



Gulf of Mexico Harmful Algal Bloom Bulletin

3 September 2004

National Ocean Service/NCCOS and CSC

NESDIS/CoastWatch and NDBC

Last bulletin: August 30, 2004

Analysis

SW Florida: The previously reported (non-harmful) bloom persists from Tampa to Naples, and appears to have intensified. Chlorophyll values are high ($> 10 \mu\text{g/L}$), and in some cases extremely high (up to $30 \mu\text{g/L}$) offshore of Charlotte Beach (around $26^{\circ}40'N$), potentially leading to reports of discolored water. Chlorophyll levels are consistently over $3 \mu\text{g/L}$ throughout the rest of the bloom. Cell counts Monday and Tuesday at Clearwater and Naples revealed no *Karenia*, consistent with previous analyses. Passage of Hurricane Frances to the north of Tampa Bay will lead to strong northerlies and likelihood for new resuspension that may further intensify the coastal non-HAB bloom.

The probable diatom bloom offshore of Cape Romano has intensified. Cell counts Monday and Tuesday indicated *Karenia* is not present in this bloom.

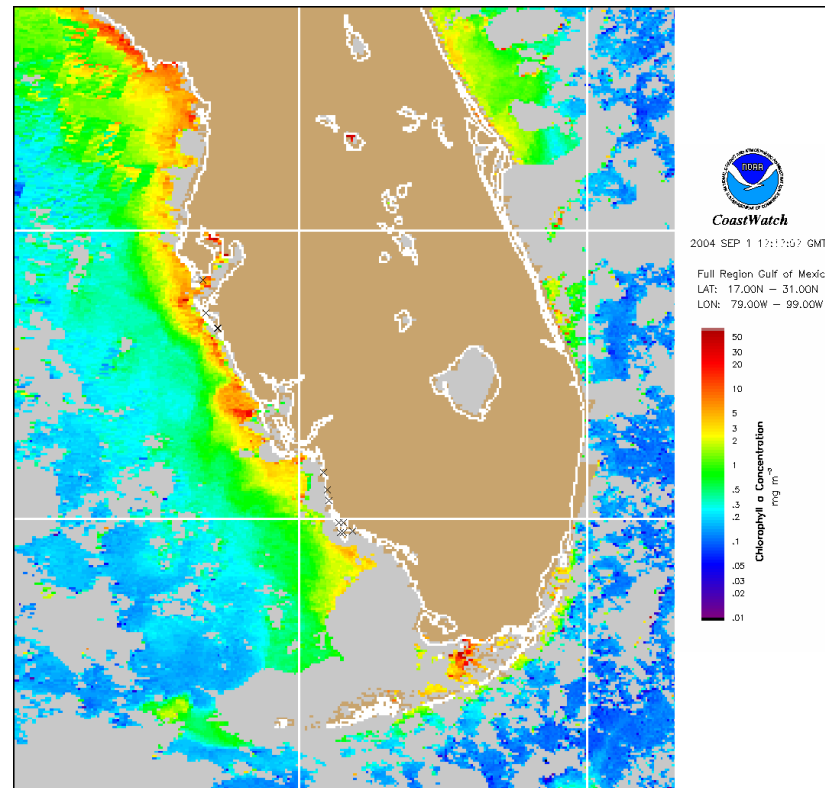
E. Florida: Patchy regions of elevated chlorophyll in the Melbourne/Ft. Pierce area. Except for plume that has been present around Ft. Pierce Inlet, no association of high chl with the coastal fish kill has been evident. (State reported *Pyrodinium* along the coast, but it has not previously caused fish kills.) State field samples have associated the fish kill in Indian River lagoon with *Takayama* sp., a toxic dinoflagellate.

Hurricane impact on HAB initiation is mostly guesswork. The guess is that insufficient upwelling will occur to promote development of *Karenia* blooms.

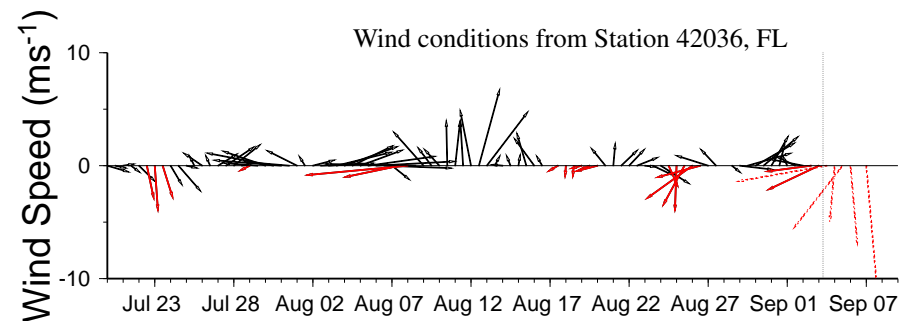
-- Stumpf, Stolz, Fenstermacher

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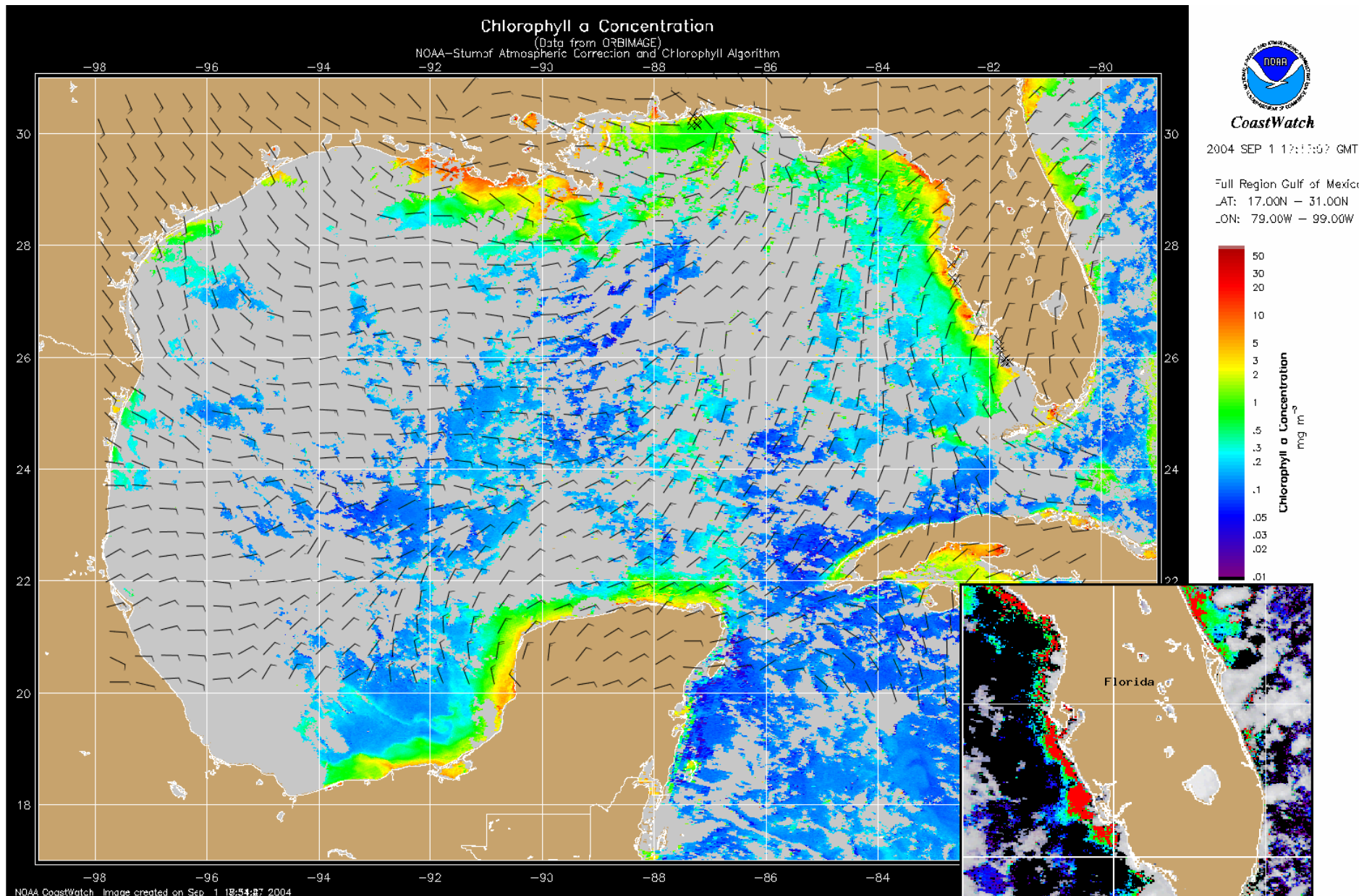


Chlorophyll concentration from satellite with possible HAB areas shown by red polygon(s). Cell concentration sampling data from August 22, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).

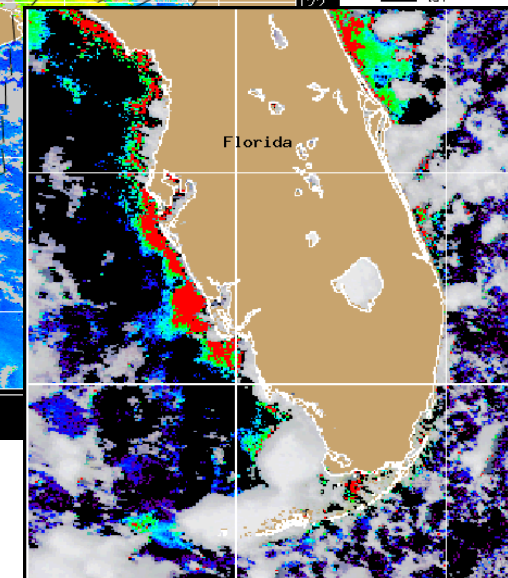


Wind speed and direction are averaged over 12 hours from measurements made on buoys. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

SW coast: Strong northerly winds through Saturday shifting to west and southwesterly Sunday. Hurricane conditions possible Friday night on east coast.



Chlorophyll concentration from satellite and forecast winds for September 4, 2004 00Z with cell concentration sampling data from August 22, 2004 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).



Blooms shown in red (see p. 1 analysis and image for interpretation)

Wind conditions from Lake Worth, FL

