



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

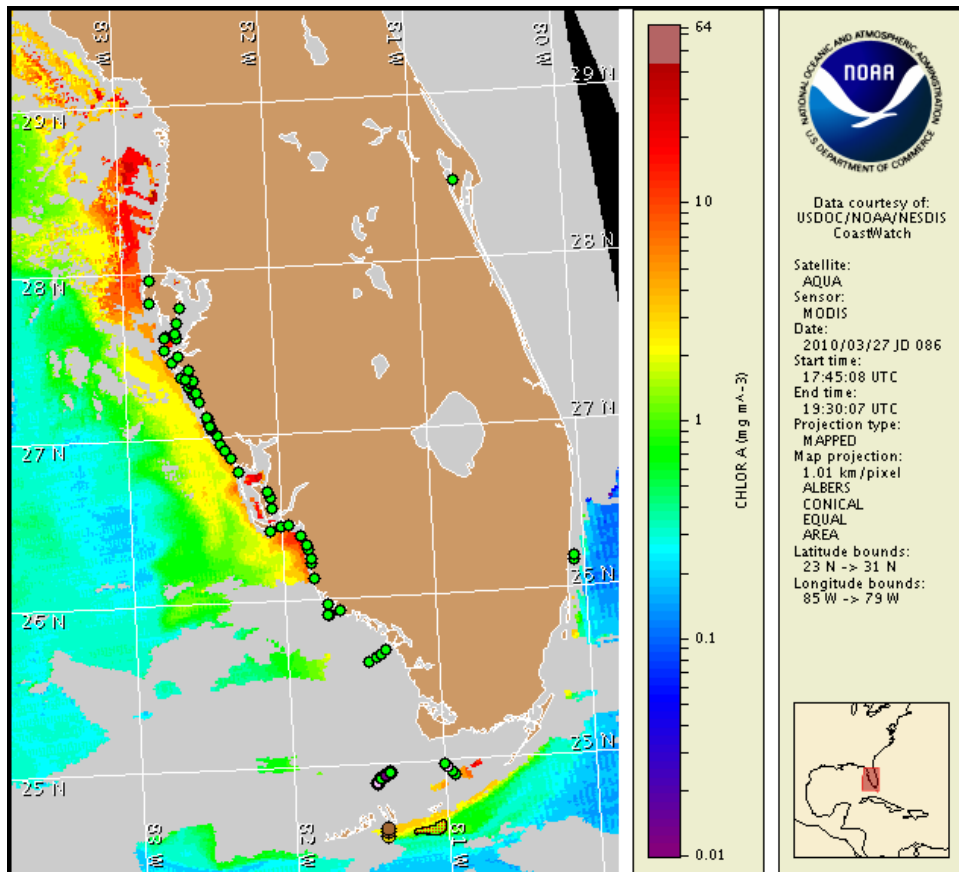
29 March 2010

NOAA Ocean Service

NOAA Satellites and Information Service

NOAA National Weather Service

Last bulletin: March 25, 2010



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from March 19 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). 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

Please note the following restrictions on all SeaWiFS imagery derived from CoastWatch.

1. Data are restricted to civil marine applications only; i.e. federal, state, and local government use/distribution is permitted.
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 alongshore in the ocean side region of the lower Florida Keys and offshore in the gulfside region of the lower Florida Keys. Patchy moderate impacts are possible today and patchy very low impacts are possible Tuesday and Wednesday along south facing coasts of the lower Florida Keys. No impacts are expected at the coast in gulfside regions of the lower Florida Keys or elsewhere in southwest Florida through Wednesday, March 31.

Analysis

Florida Keys: A harmful algal bloom has been identified approximately 0.7-4.0 miles south of the Newfound Harbor Keys in the lower Florida Keys region (up to 'low b' *Karenia brevis* concentrations; 3/26, MML). A harmful algal bloom was also identified north of the lower Florida Keys on 3/19, approximately 5.0-11.0 miles north and northeast of Harbor Key ('medium' *K. brevis* concentrations; MML). This gulfside bloom may have transported south from the Cape Sable region where up to 'medium' *K. brevis* concentrations were detected on 3/11.

Recent imagery in the Florida Keys region continues to be cloudy, limiting analysis. However, elevated chlorophyll levels ($2-3 \mu\text{g/L}$) are visible south of the lower Florida Keys, stretching from approximately $24^{\circ}32'41''\text{N } 81^{\circ}23'27''\text{W}$ northeast to $24^{\circ}39'37''\text{N } 80^{\circ}58'26''\text{W}$ (possibly as far east as 1 mile south of Lower Matecumbe Key in the upper Florida Keys region) and offshore to $24^{\circ}33'56''\text{N } 81^{\circ}4'47''\text{W}$. The full extent of this feature is not presently visible. 'Low b' *K. brevis* concentrations were identified near the westernmost coordinate listed above. Continued sampling is recommended. No recent chlorophyll information is available north of the lower Florida Keys where *K. brevis* samples were identified on 3/26.

Northwest winds will promote southward transport of the bloom in the gulfside region of the lower Florida Keys today through Tuesday. Gusty northwest winds may promote northeast to eastward transport of the bloom identified south of the lower Florida Keys today; however, northwest winds tonight through Tuesday should minimize further transport of the bloom.

Southwest Florida: Recent samples collected alongshore southwest Florida from Pinellas to northern Monroe County all indicate that *K. brevis* is not present (FWRI, MML, SCHD; 3/19-3/26).

A high chlorophyll feature ($>10 \mu\text{g/L}$) became visible in MODIS imagery on 3/27 (shown left) alongshore and offshore southern Lee County and northern Collier County. This feature is located from $26^{\circ}25'11''\text{N } 81^{\circ}57'26''\text{W}$ south to $26^{\circ}6'16''\text{N } 81^{\circ}49'59''\text{W}$ and offshore to $26^{\circ}20'33''\text{N } 82^{\circ}3'46''\text{W}$. Although this feature is likely attributable to non-harmful algal blooms and not *K. brevis*, further sampling is recommended for confirmation. Southward transport of this feature is possible through Wednesday.

Due to technical difficulties SeaWiFS imagery is currently unavailable for display. MODIS imagery is shown on this bulletin.

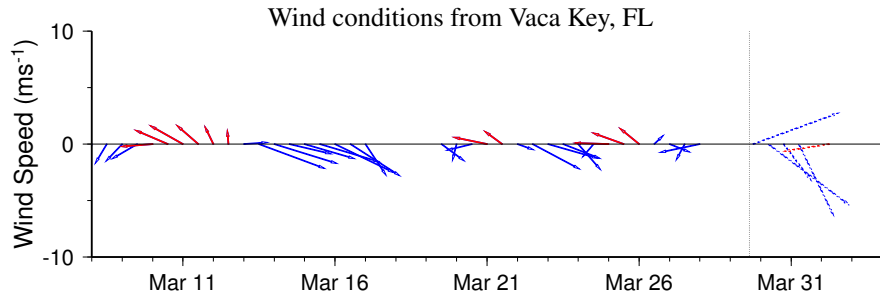
-Fisher, Derner

Wind Analysis

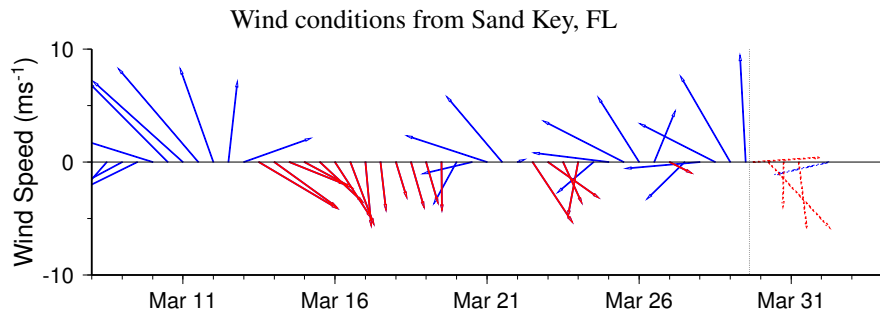
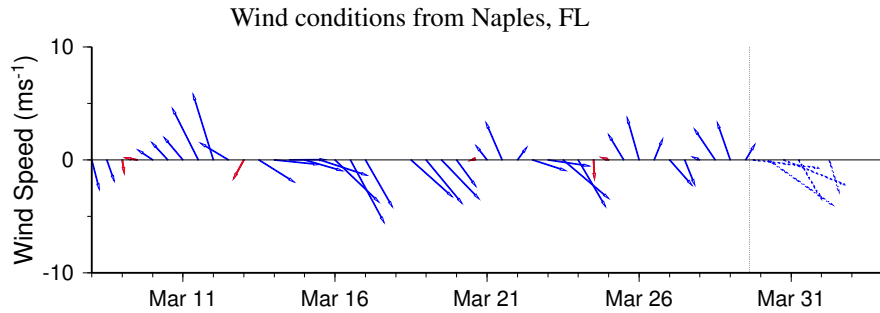
Southwest Florida: Northwest winds today (20kn, 10m/s), Tuesday (15kn, 8m/s) and Wednesday (5kn, 3m/s). Winds becoming east Wednesday night (5kn).

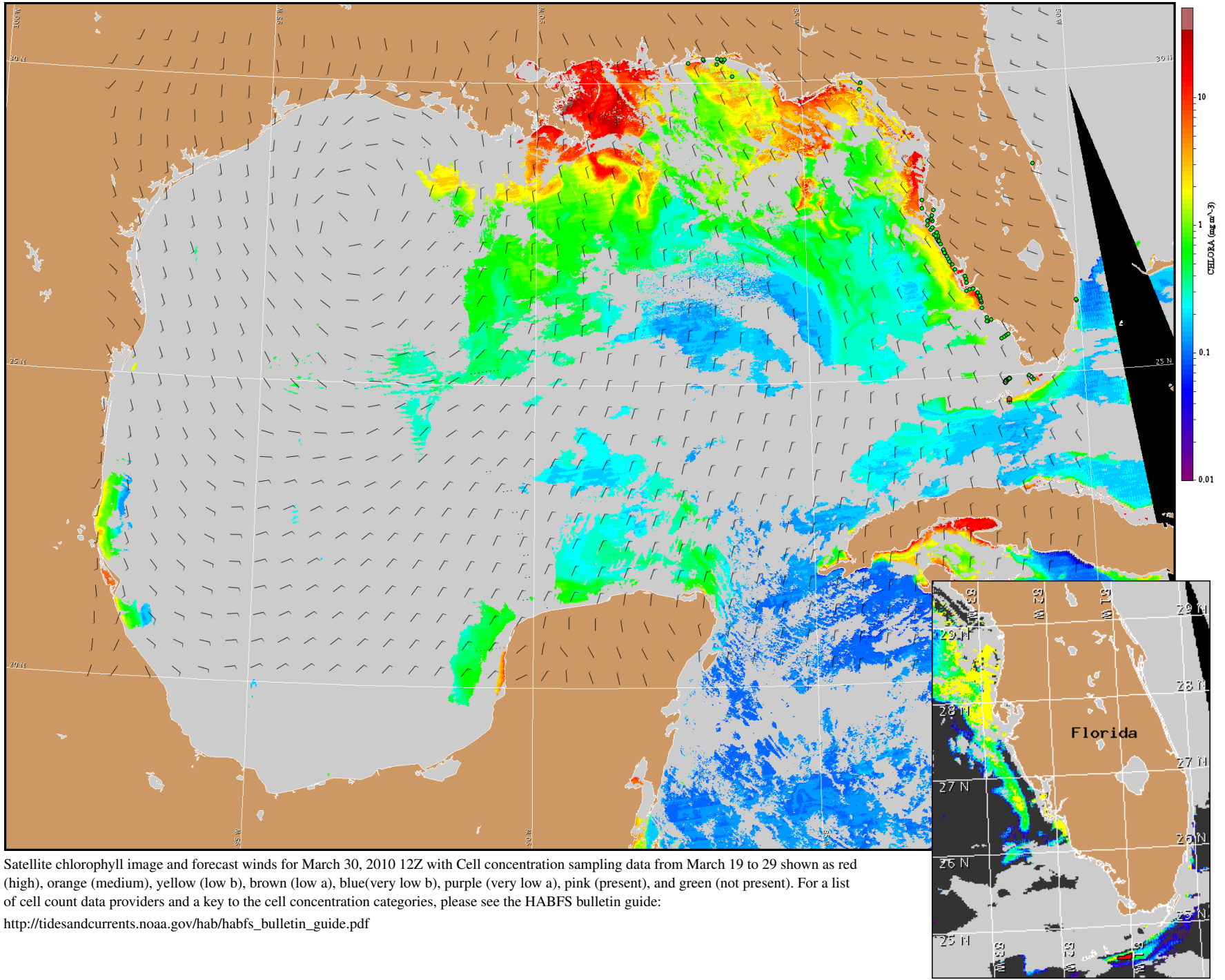
Florida Keys (gulfside): Northwest winds today (20kn, 10m/s) through Tuesday (10-15kn, 5-8m/s). Northeast winds (10kn, 5m/s) Wednesday.

Florida Keys (oceanside): South to southwest winds (15-20kn, 8-10m/s) today, shifting west to northwest (20kn, 10m/s). Northwest to north winds (10-15kn, 5-8m/s) Tuesday. Northeast winds (10-15kn) Wednesday.



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 March 30, 2010 12Z with Cell concentration sampling data from March 19 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). 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

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).