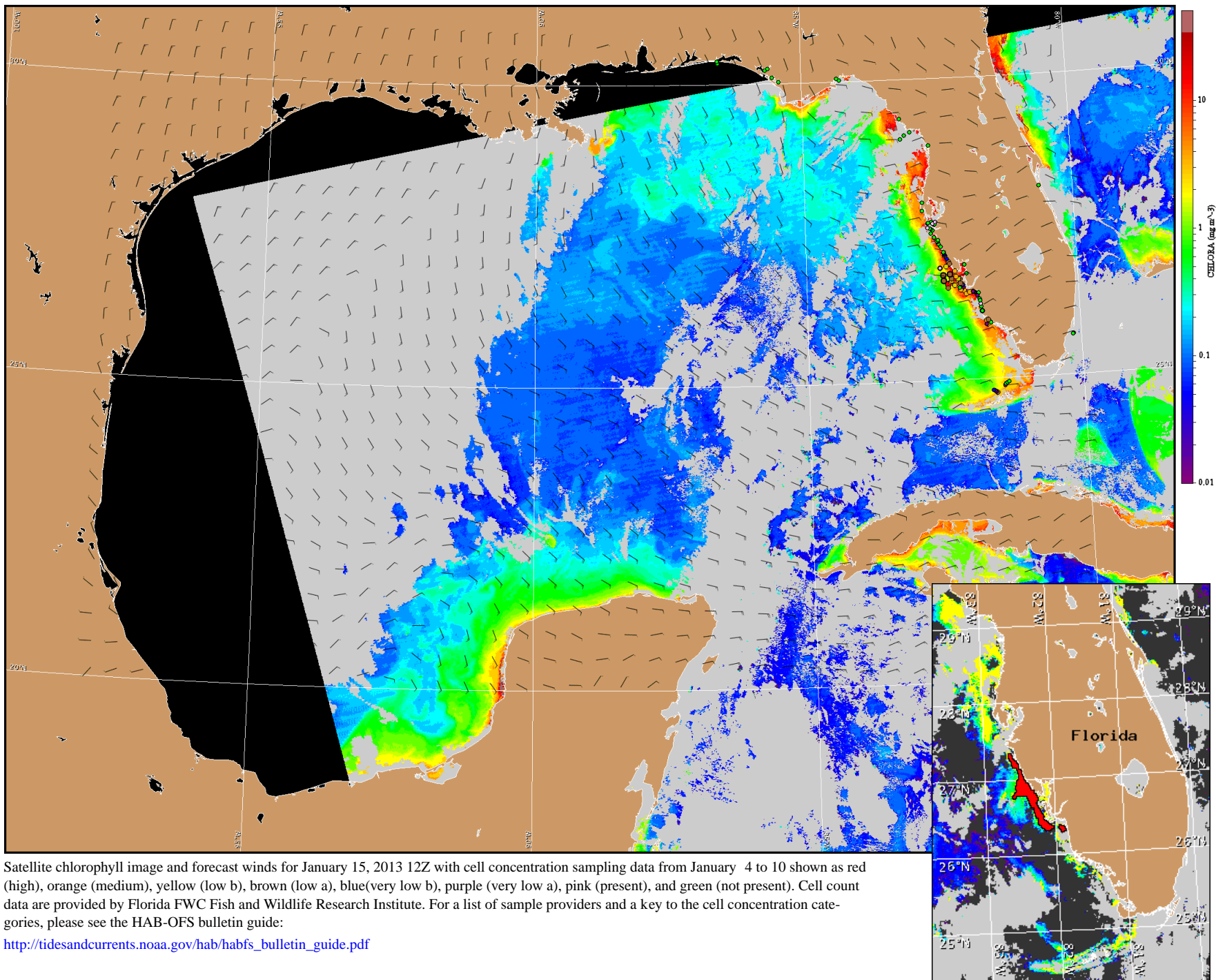


## Wind Analysis

**Pinellas to Lee counties:** Southeast winds (10kn, 5m/s) today becoming onshore near the coast in the afternoon. Southeast winds (5-10kn, 3-5m/s) tonight through Tuesday becoming onshore near the coast Tuesday afternoon. East winds (10kn) Tuesday night. Southeast winds (10kn) Wednesday becoming southwest (5kn, 3m/s) Wednesday afternoon. North winds (5kn) Wednesday night becoming east (10kn) after midnight. Southeast winds (10kn) Thursday becoming south Thursday afternoon.

**Collier and Monroe counties:** Variable easterly winds (5-15kn, 3-8m/s) today through Thursday.

**Gulf side of lower Florida Keys:** East to southeast winds (10-15kn, 5-8m/s) today becoming east winds (10-15kn) tonight through Wednesday. East to southeast winds (10-15kn) Wednesday night and Thursday.



Satellite chlorophyll image and forecast winds for January 15, 2013 12Z with cell concentration sampling data from January 4 to 10 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).