



Gulf of Mexico Harmful Algal Bloom Bulletin

1 March 2007

NOAA Ocean Service

NOAA Satellites and Information Service

Last bulletin: February 26, 2007

Conditions Report

A harmful algal bloom has been identified south of the Lower and Middle Keys in Monroe County. Today through Saturday, patchy high impacts are possible in the oceanside Lower Keys region and patchy very low impacts are possible in the oceanside Middle Keys region. Patchy low impacts are possible on Sunday in the oceanside Lower Keys region. No other impacts are expected through Sunday in southwest Florida.

Analysis

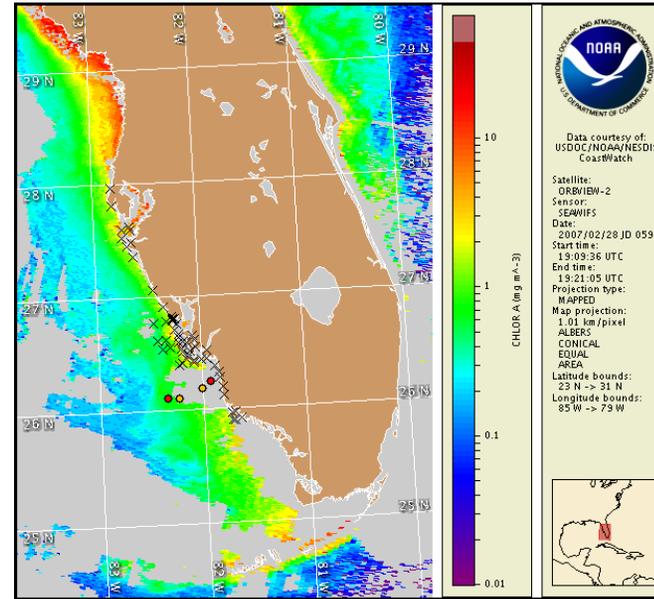
A harmful algal bloom continues to persist in patches south of the Lower and Middle Keys. High concentrations of *K. brevis* were identified south of Key West earlier this week on 2/28 near Western Sambos (MML). Several reports of discolored water have recently been received in the same general region as this high concentration. Very low concentrations of *K. brevis* were also identified this week approximately 5nm south of Sugarloaf Key (MML, 2/27). Satellite imagery has been obscured by clouds throughout much of coastal Florida, including the Keys region south of Key West. Chlorophyll levels continue to be elevated south of both the Lower and Middle Keys, with maximum chlorophyll presently visible south of the Lower Keys at 24°36.1'N 81°26.2'W (4.7µg/L) and 24°35.1'N 81°28.7'W (3.2µg/L). Chlorophyll levels range between 3-4µg/L in patches south of the Middle Keys and westernmost Upper Keys from the shoreline to approximately 5nm offshore, with slightly higher levels existing just south and southeast of Duck Key. Sampling is recommended. Southerly directed winds today through Saturday may increase the potential for impacts on the oceanside Lower and Middle Keys. Onshore and easterly transport of the bloom is possible south of the Lower and Middle Keys through Saturday. Conditions are favorable for upwelling and intensification beginning on Sunday.

Sampling continues to confirm the absence of *K. brevis* along the SW Florida coast. However, very low to low concentrations of *K. brevis* have been confirmed 10-29nm offshore Collier County (FWRI, 2/22). Present satellite imagery is obscured in this region. A band of elevated chlorophyll (~2µg/L) was visible in this region in 2/22 imagery. Elevated chlorophyll levels remain around 2µg/L, and were located out to approximately 17nm offshore in 2/25 imagery. Results of a wind transport model suggest that features in this region may have migrated slightly north since 2/25. Slight onshore transport of features is possible today and Friday, followed by southerly transport through Sunday.

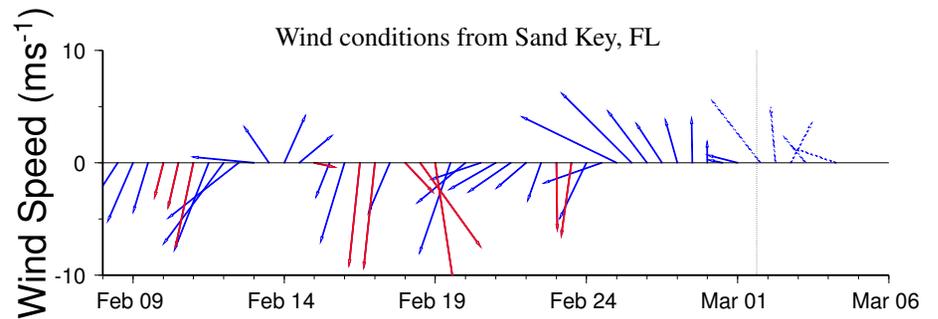
Please note the following restrictions on all SeaWiFS imagery derived from CoastWatch.

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.

~Fisher, Bronder



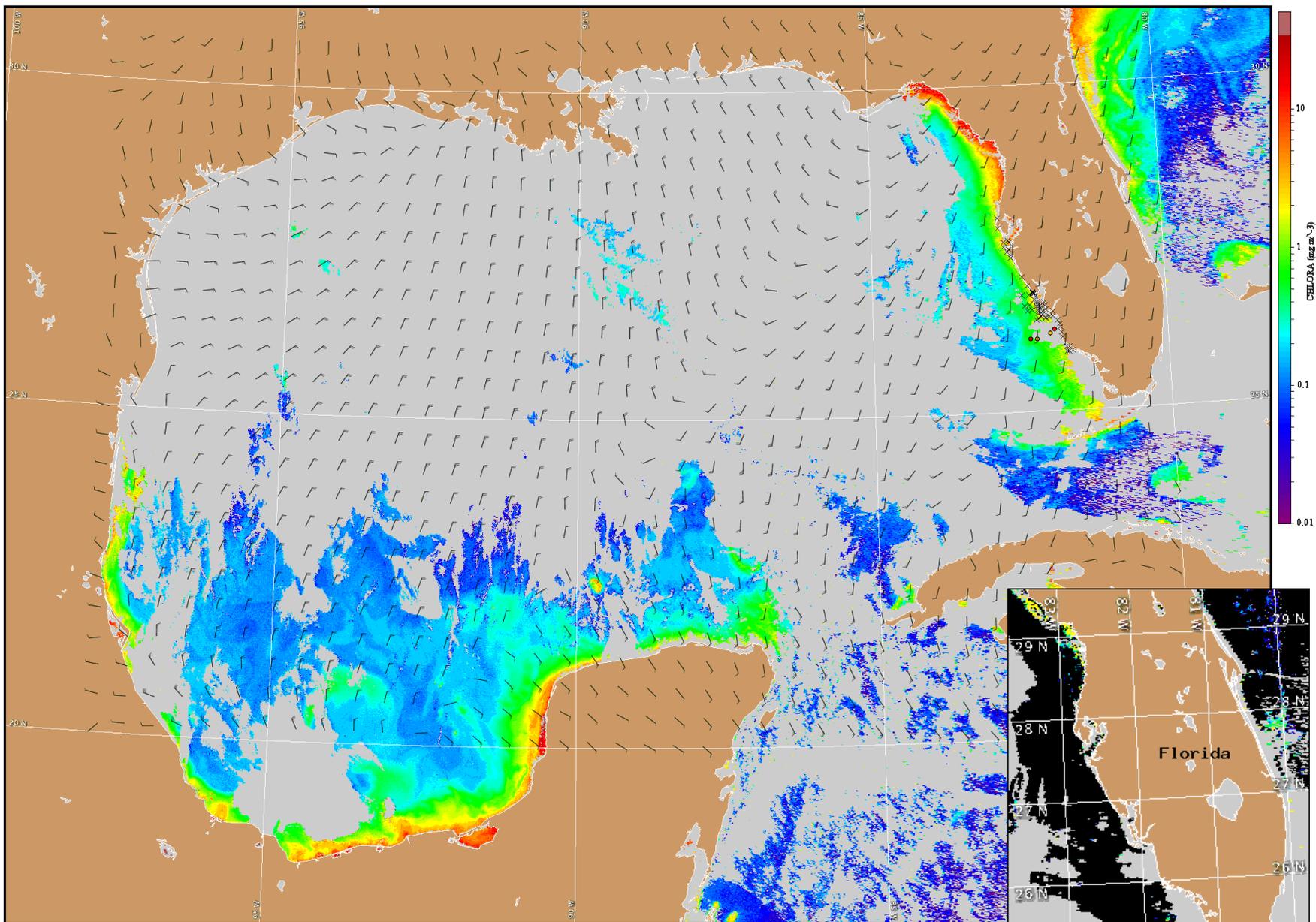
Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from February 19-27 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the the HABFS bulletin guide: http://www.csc.noaa.gov/crs/habf/habfs_bulletin_guide.pdf



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.

FL Keys: Southeast to south winds today (15kts, 8m/s). South winds Friday (10-15kts, 5-8m/s). Southwest winds Saturday becoming variable (10kts, 5m/s). Stronger north winds expected on Sunday (20kts, 10m/s and gusty), shifting north to northeast Monday.

SW Florida: South winds today(10-15kts, 5-8m/s), shifting southwest Friday (10kts, 5m/s). Variable winds Saturday (5-10kts, 3-5m/s) becoming northerly at 15kts (8m/s), then northeasterly Saturday night. North winds expected Sunday (15kts) and Monday.



Satellite chlorophyll image and forecast winds for March 2, 2007 12Z with cell concentration sampling data from February 19-27 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (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://www.csc.noaa.gov/crs/habf/habfs_bulletin_guide.pdf

Verified HAB areas shown in red. Other bloom areas shown in yellow (see p. 1 analysis for interpretation).

