



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

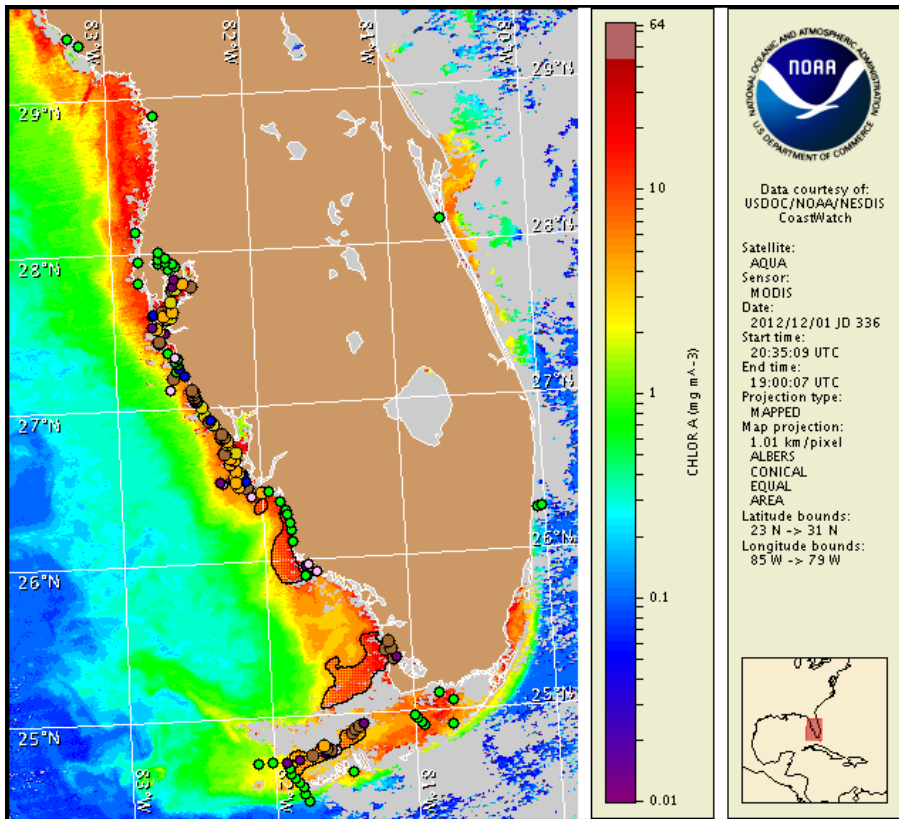
Monday, 03 December 2012

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, November 29, 2012



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from November 24 to 29 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 medium concentrations of *Karenia brevis* (commonly known as Florida Red Tide) are present along- and offshore from southern Pinellas to Monroe counties as well as offshore the gulf side of the lower Florida Keys. Patchy moderate respiratory irritation is possible today through Thursday in the bay regions of southern Pinellas/northern Manatee counties, southern Manatee/northern Sarasota counties, and southern Charlotte/Lee counties. Patchy very low respiratory irritation is possible today through Thursday alongshore southern Sarasota and northern Charlotte counties. In southern Monroe County, patchy very low respiratory irritation is possible today, Tuesday, and Thursday, with moderate respiratory irritation possible on Wednesday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Thursday, December 6.

Analysis

Southwest Florida: A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from southern Pinellas to Monroe counties, with *K. brevis* concentrations ranging from 'very low' to 'medium'. Several recent samples collected alongshore southern Monroe County north of Cape Sable indicate that the bloom has expanded southward alongshore Monroe County, with 'very low a' to 'low a' *K. brevis* concentrations identified in an area from the mouth of Broad River to Ponce de Leon Bay (FWRI; 11/27). This area will continue to be monitored as samples are received. Recent samples indicate that *K. brevis* is not present in Old Tampa Bay, while concentrations within Tampa Bay continue to range from 'very low a' to 'medium' (FWRI; 11/26-29). Samples from the Pine Island Sound and Sanibel Island regions of Lee County also continue to indicate background to 'medium' *K. brevis* concentrations, including two 'medium' samples collected at the S. Seas Plantation Entrance (Captive Island) and Lighthouse Beach (FWRI; 11/28). No *K. brevis* was identified in the most recent samples collected alongshore Collier County from Seagate to South Marco Beach on 11/29 (FWRI).

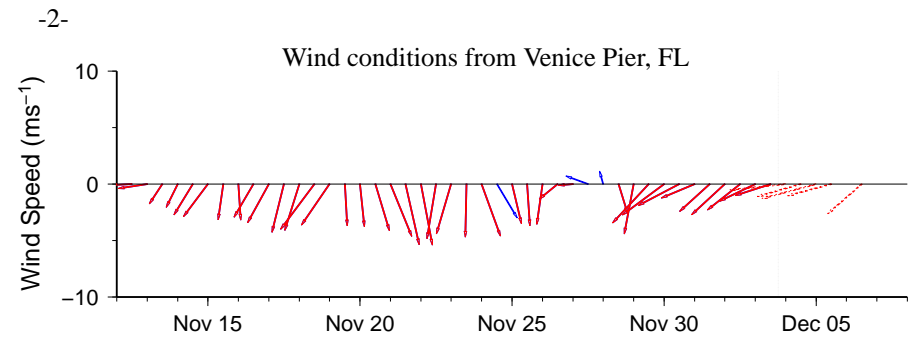
Recent MODIS Aqua imagery from 12/1 (shown left) is patchy along the coast of southwest Florida, including along- and offshore southern Monroe County, limiting analysis. Elevated to high chlorophyll (3-20 $\mu\text{g/L}$) is visible stretching along- and offshore the coast of southwest Florida from Pinellas to Monroe counties, with patches of very high chlorophyll (>20 $\mu\text{g/L}$) visible inshore the bay regions of southern Pinellas/northern Manatee counties, alongshore southern Lee to northern Collier counties, and along- and offshore north of Cape Sable in Monroe County.

Forecasted offshore winds today through Thursday may minimize the potential for onshore transport of the bloom and decrease respiratory impacts along the coast from southern Manatee to Monroe counties, except in the bay regions.

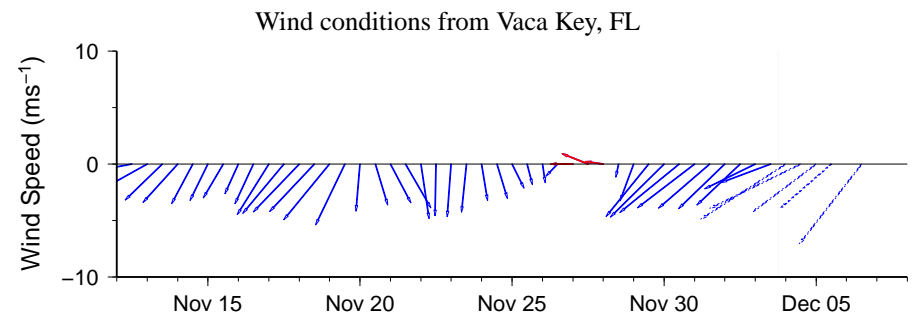
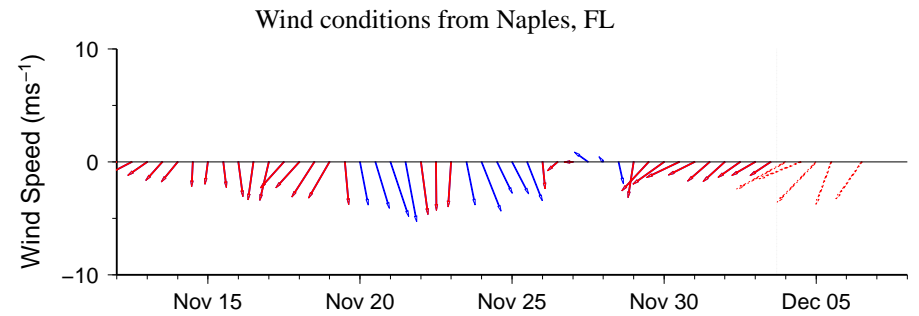
Florida Keys: A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys, with *K. brevis* concentrations ranging from 'not present' to 'medium' extending from approximately 12.6 miles northwest of Key West to 5-8 miles northeast of Harbor Key (MML; 11/26-29). No new samples have been received for this region since the last bulletin; however, this region will continue to be monitored as information is received.

MODIS Aqua imagery (12/1; shown page 1) is patchy throughout the Florida Keys, limiting analysis of the region. Elevated chlorophyll concentrations (2-6 $\mu\text{g/L}$) are visible off-shore the lower Keys, with elevated to high concentrations (5-18 $\mu\text{g/L}$) visible in the region northeast of Big Pine Key. Northeast to east winds forecasted today through Thursday may promote the potential for western transport of the bloom.

Derner, Burrows



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).

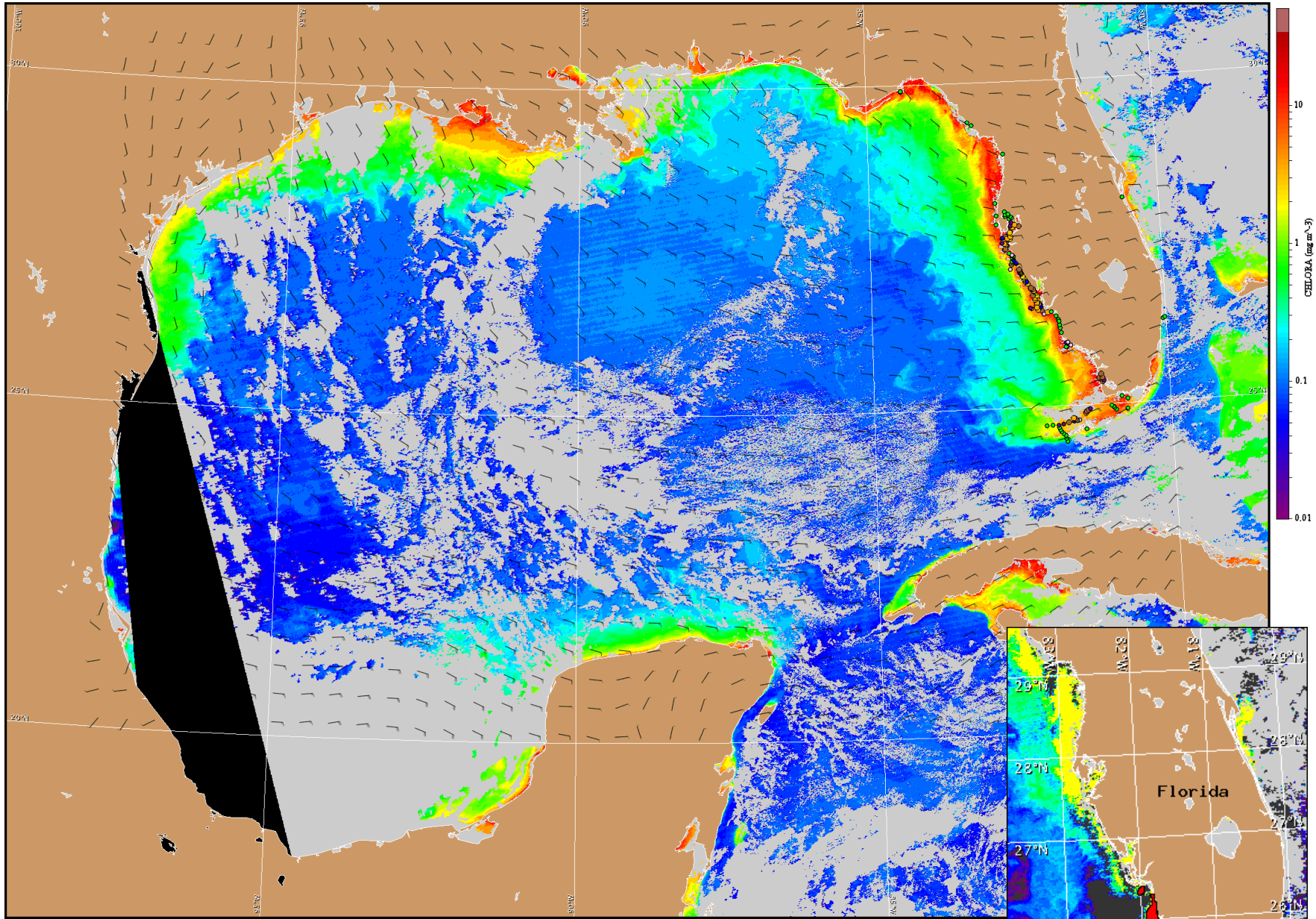


Wind Analysis

Pinellas to Lee counties: East to northeast winds (10-15kn, 5-8m/s) today through Tuesday. East winds (10kn, 5m/s) Tuesday night. Northeast winds (10kn) Wednesday, becoming north in the afternoon. Northeast winds (10kn) Wednesday night through Thursday.

Collier and Monroe counties: East northeast winds (12-19kn, 6-10m/s) today through Tuesday. North northeast winds (7-12kn, 4-6m/s) Wednesday. East northeast winds (9-14kn, 5-7m/s) Wednesday night through Thursday.

Gulf side of Lower Florida Keys: Northeast to east winds (15-20kn, 8-10m/s) today through Tuesday. Northeast winds (10-15kn) Wednesday. Northeast to east winds (10-15kn) Wednesday night through Thursday.



Satellite chlorophyll image and forecast winds for December 4, 2012 12Z with cell concentration sampling data from November 24 to 29 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).