



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

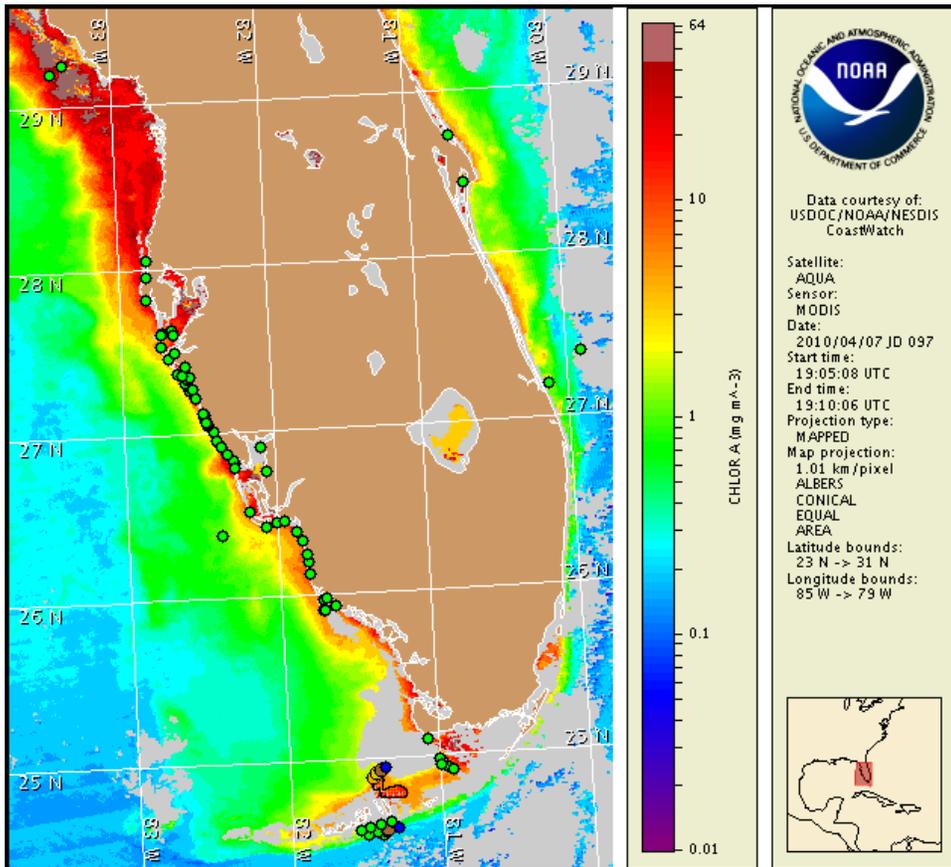
8 April 2010

NOAA Ocean Service

NOAA Satellites and Information Service

NOAA National Weather Service

Last bulletin: April 5, 2010



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from March 29 to April 7 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](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 and offshore in the ocean side region of the lower Florida Keys and offshore in the gulfside region of the lower Florida Keys. Patchy low impacts are possible today and Friday, and patchy very low impacts are possible Saturday and Sunday, along south facing coasts of the lower Florida Keys. No impacts are expected at the coast in the gulfside regions of the lower Florida Keys or elsewhere in southwest Florida through Sunday, April 11.

## Analysis

**Florida Keys:** A harmful algal bloom continues both alongshore and offshore south of the lower Florida Keys. No new samples have been received south of the lower Keys, where up to 'low a' *Karenia brevis* concentrations were identified south of Newfound Harbor Keys on 3/30 (MML). Imagery along the coast in the lower Keys remains cloudy, limiting analysis. Elevated chlorophyll is visible surrounding the lower Florida Keys, with levels of approximately 2  $\mu\text{g/L}$  just offshore south of Key West and Stock Island, wrapping around the islands in patches (2-5  $\mu\text{g/L}$ ) on the gulfside of Key West, Stock Island, and north of Big Coppitt Key. It is possible that the harmful algal bloom identified south of the Newfound Harbor Keys may have transported westward south of the Key West area. Observed wind conditions in the lower Keys generally support westward transport as well. Continued sampling south of the lower Keys is recommended.

No new samples have been received for the harmful algal bloom identified north of the lower Florida Keys, where up to 'medium' *K. brevis* concentrations were identified in an area 5-10 miles north-northeast of Upper Harbor Key on 3/31 (MML). Imagery indicates an elevated chlorophyll (4-7  $\mu\text{g/L}$ ) feature throughout this sample region centered at 24°51'56"N 81°25'55"W, extending outward with an approximately 3 mile radius in all directions. A patch of elevated to high chlorophyll (6 to >10  $\mu\text{g/L}$ ) is also visible just southeast of this feature, northeast of Big Pine Key, centered at 24°47'46"N 81°18'57"W, extending approximately 12 miles from west to east and 5 miles from north to south. As satellite imagery is partially obscured by clouds in this region, it's possible that the extents of these features are larger than indicated. Continued sampling throughout this region is recommended.

Variable wind conditions throughout the remainder of the week in the lower Florida Keys minimize the potential for bloom transport.

**Southwest Florida:** Recent samples collected alongshore southwest Florida from Pinellas to Monroe County indicate that *K. brevis* is not present (FWRI, MML, SCHD; 3/29-4/6).

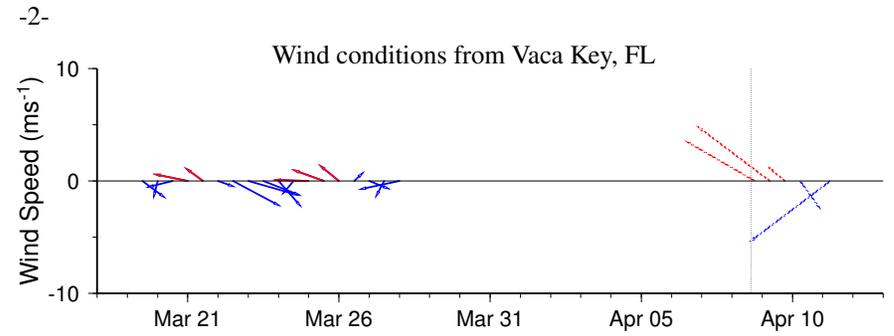
Chlorophyll levels alongshore and offshore southern Lee and northern Collier remain elevated (3-8  $\mu\text{g/L}$ ) along the coast and extending to approximately 11 miles offshore Naples. High chlorophyll (>10  $\mu\text{g/L}$ ) is also visible extending into central and northern Lee County, including inside the bay regions. Elevated to high chlorophyll (3 to >10  $\mu\text{g/L}$ ) levels continue northward, stretching alongshore from Cayo Costa in Charlotte County to southern Manatee County, the Tampa Bay area, and alongshore and offshore Pinellas County. Much of the current elevated to high chlorophyll levels along the coast of southwest Florida are associated with non-harmful algal blooms that have been

identified in recent samples (FWRI 3/29-4/6). Variable wind conditions over the next several days at the coast in southwest Florida minimize the potential for feature transport through Sunday.

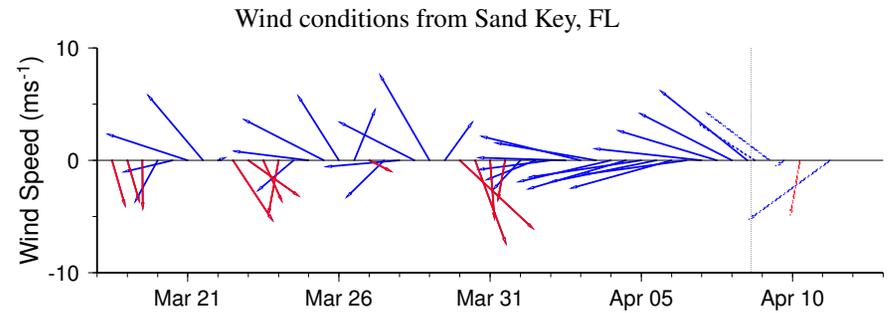
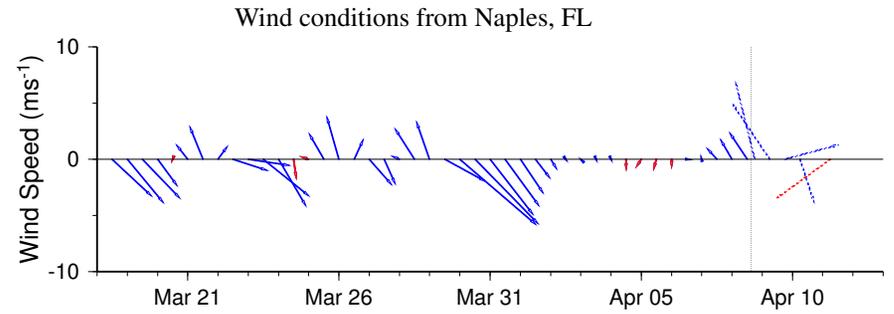
Due to technical difficulties SeaWiFS imagery is currently unavailable for display. MODIS imagery is shown on this bulletin.

Derner, Fisher

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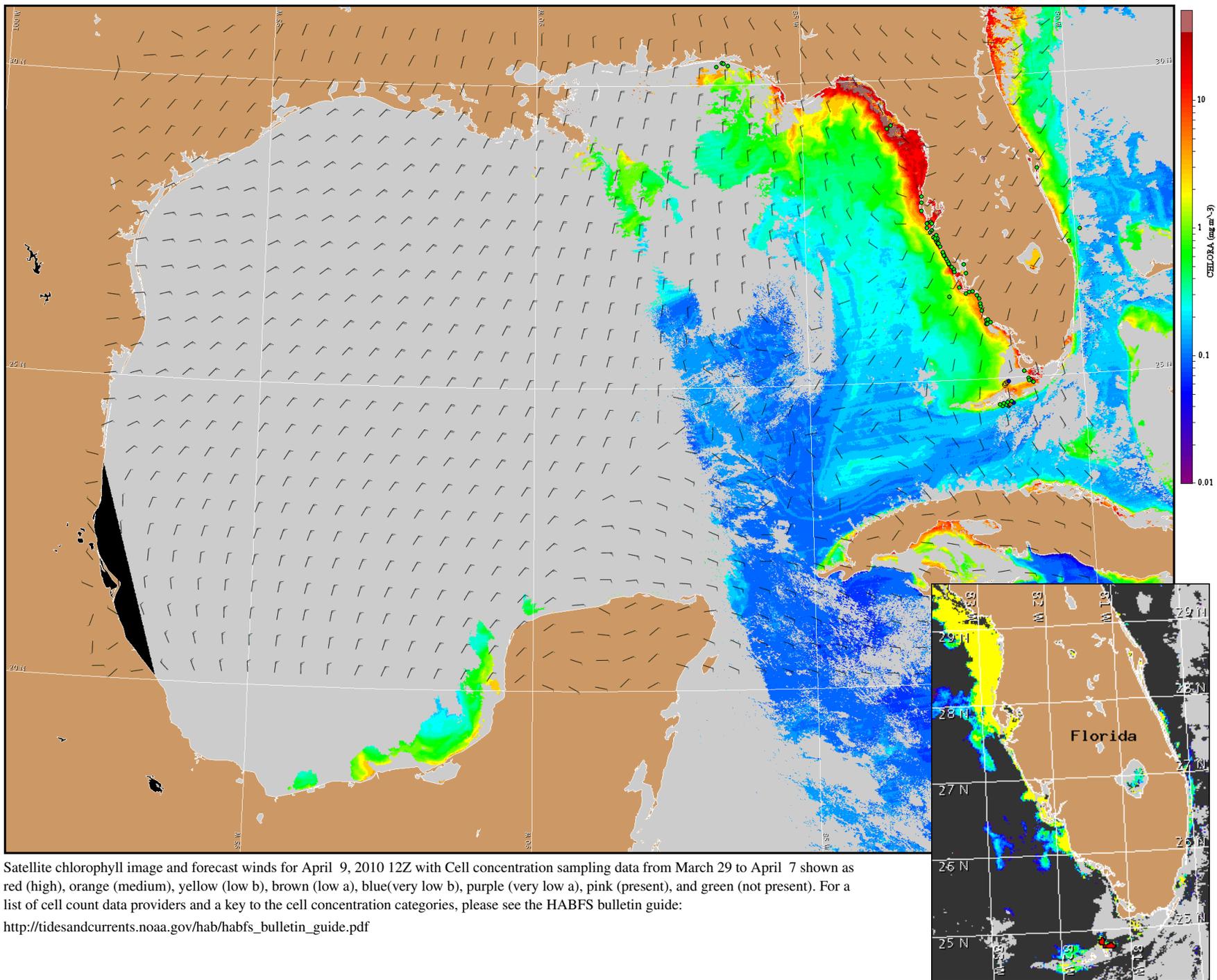
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



## Wind Analysis

Florida Keys: Southeast winds (10-15kn, 5-8m/s) today. South to southwest winds (10kn, 5m/s) Friday, shifting to west to northwest (10-15kn) Friday afternoon and night. Northeast winds (15kn, 8m/s) Saturday. Northeast to east winds (15-20kn, 8-10m/s) Sunday.

Southwest Florida: South winds (10-15kn, 5-8m/s). Southwest winds (10kn, 5m/s) Friday, becoming north (15-20kn, 8-10m/s) in the afternoon. Northeast winds Saturday (10-20kn, 5-10m/s), becoming east (15kn, 8m/s) Saturday night. Northeast winds Sunday (5-15kn, 3-8m/s).



Satellite chlorophyll image and forecast winds for April 9, 2010 12Z with Cell concentration sampling data from March 29 to April 7 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).