

Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

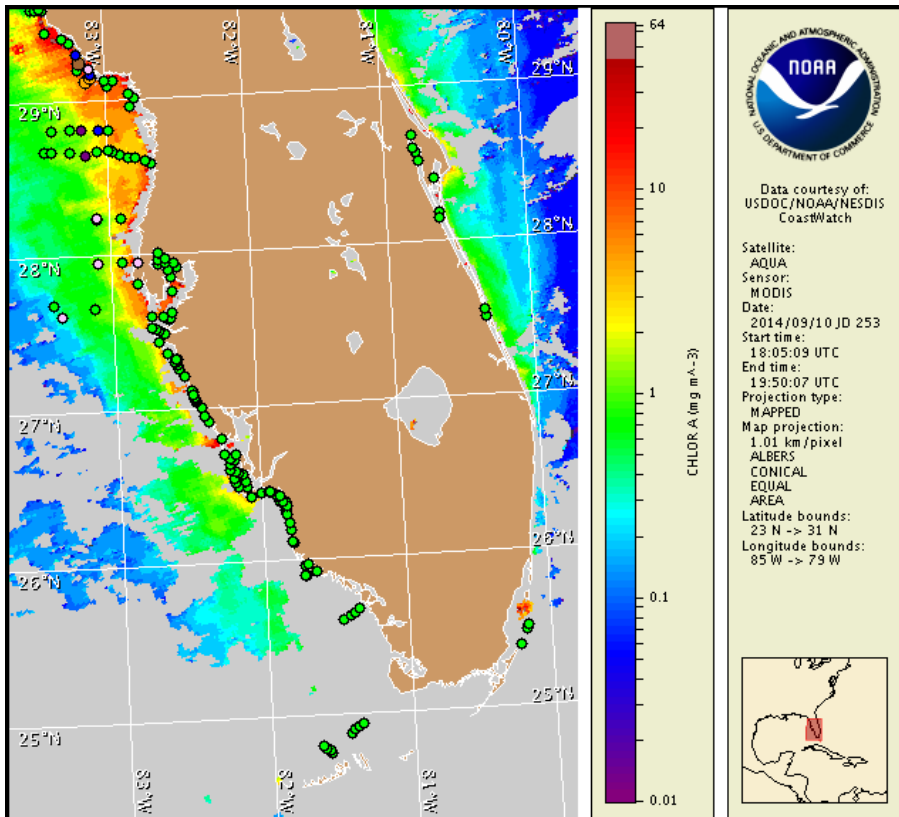
Thursday, 11 September 2014

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 8, 2014



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 1 to 9: 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 Fish and Wildlife Conservation Commission (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 FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Florida red tide) ranges from not present to background concentrations along the coast from southern Manatee to Monroe counties and is not present in the Florida Keys. No respiratory irritation is expected alongshore from southern Manatee to Monroe counties Thursday, September 11 through Monday, September 15.

K. brevis ranges from not present to medium concentrations along- and offshore portions of the coast from Dixie to Pinellas counties. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for alongshore Levy County for Thursday, September 11 through Monday, September 15 is listed below:

County Region: Forecast (Duration)

Levy: Moderate (Th, Sa-M), Very Low (F)

Last week, officials at the Florida Fish and Wildlife Conservation Commission received reports of respiratory irritation on shore in some parts of northern Pinellas County (<http://www.myfwc.com/redtidestatus>) and continued respiratory irritation in this area may be possible. Our forecast will be updated if additional field observations confirm elevated concentrations of *K. brevis* along the coast this week.

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Over the past several days, reports of dead fish have been received from offshore Levy County.

Analysis

Dixie to Pinellas County: The most recent samples collected along- and offshore west Florida continue to indicate not present to 'medium' concentrations of *Karenia brevis*. Along- and offshore Levy, not present to 'medium' concentrations of *K. brevis* were identified (FWRI; 9/8-9). In Dixie County, 'very low b' concentrations of *K. brevis* were identified within 2 miles of the coast (FWRI; 9/9). Offshore Citrus County, 'very low b' and 'very low a' *K. brevis* concentrations were identified 19 and 26 miles offshore, respectively (FWRI; 9/8). From 3 to 21 miles offshore Hernando County, *K. brevis* was not present (FWRI; 9/8). In Pinellas County, a 'background' concentration was identified 39 miles offshore (FWRI; 9/5). All other samples collected along- and offshore in this region indicated that *K. brevis* is not present (FWRI; 9/5-9/8). Dead fish were reported 7 miles off Cedar Key in Levy County (FWRI; 9/9).

Recent MODIS Aqua imagery (9/10, shown left) indicates elevated to very high levels of chlorophyll (2 to $>20\mu\text{g/L}$) along- and offshore Dixie and Levy counties. A patch of very high levels of chlorophyll ($>20\mu\text{g/L}$) is centered at 29.349° N 83.630° W. The bloom extent is difficult to determine using satellite imagery. This is most likely due to increasing patchiness and the presence of concentrations below 100,000 cells/L.

Over the weekend, forecasted southeast to east winds may continue to promote northerly transport of the surface *K. brevis* concentrations. Forecasted winds will increase the

potential for respiratory irritation at the coast of Levy County today and Saturday through Monday and at the coast of northern Pinellas County today and Monday.

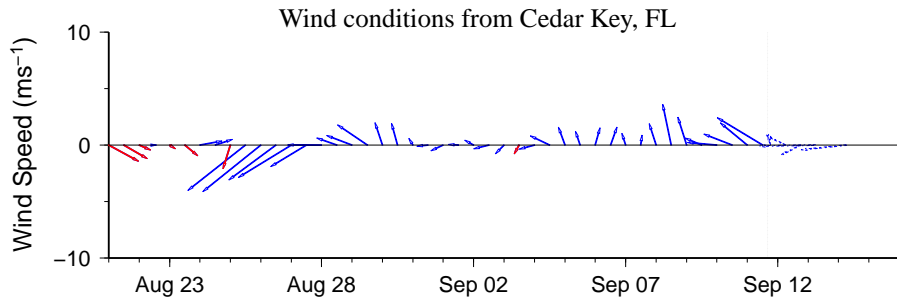
Manatee to Monroe County: Recent samples collected over the past ten days along- and offshore the coast of southwest Florida indicate that *K. brevis* is not present from Manatee to Monroe County, and are not present in the Florida Keys (FWRI, MML, SCHD, CCPCPD; 9/1-9/9). MODIS Aqua imagery from (9/10, shown left) is partially obscured by clouds along- and offshore from Manatee to Monroe counties. Patches of elevated chlorophyll (>2 $\mu\text{g/L}$) are visible along- and offshore from Manatee to Charlotte counties. Elevated to high chlorophyll levels (>2 $\mu\text{g/L}$) are visible along northern Lee County. Elevated chlorophyll levels along the coast may be the result of various algal species that have been reported throughout the region and not due to *K. brevis*.

Urizar, Kavanaugh

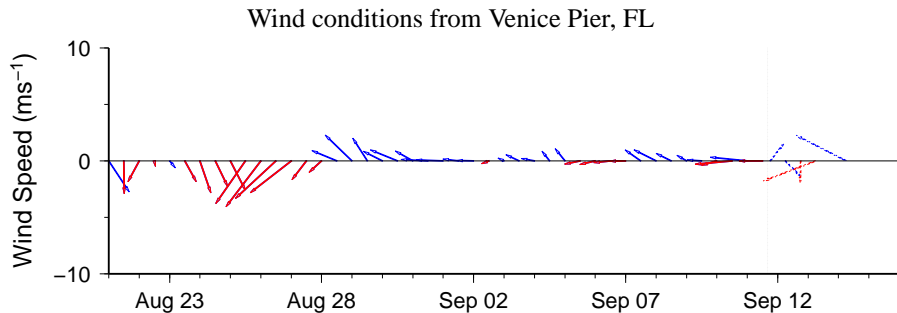
Wind Analysis

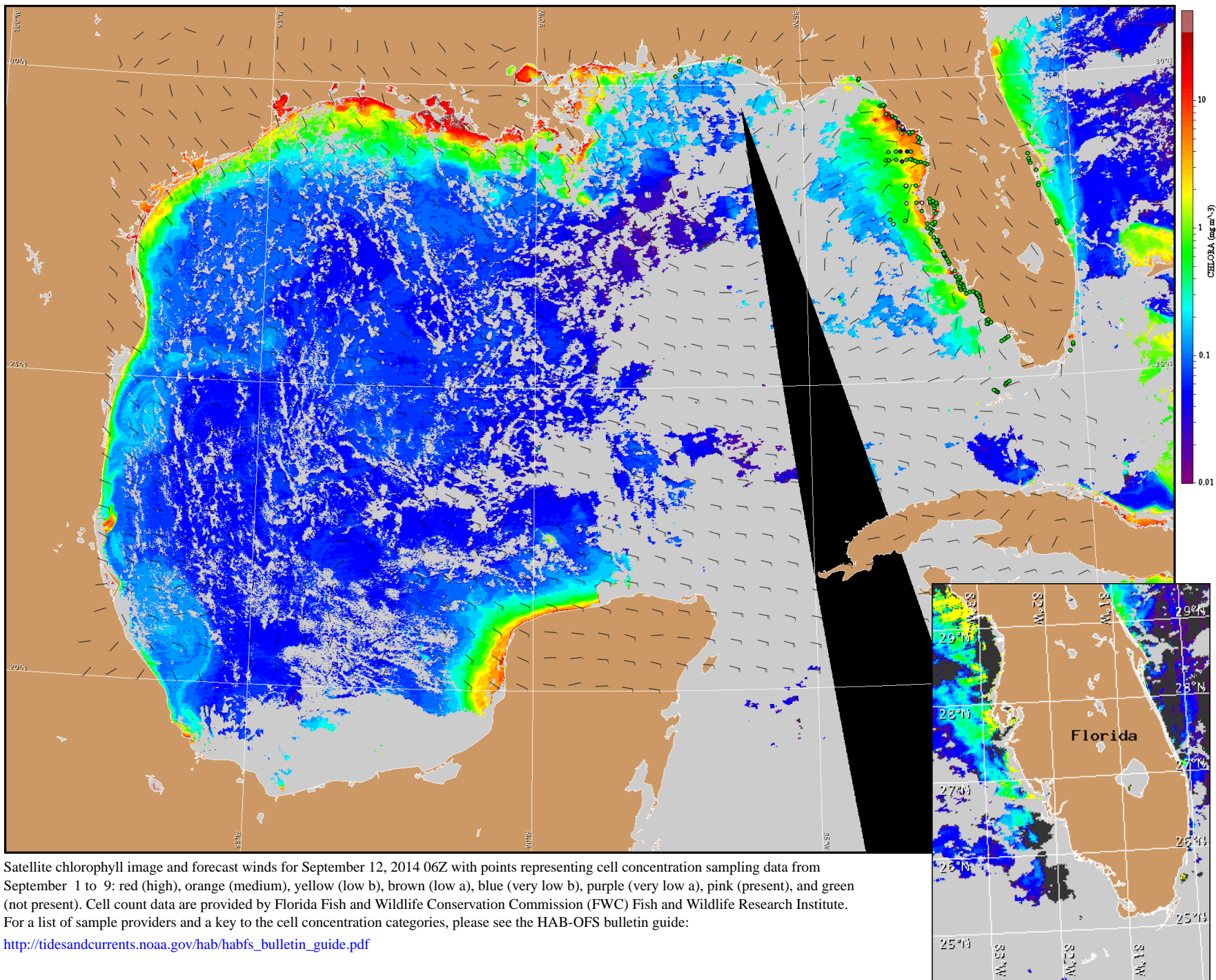
Cedar Key, FL: Southeast winds (5-10 kn, 3-5m/s) today becoming south (5kn, 3m/s) in the afternoon. Northwest winds (5 kn) tonight becoming east after midnight. East winds (5 kn) Friday becoming north in the afternoon. Northeast winds (10 kn, 5m/s) Friday night becoming east after midnight. Southeast winds (10 kn) Saturday. East winds (10 kn) Saturday night. Southeast winds (5-10 kn) Sunday through Monday becoming south Monday afternoon.

Venice, FL: Southeast winds (5-10kn, 3-5m/s) today becoming southwest (5kn, 3m/s) in the afternoon. Northwest winds (5-10kn) tonight becoming east after midnight. Northeast winds (10kn, 5m/s) Friday becoming north in the afternoon. Northeast winds (10 kn) Friday night. East winds (10kn) Saturday. Southeast winds (5-10 kn) Sunday through Monday.



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).





Satellite chlorophyll image and forecast winds for September 12, 2014 06Z with points representing cell concentration sampling data from September 1 to 9: 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 Fish and Wildlife Conservation Commission (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).