



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

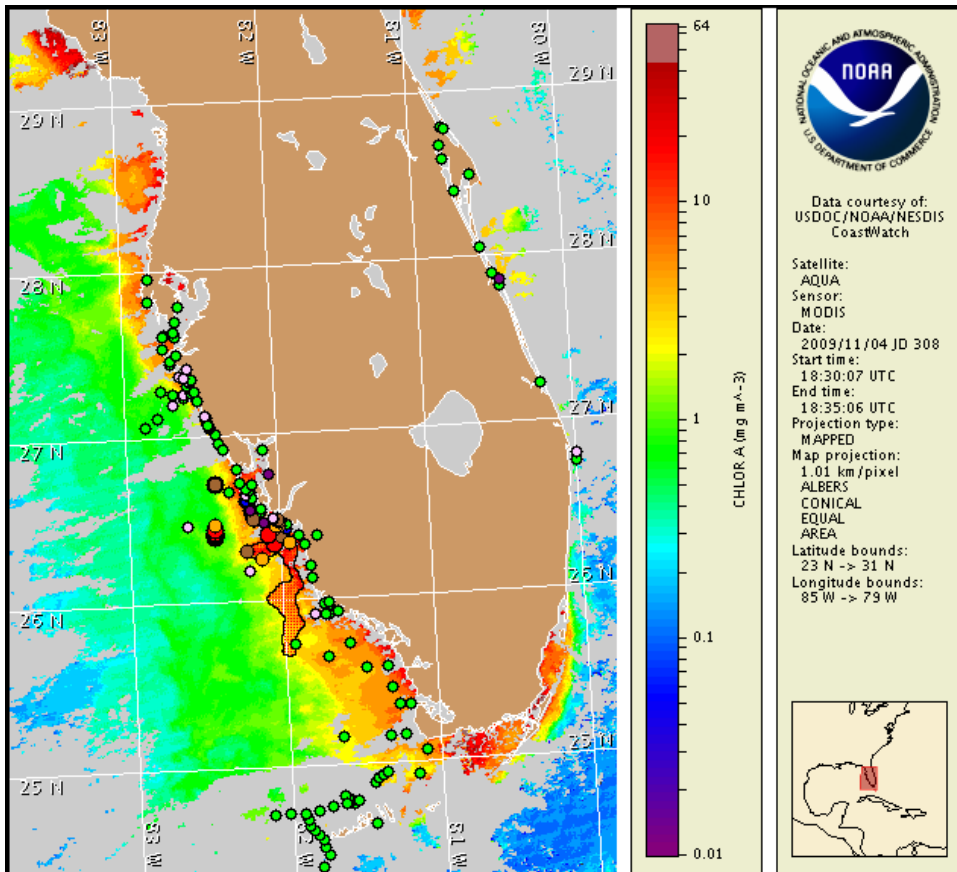
5 November 2009

NOAA Ocean Service

NOAA Satellites and Information Service

NOAA National Weather Service

Last bulletin: November 2, 2009



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from October 26 to November 4 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). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

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2. Image products may be published in newspapers. Any other publishing arrangements must receive GeoEye approval via the CoastWatch Program.

Conditions Report

A harmful algal bloom has been identified onshore northern and central Lee County, in the Pine Island Sound/San Carlos Bay region in Lee County, and offshore southern Lee and northern Collier counties. Patchy high impacts are possible today through Sunday in central Lee County and in the Pine Island Sound/San Carlos Bay region. No impacts are expected elsewhere alongshore southwest Florida today through Sunday, November 8. Dead fish have been reported offshore central Lee County and northern Collier County over the past few days.

Analysis

A harmful algal bloom has been identified onshore northern and central Lee County, in the Pine Island Sound/San Carlos Bay region in Lee County, and offshore southern Lee and northern Collier counties. Recent sample results indicate a decrease in *Karenia brevis* concentrations at several sampling locations in the Pine Island Sound region. Samples collected on 11/2 indicate a very low a concentration between Long Point and York Island and at Redfish Pass, and a very low b concentration at Captiva Pass (FWRI). A sample from Buck Key indicates low a *K. brevis* concentration (FWRI; 11/2). Two other samples in the Pine Island sound region, including Merwin Key, indicate background concentrations (FWRI; 11/2). A sample collected alongshore northern Lee County identified a very low a concentration (FWRI; 11/2/09). Samples collected 12 miles offshore northern Lee County indicate high concentrations of *K. brevis* at the surface and low a concentrations at 2m depth (FWRI; 10/31), and recent samples indicate *K. brevis* is no longer present in Boca Grande Pass (FWRI; 11/2).

Samples collected in the Sanibel Island region of Lee County on 10/30 indicate low a *K. brevis* concentrations (FWRI). High *K. brevis* concentrations were also identified 2 miles south of Sanibel Island (FWRI; 10/30). Samples collected 7 miles west of Bonita Springs and 13 miles southwest of Sanibel Island indicate medium *K. brevis* concentrations at the surface and below the surface at each location (7.3m and 13.4m depth, respectively; FWRI; 10/31). Samples collected on 11/1 indicate *K. brevis* concentrations ranging from low b to high in an area approximately 17 miles west of Sanibel Island (FWRI).

Extensive fish kills have been reported offshore central Lee County, approximately 10 miles west of the Sanibel Lighthouse (FWRI; 11/2) and offshore northern Collier County, 5-6 miles west of Naples (FWRI; 11/3). Dead fish were also reported in Redfish Pass and Merwin Key (FWRI; 11/2), as well as Lighthouse Point on the eastern end of Sanibel Island (MML; 11/2-11/3). Respiratory irritation has been reported at Tarpon Bay Beach off the north coast of Sanibel Island and Lighthouse Point (MML; 11/2-3).

Additional samples collected alongshore Pinellas, Manatee, Charlotte, Lee, Collier, northern Monroe and the Florida Keys all indicate that *K. brevis* is not present (FWRI, MML, SCHD; 10/30-11/4). Several samples collected alongshore northern Sarasota County, in Sarasota Bay, and offshore central Sarasota County contain background *K. brevis* concentrations (FWRI; 10/30, 11/3).

MODIS satellite imagery (11/4) indicates elevated to high (>7 $\mu\text{g/L}$) chlorophyll levels alongshore Lee and northern Collier counties. Patches of high levels of chlorophyll (>10

Wind Analysis

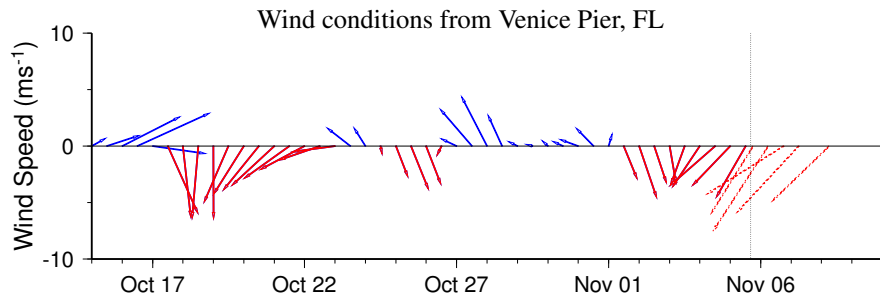
Southwest Florida: Northeast winds today through Friday (15-20 kn, 8-10 m/s). East winds Saturday through Monday (20 kn, 10 m/s).

$\mu\text{g/L}$) offshore central to southern Lee county, south-southwest of Sanibel Island, and offshore northern Collier county are also visible. Cloud cover makes it difficult to determine the extents of elevated chlorophyll patches; however, a patch of elevated to high chlorophyll is visible offshore northern Collier County extending east toward the coast from $26^{\circ}19'17''\text{N } 82^{\circ}12'21''\text{W}$. Continued sampling throughout is recommended.

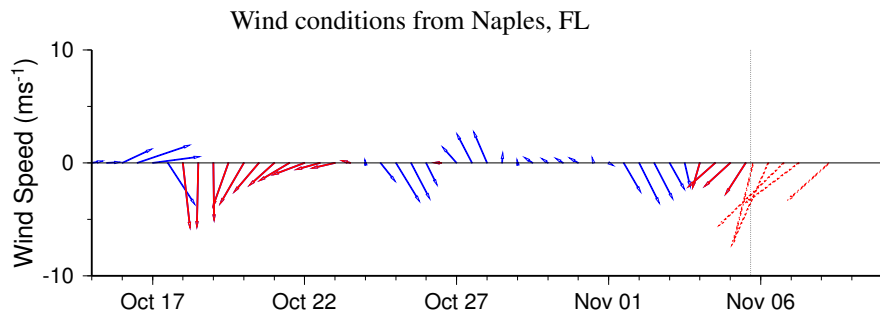
Forecasted winds decrease the potential for further bloom formation alongshore southwest Florida today through Sunday November 8.

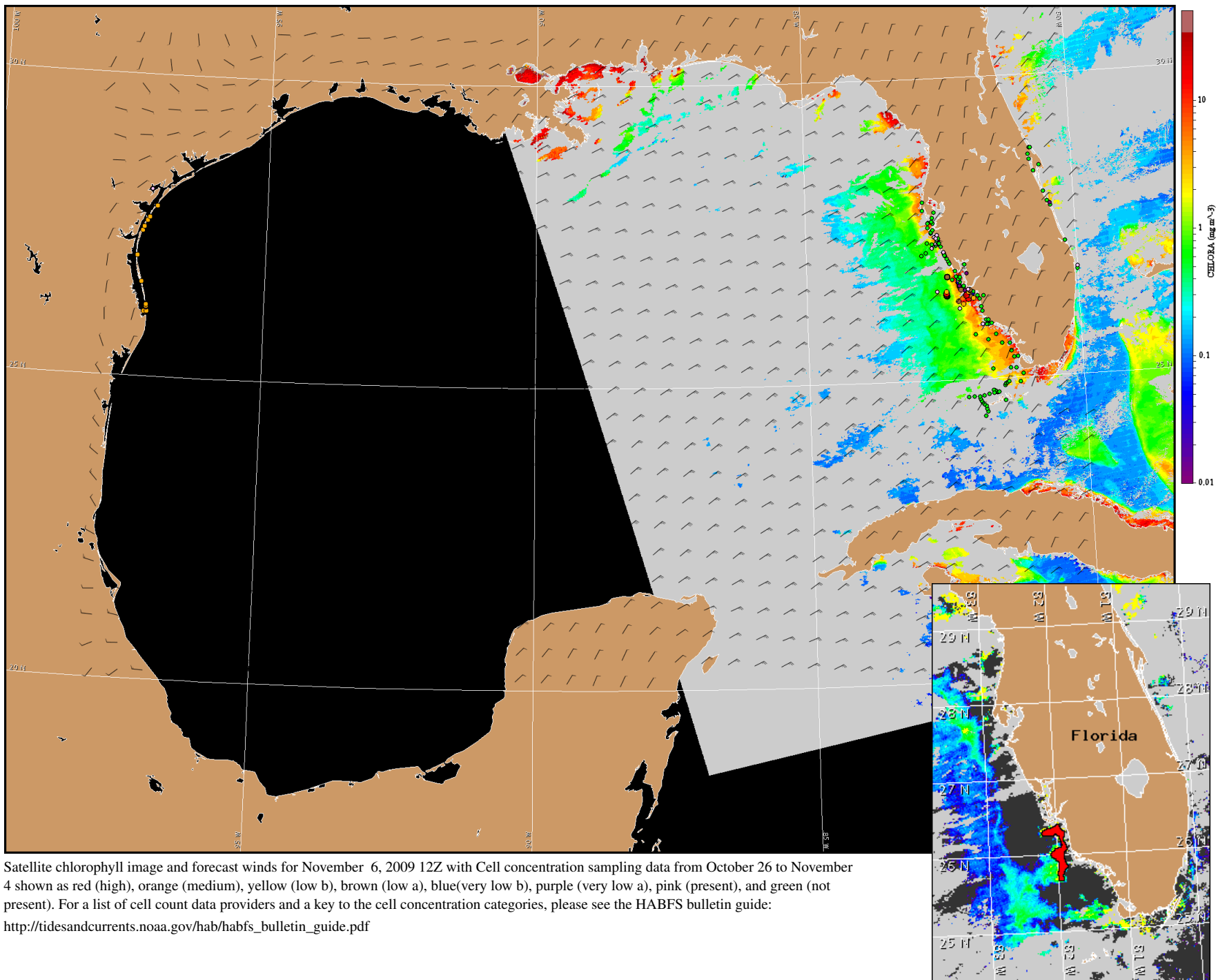
Due to technical difficulties SeaWifs imagery is currently unavailable. MODIS imagery is displayed on this bulletin.

Derner, Urizar



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 6, 2009 12Z with Cell concentration sampling data from October 26 to November 4 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). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS 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).