



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

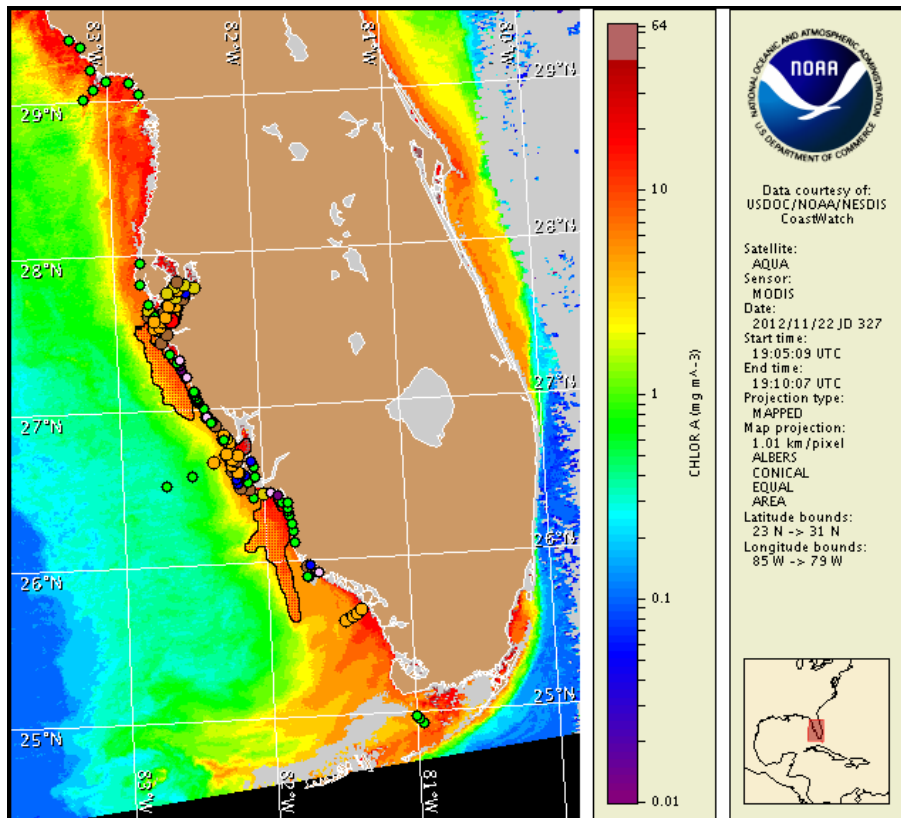
Friday, 23 November 2012

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 19, 2012



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from November 13 to 21 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 northern Monroe counties. Patchy high respiratory impacts are possible today through Monday in the bay regions of southern Pinellas/northern Manatee counties and southern Charlotte/Lee counties. Patchy moderate respiratory impacts are possible today through Monday in the bay regions of southern Manatee and northern Sarasota counties. Patchy very low respiratory impacts are possible today through Monday alongshore Sarasota and northern Charlotte counties. No respiratory impacts are expected alongshore southern Lee and northern Collier counties today, Sunday and Monday, with patchy very low impacts possible on Saturday. Patchy low respiratory impacts are possible today through Monday in the bay regions of central Collier County. Patchy very low respiratory impacts are possible today, Sunday and Monday in northern Monroe County, with patchy moderate respiratory impacts possible on Saturday. No impacts are expected elsewhere alongshore southwest Florida today through Monday, November 26. Over the past few days, reports of dead fish have been received from central Collier County.

Analysis

A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from southern Pinellas to northern Monroe counties, with concentrations ranging from very low to high. Recent samples from southern Pinellas County indicate that *K. brevis* concentrations range from not present to 'medium' offshore, but are not present alongshore (FWRI; 11/15-19). Within the bay regions of southern Pinellas and northern Manatee recent samples indicate *K. brevis* concentrations have increased to a range between 'low a' to 'high' (FWRI; 11/15-21), while samples collected from the bay regions of southern Manatee and northern Sarasota counties indicate a decrease in concentrations to a range between 'background' to 'low a' (FWRI; 11/20). Alongshore Sarasota and northern Charlotte counties recent samples indicate *K. brevis* concentrations have decreased to a range between not present and 'very low a' (FWRI, SCHD; 11/19-20). Recent samples collected within the bay regions of Charlotte and Lee counties and alongshore central Lee County indicate *K. brevis* concentrations ranging from not present to 'medium' (FWRI; 11/19-20). *K. brevis* was not present in samples collected alongshore northern and central Collier County (FWRI, CCPCPD; 11/19-21). Along- and offshore northern Monroe County, 'medium' concentrations of *K. brevis* were identified from samples collected 0.7-9.2 miles southwest of Pavilion Key (MML; 11/20). Over the past few days, dead fish were reported in the Marco Island region (CCPCPD; 11/19-20).

Recent MODIS Aqua imagery (11/22; shown left) is partially obscured by clouds offshore the Florida Keys, limiting analysis. Chlorophyll remains elevated to high (2 to >10 $\mu\text{g/L}$) along- and offshore from Pinellas to Monroe counties, and MODIS imagery indicates that patches of the bloom may have transported south over the past few days (11/22, shown left; 11/19-21, not shown). Patches of elevated to high chlorophyll (3 to >10 $\mu\text{g/L}$) remain visible stretching along- and offshore Pinellas County and now extend to southern Sarasota County, 26°56'6"N 82°29'54"W. Chlorophyll remains elevated (2 to 6 $\mu\text{g/L}$) along- and offshore Charlotte and central Lee counties and has intensified along- and offshore southern Lee and Collier counties with a patch of elevated to very high chlorophyll (3 to >20 $\mu\text{g/L}$) stretching approximately 60 miles from 26°27'29"N 81°59'29"W to 25°37'17"N 81°49'26"W. A patch of elevated to very high chlorophyll (3 to >20 $\mu\text{g/L}$)

is also visible along- and offshore Monroe County and the Florida Keys, with the highest chlorophyll levels found stretching from 25°41'45"N 81°22'24"W to 25°24'48"N 81°18'37"W, which corresponds with the 'medium' *K. brevis* concentrations identified from offshore Pavilion Key (MML; 11/20).

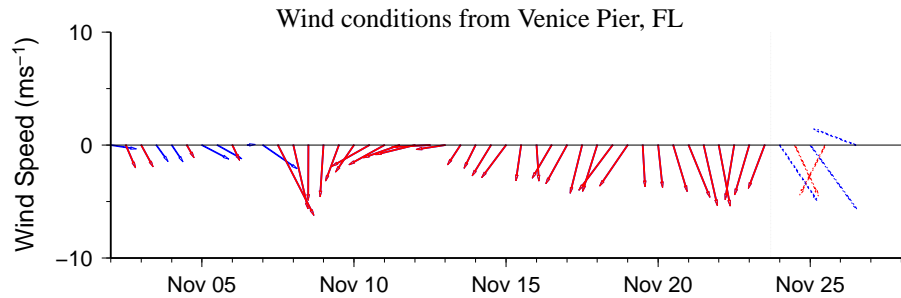
Forecasted offshore winds today through Monday may minimize the potential for onshore transport of the bloom and decrease respiratory impacts along the coast from southern Pinellas to Monroe counties, except in the bay regions. North to northeast winds forecasted through Sunday may promote the potential for continued southerly transport of the bloom. Due to upwelling favorable winds, intensification of the bloom may also be possible in southern Lee and Collier counties.

Kavanaugh, Yang

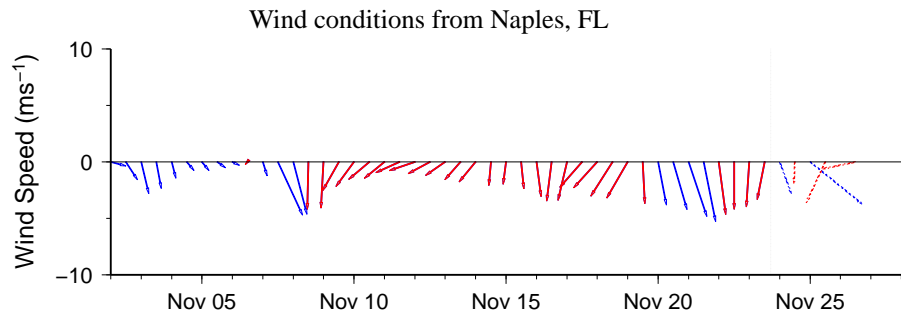
Wind Analysis

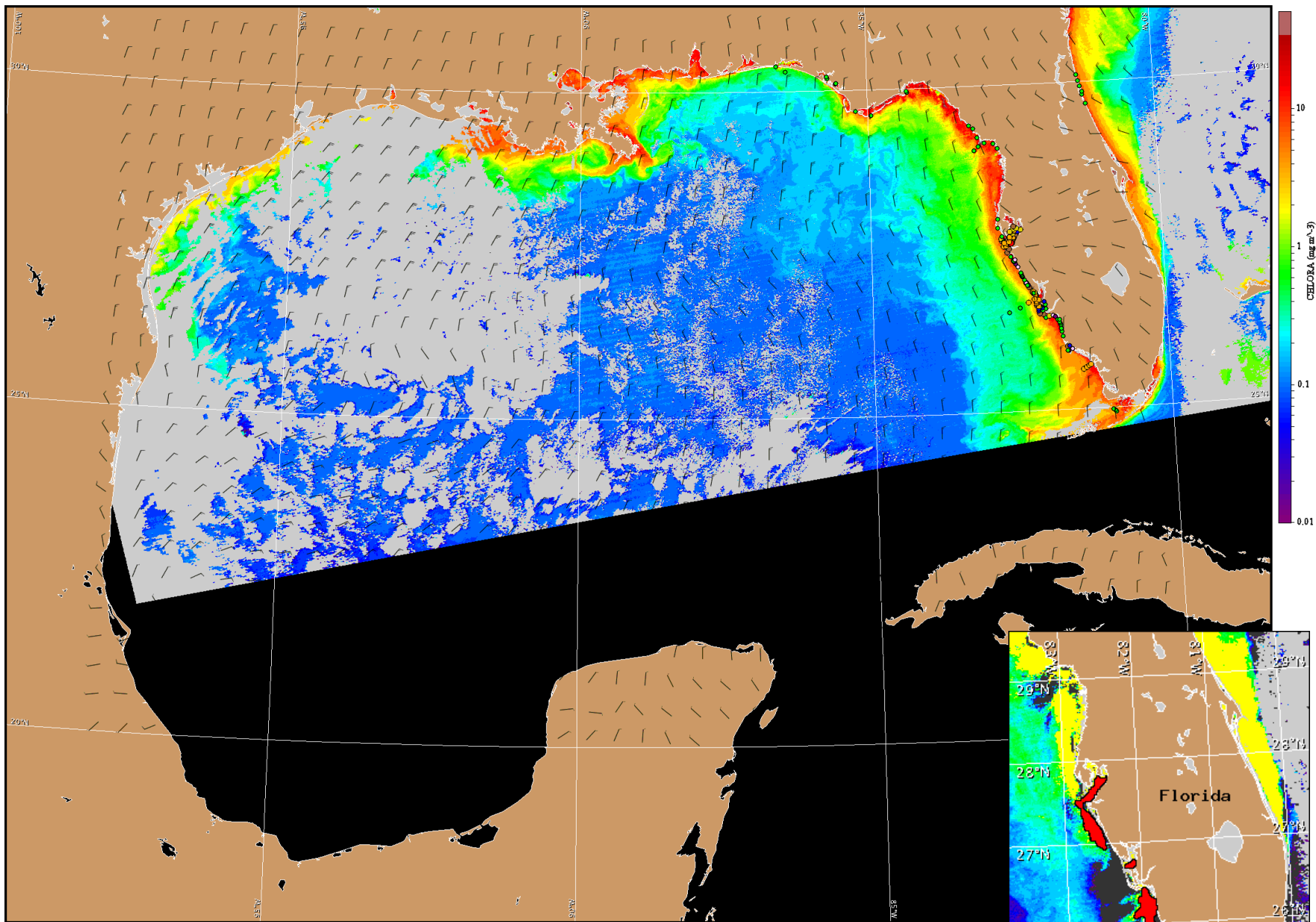
Venice: North winds (10-15 kn, 5-8 m/s) today through Saturday. Northeast winds (5-15 kn, 3-8 m/s) Sunday becoming east winds (5-10 kn, 3-5 m/s) Sunday night through Monday.

Naples: North winds (5-13 kn, 3-7 m/s) today. North northwest winds (8-13 kn, 4-7 m/s) Saturday becoming north winds (8-13 kn) Saturday night. Northeast winds (7-12 kn, 4-6 m/s) Sunday becoming east winds (9-14 kn, 5-7 m/s) Sunday night through Monday.



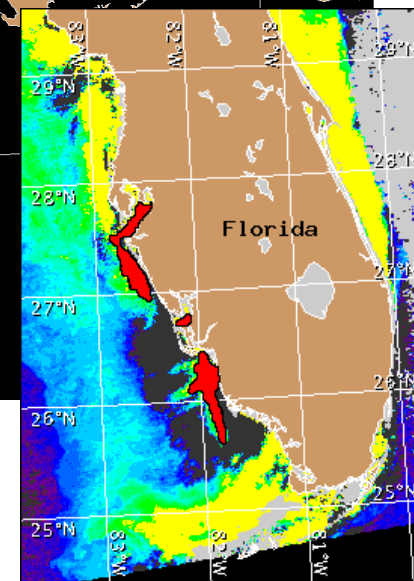
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).





Satellite chlorophyll image and forecast winds for November 24, 2012 12Z with cell concentration sampling data from November 13 to 21 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).