



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

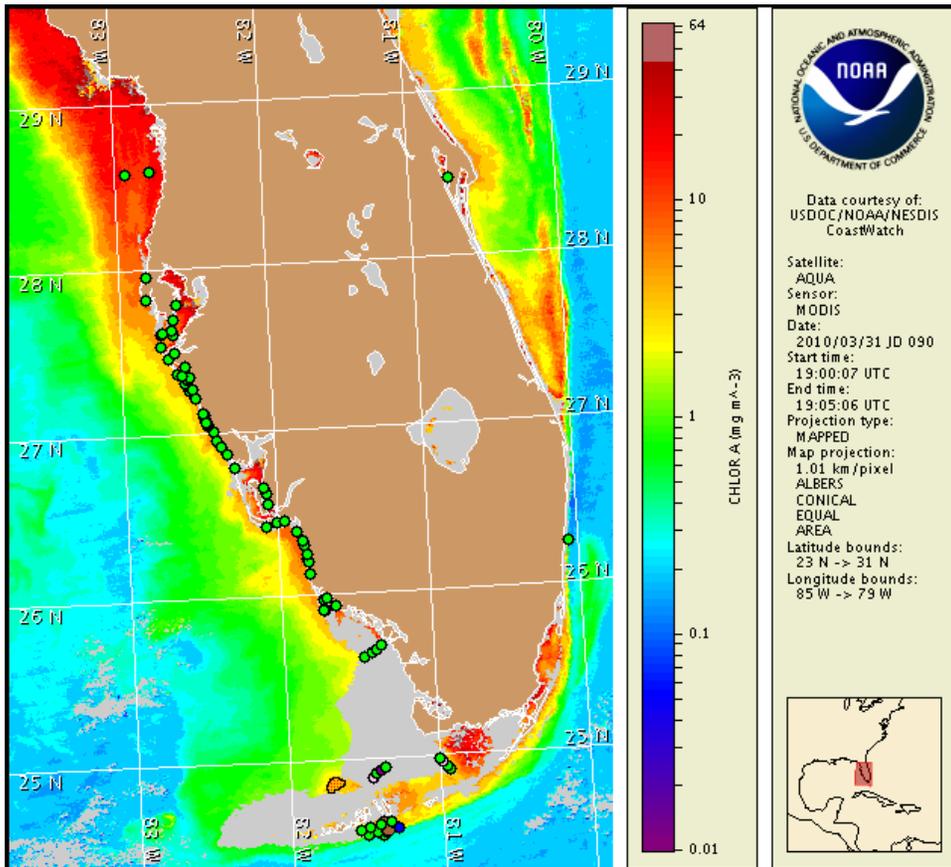
1 April 2010

NOAA Ocean Service

NOAA Satellites and Information Service

NOAA National Weather Service

Last bulletin: March 29, 2010



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from March 22 to 31 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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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 patchy harmful algal bloom continues alongshore in the ocean side region of the lower Florida Keys and offshore in the gulfside region of the lower Florida Keys. Patchy very low impacts are possible today through Sunday 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 Sunday, April 4.

Analysis

Florida Keys: A harmful algal bloom continues south of the lower Florida Keys, both alongshore and offshore. Samples collected on 3/30 detected 'very low b' to 'low a' concentrations of *Karenia brevis* approximate 4-5 miles south of the Newfound Harbor Keys and West Summerland Key (MML). An elevated chlorophyll feature ($2-3 \mu\text{g/L}$) continues to be visible in recent MODIS imagery within the sampled locations, presently extending from $24^{\circ}33'52''\text{N } 81^{\circ}19'32''\text{W}$ east to Plantation Key in the upper Florida Keys region. This feature is located primarily offshore (~4-6 miles) between the sampled region and the western edge of Long Key, then extends eastward at the coast to Plantation Key. Continued sampling is recommended.

The harmful algal bloom identified north of the lower Florida Keys on 3/19 may have dissipated or migrated westward. Samples collected on 3/29 showed 'very low a' to no *K. brevis* concentrations at the initial bloom location originally containing 'medium' *K. brevis* concentrations (MML). Recent MODIS imagery indicates that the bloom may have transported to the southwest over the past few days, and may not necessarily be dissipating. Although imagery is obscured within the sample region, an elevated chlorophyll feature ($\sim 3 \mu\text{g/L}$) is visible further west from $24^{\circ}52'11''\text{N } 81^{\circ}37'1''\text{W}$ to $24^{\circ}49'29''\text{N } 81^{\circ}48'4''\text{W}$, with maximum concentrations near $24^{\circ}50'10''\text{N } 81^{\circ}34'17''\text{W}$. Observed wind conditions at Sand Key generally support westward transport as well.

Forecasted winds favor slight northwestward transport of the bloom south of the lower Florida Keys through Sunday. Prevailing currents will likely minimize westward movement. Westward to northwestward transport of the bloom north of the lower Florida Keys is possible through Sunday.

Southwest Florida: Recent samples collected alongshore southwest Florida from Pinellas to Collier County indicate that *K. brevis* is not present (FWRI, MML; 3/29-3/31).

Chlorophyll levels in recent MODIS imagery have decreased alongshore and offshore (~6-9 miles) southern Lee and northern Collier counties but still remain elevated to $3-8 \mu\text{g/L}$. An elevated chlorophyll feature is also visible approximately 18-27 miles offshore Naples in northern Collier County, centralized at $26^{\circ}6'22''\text{N } 82^{\circ}6'53''\text{W}$. These features are likely associated with non-harmful diatom blooms that have been identified in recent samples (FWRI; 3/29-3/30), and not *K. brevis*. Variable offshore winds will likely minimize alongshore transport of these features through Sunday.

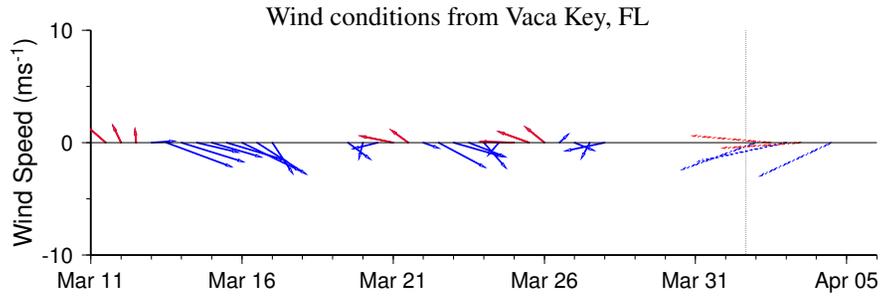
Due to technical difficulties SeaWifs imagery is currently unavailable for display. MODIS imagery is shown on this bulletin.

-Fisher, Derner

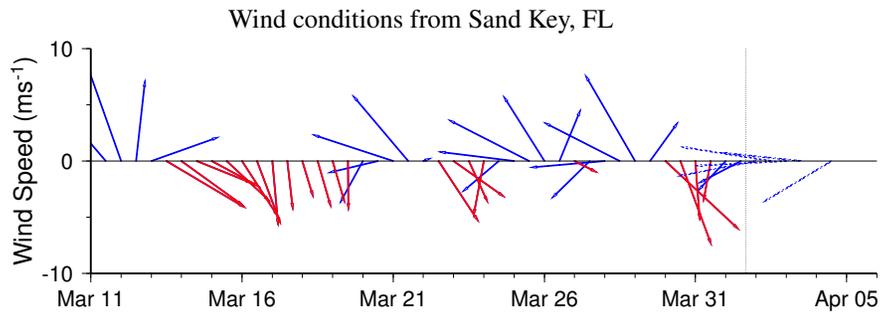
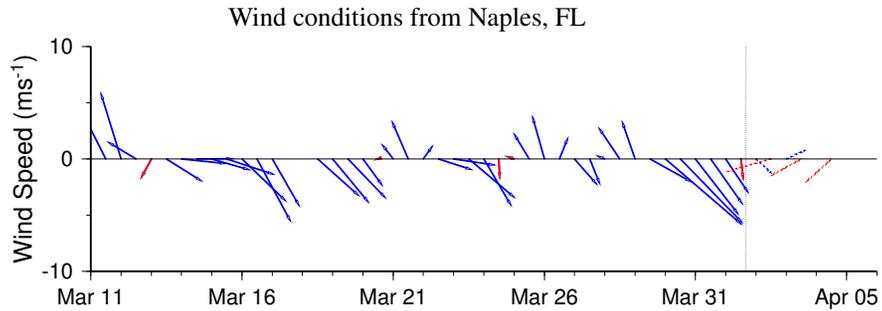
Wind Analysis

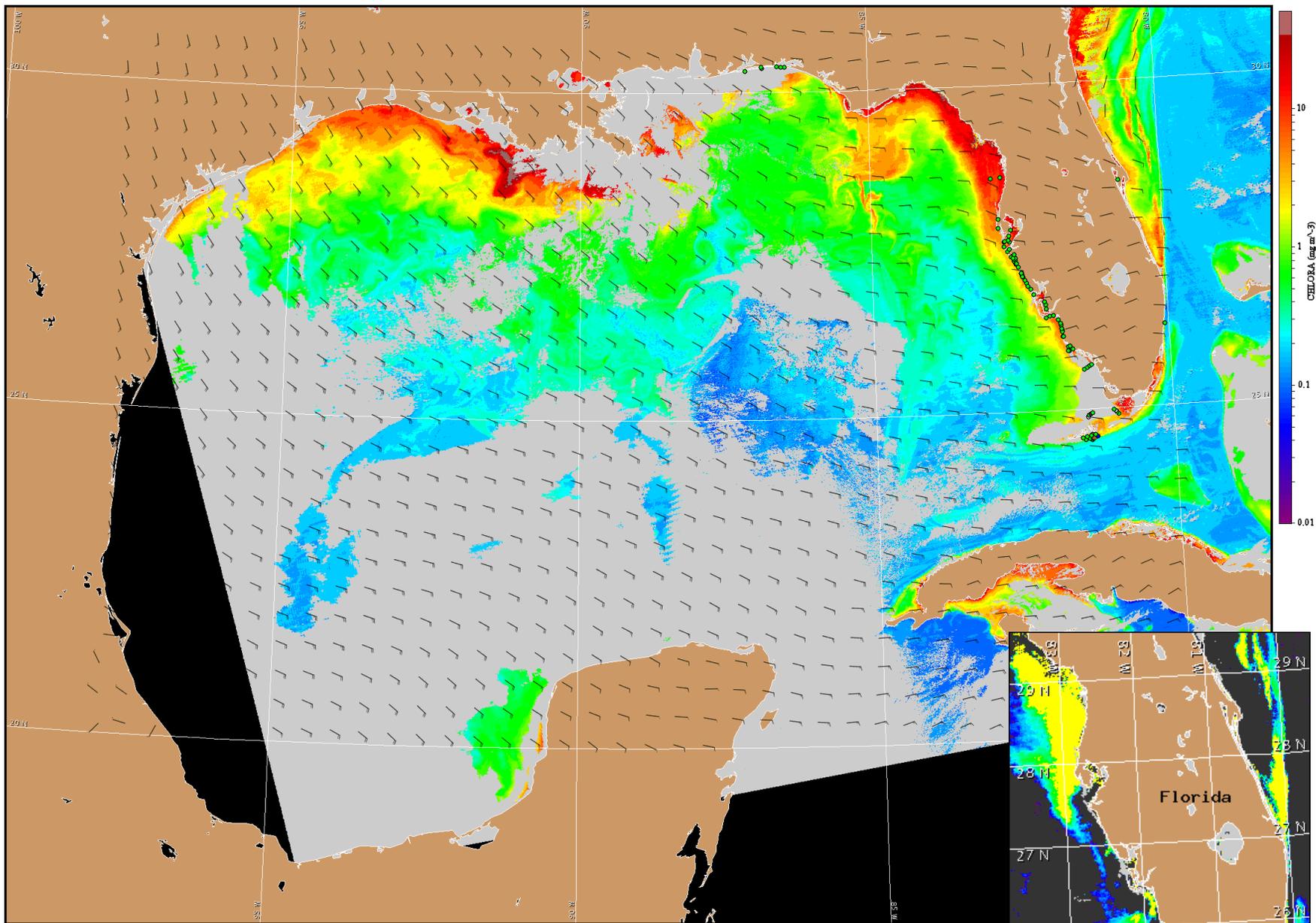
Florida Keys (gulfside and oceanside): Northeast to east winds today (gulfside: 10-15kn, 5-8m/s; oceanside: 10-20kn, 5-10m/s). East winds tonight through Sunday (gulfside: 10-15kn; oceanside: 15-20 tonight through Saturday, 10-15kn Sunday).

Southwest Florida: Northeast winds today (5-10kn, 3-5m/s). East winds Friday (5-12kn, 3-6m/s). Southeast winds Saturday (5-10kn). Northeast winds Saturday night (5-10kn). East winds Sunday, becoming variable Sunday night (5-10kn). Variable east winds today through Sunday north of Collier County.



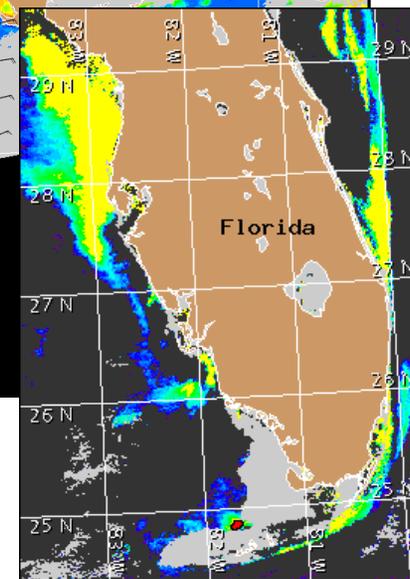
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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





Satellite chlorophyll image and forecast winds for April 2, 2010 12Z with Cell concentration sampling data from March 22 to 31 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).