



Gulf of Mexico Harmful Algal Bloom Bulletin

13 December 2004

National Ocean Service

National Environmental Satellite, Data, and Information Service

Last bulletin: December 9, 2004

Conditions:

A harmful algal bloom has been identified south of Cape Romano and west of Cape Sable. Fish and dolphin mortalities west of Shark River were reported last week. Samples taken between December 6 and 8 showed medium concentration of the harmful algae *Karenia Brevis* 17 miles west of Cape Sable, and very low concentration at Caxambas Pass, near Marco Island. Impacts on the coast are expected to be low through Thursday.

Analysis:

Some of the recent satellite images have been obscured by clouds. Imagery indicates that the HAB has moved slightly southeast, and is merging with the *Rhizosolenia* bloom south of it at 81°50'W, 25°N. The southeastern edge of the HAB is at 81°33'W, 25°10'N. Chlorophyll concentration at 81°42'W, 25°16'N is above 4 $\mu\text{g/L}$. Samples from December 8 show medium concentration west of Cape Sable at 25.269267°N, 81.484983°W.

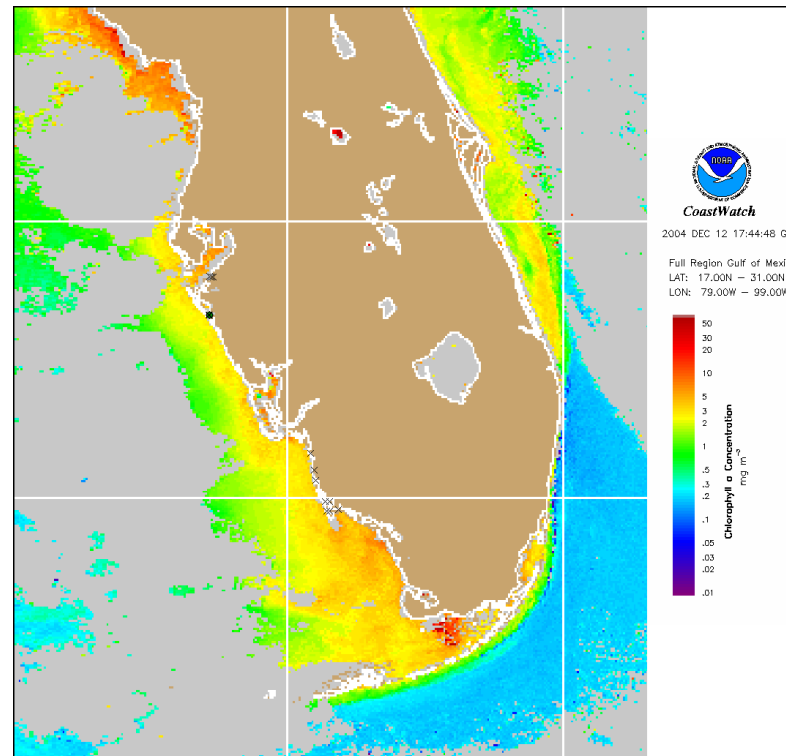
Imagery indicates another high chlorophyll feature on the eastern edge of the HAB, which is possibly an extension of the HAB. The center of this feature is at 81°26'W, 25°33'N. Chlorophyll concentration at 81°21'W, 25°39'N is above 8 $\mu\text{g/L}$.

Southward transport of the HAB is likely through Thursday.

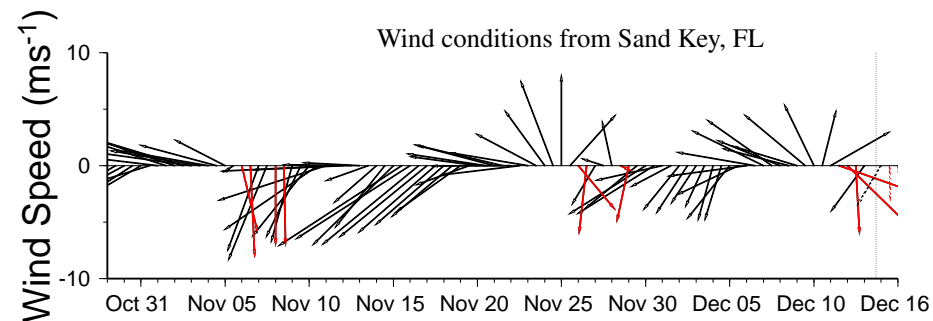
Bronder, Stolz

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3. There are restrictions on Internet/Web/public posting of these data.
4. Image products may be published in newspapers. Any other publishing arrangements must receive OrbImage approval via the CoastWatch Program.

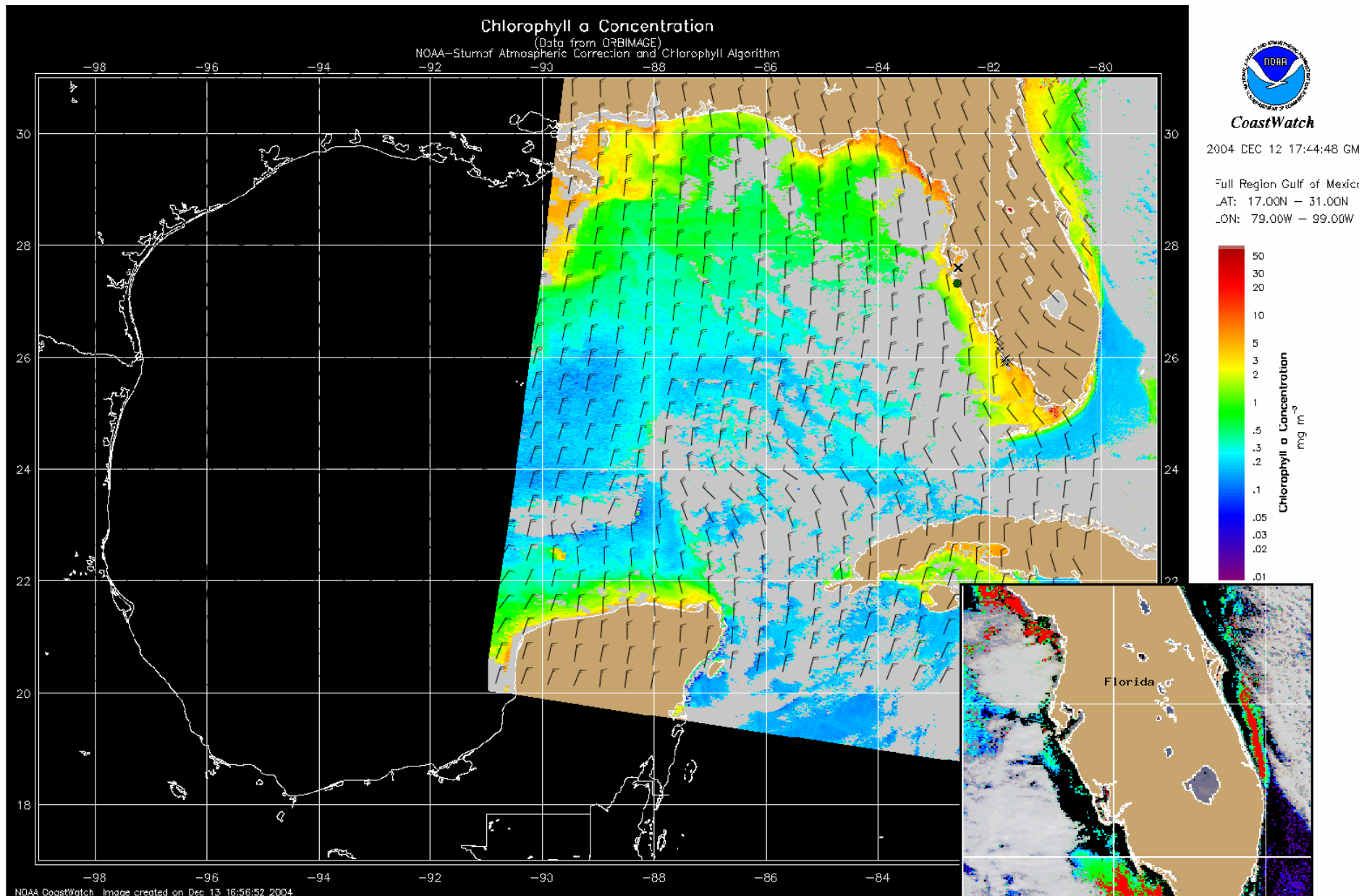


Chlorophyll concentration from satellite with possible HAB areas shown by red polygon(s). Cell concentration sampling data from November 30, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).

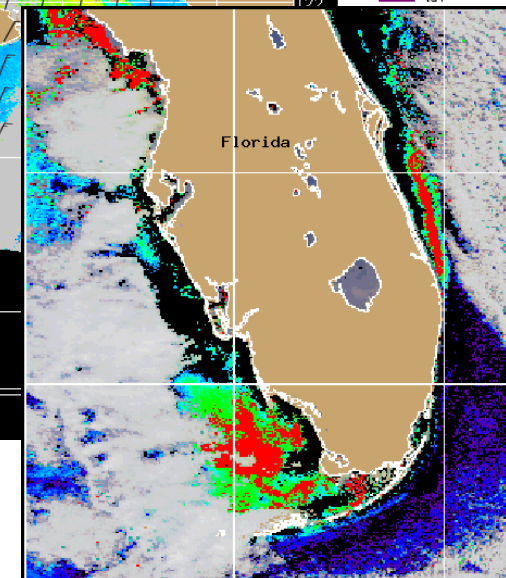


Wind speed and direction are averaged over 12 hours from measurements made on buoys. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right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

Winds have been rotating clockwise from easterly to northeasterly over the past week. The forecast calls for northwesterly wind tonight (5-10 knots, 3-5 meters/second), northerly tomorrow (15-20 knots, 8-10 meters/second), northerly to northeasterly tomorrow night and Wednesday (15-20 knots, 8-10 meters/second), and northeasterly Wednesday night and Thursday (15-20 knots, 8-10 meters/second).



Chlorophyll concentration from satellite and forecast winds for December 14, 2004 18Z with cell concentration sampling data from November 30, 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)

