



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

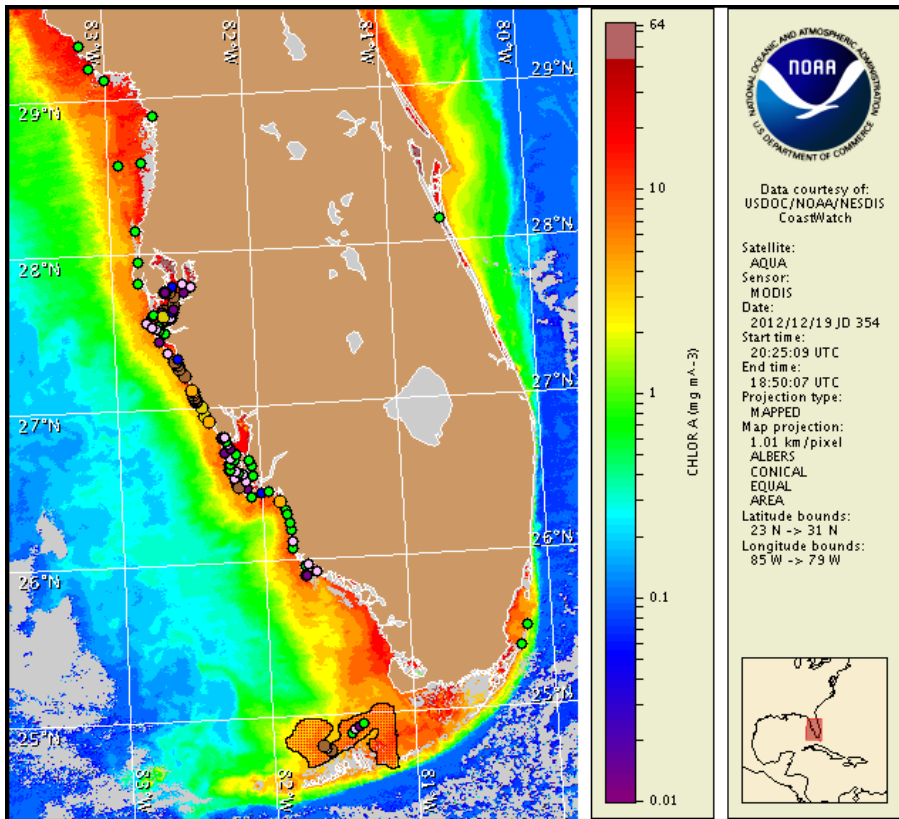
Thursday, 20 December 2012

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, December 17, 2012



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s). Cell concentration sampling data from December 10 to 18 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 southwest Florida from southern Pinellas to Monroe counties including offshore the gulfside of the lower Florida Keys. Patchy high respiratory impacts are possible today alongshore Sarasota and southern Lee counties with patchy very low respiratory impacts possible Friday through Monday. Patchy very low respiratory impacts are possible today through Monday in the bay regions of southern Pinellas, Manatee, Sarasota, and central Collier counties, and alongshore Charlotte County. Patchy low respiratory impacts are possible today through Monday in the bay regions of southern Charlotte/northern Lee counties. Patchy very low respiratory impacts are possible today in the gulfside of the lower Florida Keys with patchy low respiratory impacts possible Friday through Monday. No respiratory impacts are expected elsewhere alongshore southwest Florida today through Monday, December 24. Respiratory irritation was reported over the past several days alongshore Sarasota County.

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 'very low a' to 'medium' *K. brevis* concentrations alongshore Sarasota County, 'not present' to 'very low b' in the bay regions of southern Pinellas, Manatee, Charlotte, Lee, central Collier counties, and alongshore northern and central Collier County (FWRI, SCHD, CPCCPD; 12/13-18). Over the past few days, three incidences of slight respiratory irritation were reported alongshore Sarasota County (MML; 12/19).

Recent MODIS imagery from 12/19 (shown left) indicates that chlorophyll remains elevated to high (2 to >10 $\mu\text{g/L}$) along- and offshore from Pinellas to Monroe counties with patches of very high (>20 $\mu\text{g/L}$) concentrations alongshore central Sarasota County and in the vicinity from the eastern tip of Sanibel Island to Fort Meyer Beach in central Lee County.

Forecast winds may increase the potential of southwestward transport of the bloom. Forecasted onshore winds today may intensify respiratory impacts along the coast from Sarasota to southern Lee counties.

Florida Keys: A harmful algal bloom of *K. brevis* is present offshore the gulfside of the lower Florida Keys. There are currently no new samples from this region. Recent MODIS imagery from 12/19 (shown left) indicates that chlorophyll is elevated to high (2 to >10 $\mu\text{g/L}$) alongshore and offshore the gulfside of the Florida Keys with highest concentrations located in the vicinity of Horseshore Key and Little Pine Key. Forecasted northern winds Friday through Monday may increase the potential of respiratory impacts alongshore the gulfside of the lower Florida Keys and promote the southward transport of the bloom.

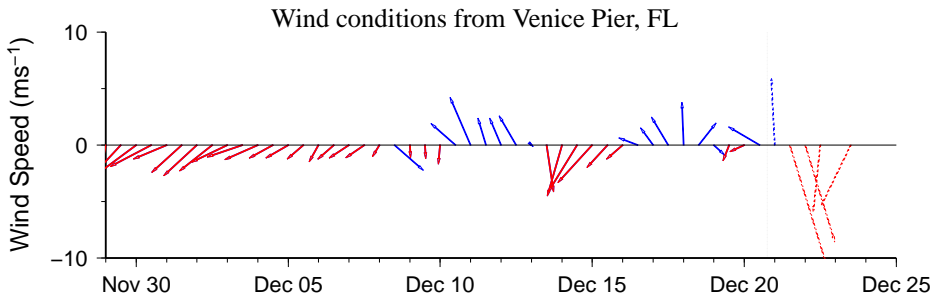
Yang, Fenstermacher

Wind Analysis

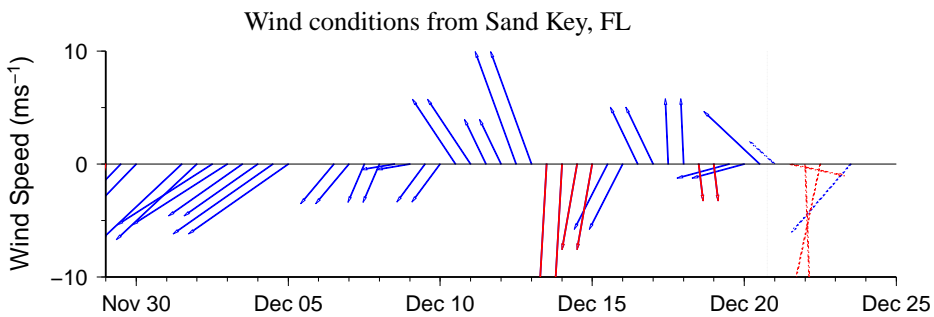
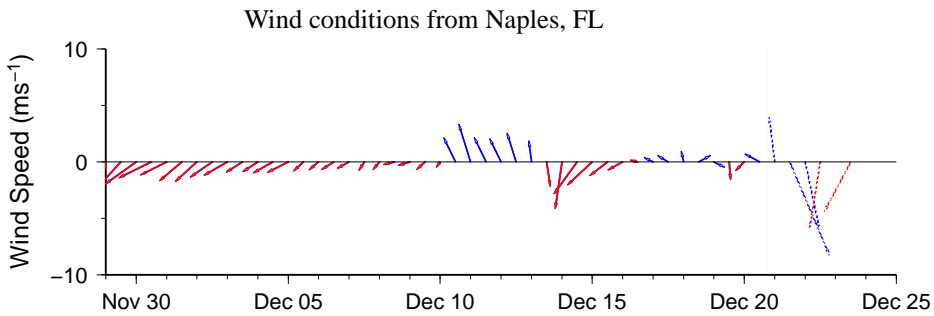
Pinellas to Lee counties: South winds (15-20kn, 8-10m/s) this afternoon becoming southwest (20-25kn, 10-13m/s) tonight then northwest after midnight. North winds (20-25kn, 10-13m/s) Friday decreasing to 10kn (5m/s) Saturday afternoon. Northeast winds (10kn) Saturday night and Sunday. East winds (10kn) Sunday night through Monday.

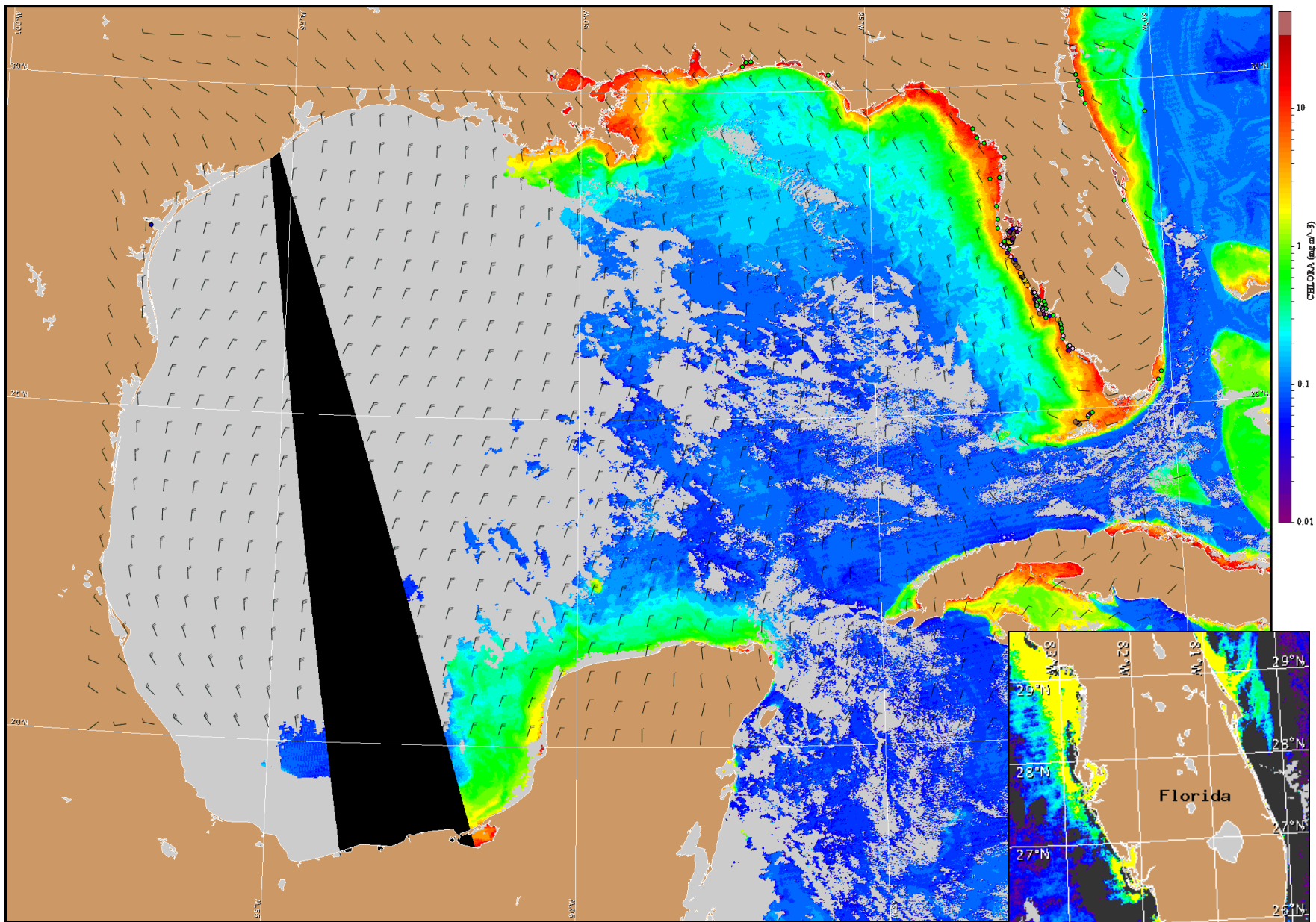
Collier and Monroe counties: Southeast winds (9-14kn, 5-7m/s) today becoming south (7-12kn, 4-6m/s) and then west southwest (14-19kn, 7-10m/s) tonight. North northwest winds (20-25kn, 10-13m/s) becoming north (19-24kn, 10-12m/s) Friday night. North northeast winds (17-22kn, 9-11m/s) Saturday becoming (9-14kn, 5-7m/s) Saturday afternoon. East northeast winds (9-14kn) Saturday night through Sunday night. East winds (8-13kn, 4-7m/s) Monday.

Gulfside of lower Florida Keys: Southeast winds (10kn, 5m/s) this afternoon becoming south (10kn) and then southwest (10-15kn, 5-8m/s) toward morning. Northwest to north winds (20-25kn, 10-13m/s) Friday becoming north to northeast (20-25kn) Friday night. North to northeast winds (15-25kn) Saturday. Northeast winds (15kn, 8m/s) Sunday becoming east to southeast (10-15kn) Sunday afternoon. East to southeast winds (10-15kn) Sunday night through Monday night.



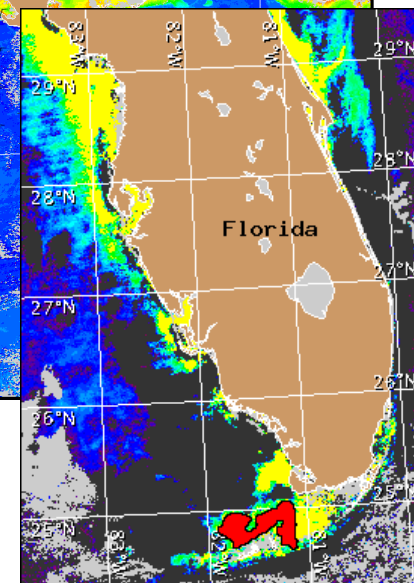
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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





Satellite chlorophyll image and forecast winds for December 21, 2012 12Z with cell concentration sampling data from December 10 to 18 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).