



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

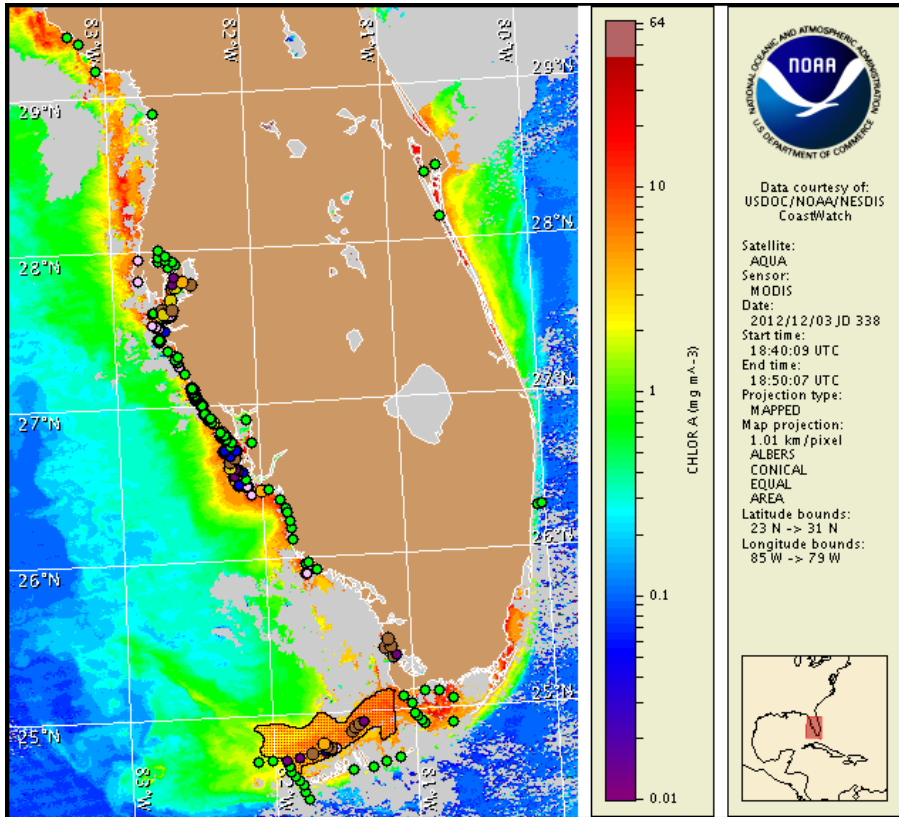
Thursday, 06 December 2012

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 3, 2012



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from November 26 to December 5 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 impacts are possible today through Monday in the bay regions of southern Pinellas/northern Manatee and southern Manatee/northern Sarasota counties. Patchy very low impacts are possible alongshore northern Sarasota Saturday and Monday, with no respiratory impacts expected today, Friday, and Sunday. Alongshore southern Sarasota and northern Collier counties, patchy very low respiratory irritation is possible today and Friday, with patchy moderate respiratory impacts possible Saturday and Monday, and patchy low respiratory impacts possible on Sunday. Patchy moderate respiratory impacts are possible today through Saturday and on Monday in the bay regions of southern Charlotte/Lee counties, with patchy low respiratory impacts possible on Sunday. Patchy very low respiratory irritation is possible today through Monday in the bay regions of central Collier County. Patchy very low respiratory impacts are possible today and Friday alongshore southern Monroe County, with patchy low respiratory impacts possible Saturday through Monday. No respiratory impacts are expected elsewhere alongshore southwest Florida, including the Florida Keys, today through Monday, December 10.

Analysis

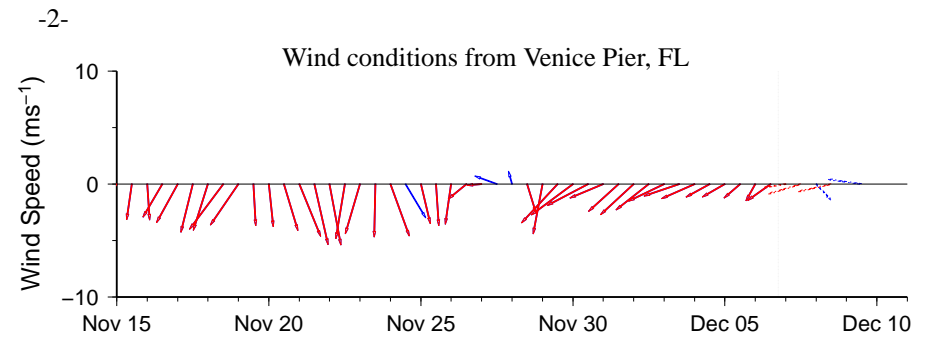
Southwest Florida: A harmful algal bloom of *Karenia brevis* is present along- and offshore southwest Florida from southern Pinellas to Monroe counties, with *K. brevis* concentrations ranging from 'very low' to 'medium'. Recent samples indicate decreasing concentrations of *K. brevis* alongshore southwest Florida, with background to 'low a' concentrations identified in Tampa Bay (FWRI; 12/3-4), just one background concentration alongshore Sarasota County (Siesta Beach; SCHD; 12/3), 'very low a' concentrations northeast of Gasparilla Island in Charlotte County (FWRI; 12/4), background to 'low b' concentrations in the Pine Island Sound region of Charlotte/Lee counties (FWRI; 12/3-4), and one 'very low b' concentration at South Marco Beach in Collier County (FWRI, CCPCPD; 12/3). Numerous additional samples collected throughout the region alongshore Pinellas to Collier County and within the bay regions indicated that *K. brevis* is not present (FWRI, CCPCPD, SCHD; 12/3-4).

Recent MODIS Aqua imagery from 12/3 (shown left) is patchy alongshore much of southwest Florida, including along- and offshore from central Collier to Monroe County, limiting analysis in these regions. Elevated chlorophyll (3-10 $\mu\text{g/L}$) is visible alongshore and in the bay region of southern Pinellas and northern Manatee, and along- and offshore Lee and Collier counties, with high chlorophyll (10-16 $\mu\text{g/L}$) visible in small patches throughout these areas. Forecasted offshore winds today through Saturday may minimize the potential for onshore transport of the bloom and decrease respiratory impacts along the coast from Pinellas to Monroe counties, except in the bay regions.

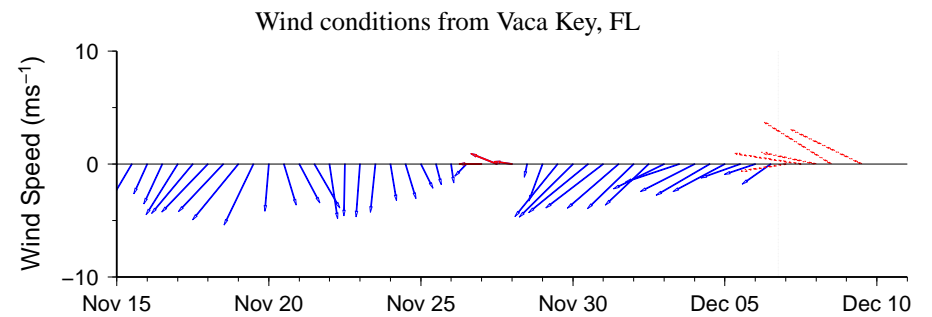
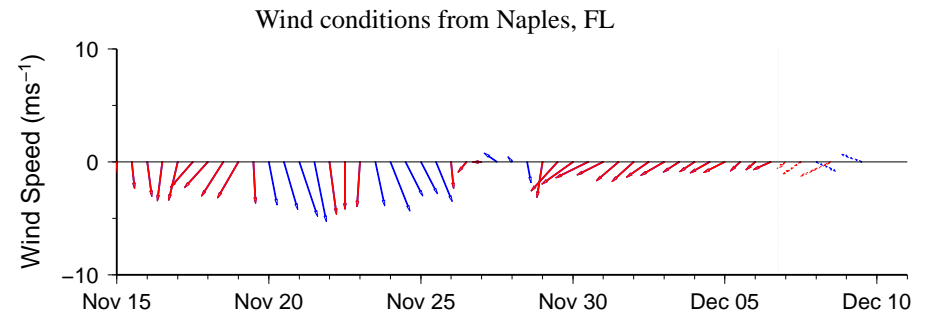
Florida Keys: A harmful algal bloom of *Karenia brevis* is present offshore the gulf side of the lower Florida Keys. Recent samples collected south of Cape Sable, along the east and west ends of 7-Mile Bridge, and within Spanish Harbor (roadside) all indicated that *K. brevis* is not present (MML; 11/30-12/5). No new samples have been received from the area north of the lower Florida Keys where *K. brevis* concentrations ranging from 'not present' to 'medium' were identified offshore last week (MML; 11/26-29).

MODIS Aqua imagery (12/3; shown page 1) is patchy throughout the Florida Keys, limiting analysis of the region. Elevated chlorophyll concentrations ($2-7 \mu\text{g/L}$) are visible off-shore north of the lower Keys. Forecasted winds today through Monday may promote westward 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).

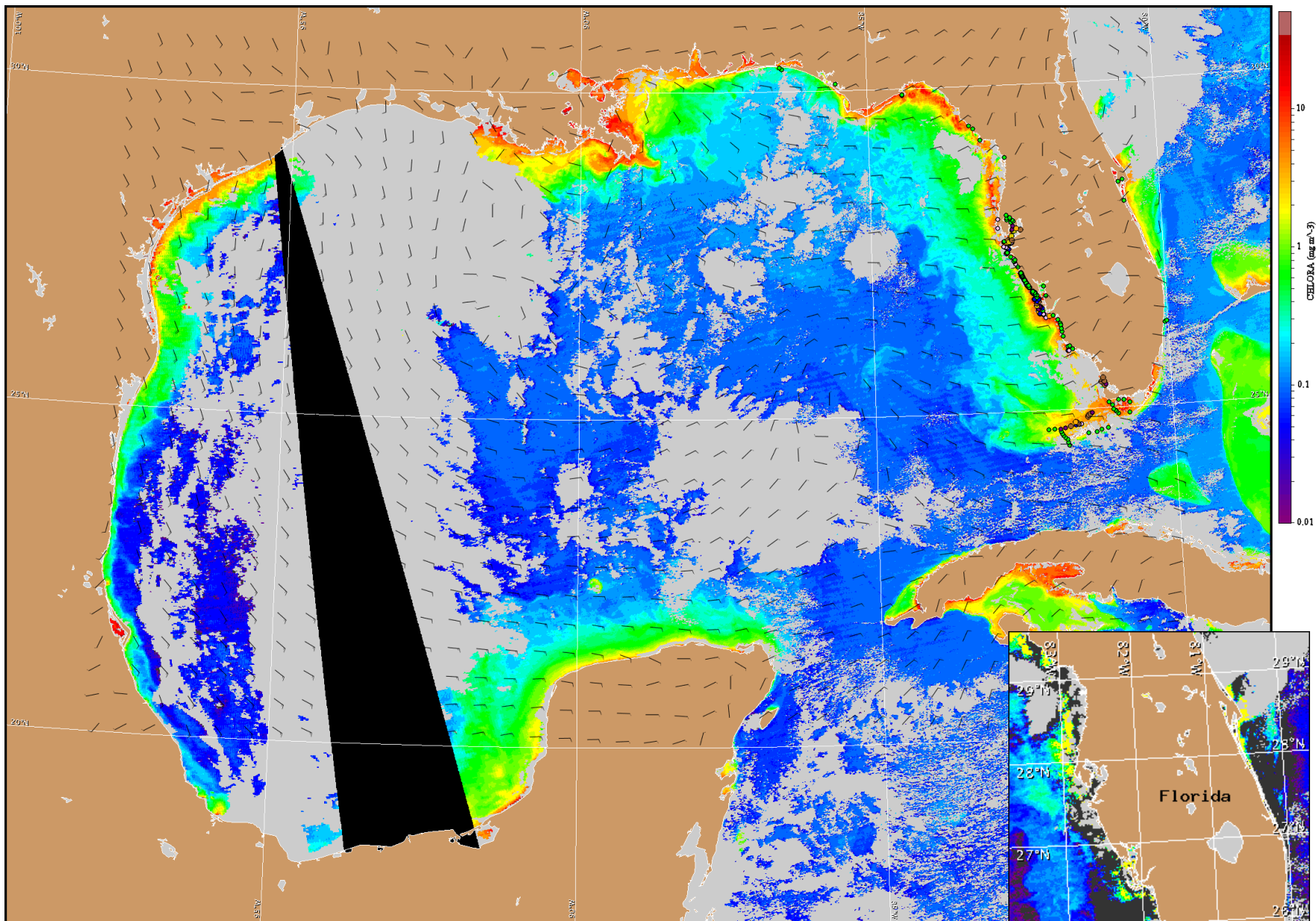


Wind Analysis

Pinellas to Lee counties: East winds (10kn, 5m/s) today becoming northeast (10kn) tonight. East winds (10kn) Friday becoming north (5-10kn, 3-5m/s) in the afternoon. Northeast to east winds (10kn) Friday night. East winds (5-10kn) Saturday becoming variable (<10kn) in the afternoon. Northeast to east winds (5kn, 3m/s) Saturday night. Variable southerly winds (5kn) Sunday. Southwest winds (15kn, 8m/s) Monday.

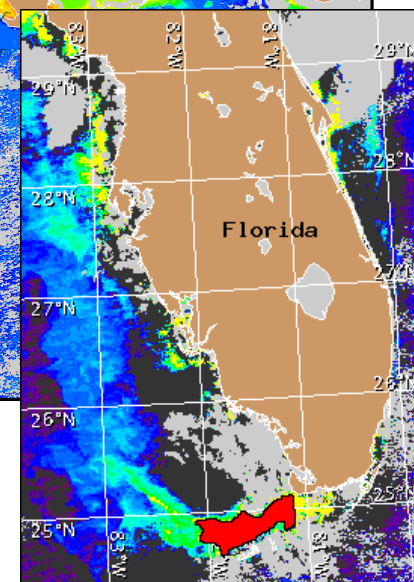
Collier and Monroe counties: East northeast winds (5-12kn, 3-6m/s) today. East winds (6-13kn, 3-7m/s) Friday. East southeast winds (5-10kn) Saturday becoming south southeast (5-7kn, 3-4m/s) in the afternoon. South to southeast winds (5-7kn) Saturday night. South southeast winds (5-12kn, 3-6m/s) Sunday and Monday becoming southwest (9-14kn, 5-7m/s) Monday afternoon.

Gulf side of lower Florida Keys: Northeast to east winds (10kn) today and tonight. East winds (10-15kn, 5-8m/s) Friday. East to southeast winds (10kn) Saturday through Monday.



Satellite chlorophyll image and forecast winds for December 7, 2012 12Z with cell concentration sampling data from November 26 to December 5 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).