



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

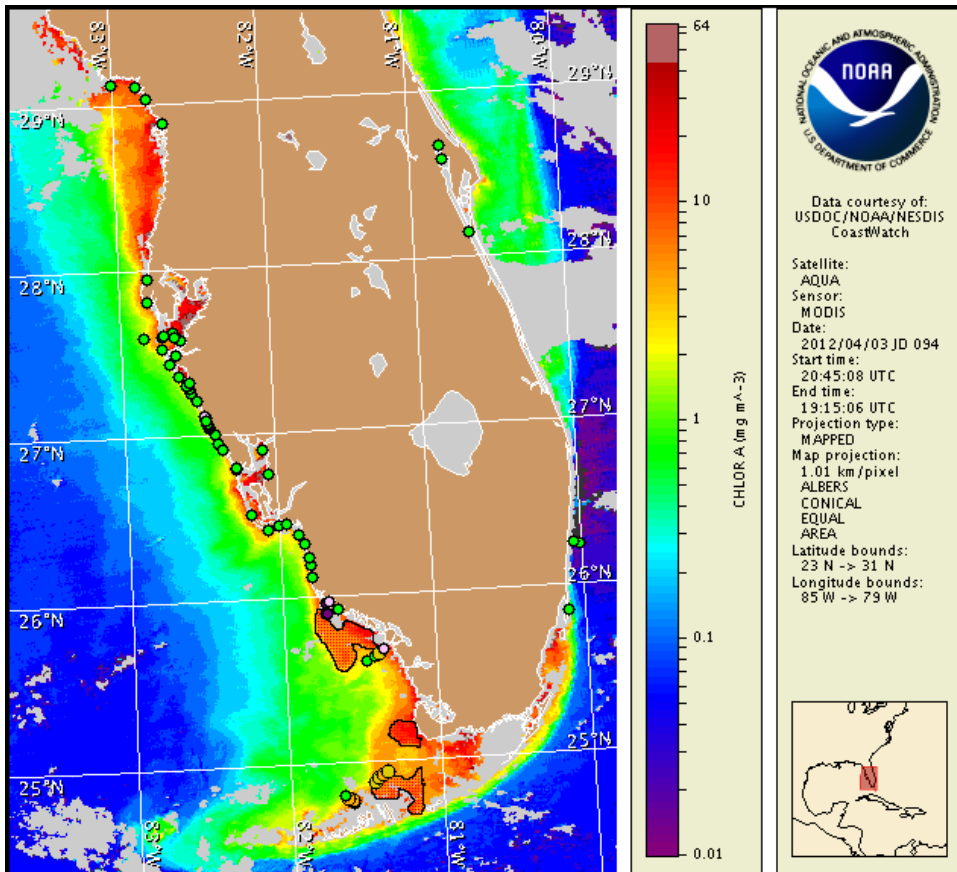
Thursday, 05 April 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, April 2, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from March 26 to April 4 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 HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habofs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:
<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

A patchy harmful algal bloom is present in northern Monroe County and offshore the Gulf side region of the Lower Florida Keys. Patchy moderate impacts are possible in northern Monroe County today and Friday, with patchy very low impacts possible on Saturday and Sunday. Patchy very low impacts are possible in the Gulf side region of the lower Florida Keys today, with patchy moderate impacts possible Friday and Saturday, and patchy high impacts possible on Sunday. No additional impacts are expected alongshore southwest Florida today through Sunday, April 8.

Analysis

Southwest Florida: A harmful algal bloom has been re-identified in the Pavilion Key region of northern Monroe County where a bloom was last identified on 2/2 (MML). Two samples collected 1-3 miles offshore southwest of Pavilion Key on 3/27 indicate background to 'low b' *Karenia brevis* concentrations (MML). Several samples collected earlier this week also identified background to 'very low a' concentrations throughout the Marco Island region of southern Collier County, including South Marco Beach, Big Marco Pass, and Caxambas Pass (4/2; CCPCPD, FWRI). No *K. brevis* was identified in the Venice Beach area of Sarasota County, where 'very low' *K. brevis* concentrations were reported offshore South Venice on 3/27 (MML). No additional *K. brevis* has been identified alongshore from Pinellas to Collier counties (3/27-4/3; CCPCPD, FWRI, MML). Additional sampling information can be obtained through FWRI at <http://myfwc.com/research/redtide/events/status/statewide/>.

A large elevated chlorophyll feature is visible in recent MODIS imagery (4/3, shown left) alongshore and offshore southern Collier County and northern Monroe from Clam Pass to approximately 22 miles south of Cape Romano. This same feature extends approximately 9 miles west of Cape Romano to the north and is located within the Pavilion Key region to the south where 'low' *K. brevis* concentrations were recently identified. Continued sampling is recommended. Recent imagery also continues to indicate elevated to high chlorophyll levels (8 to $>10\mu\text{g/L}$) alongshore Cape Sable and extending west up to 12 miles. Continued sampling is highly recommended. Imagery does not indicate a decrease in chlorophyll levels in this region since 'medium' *K. brevis* concentrations were last identified here.

Forecasted winds will increase the potential for impacts at the coast today and Friday. Bloom transport will likely be minimal through Sunday.

Florida Keys: Several samples received from the Keys this week identified *K. brevis* north of the Lower Florida Keys. 'Medium' *K. brevis* concentrations were identified 3-6 miles north of Sawyer Key on 3/27, as well as 5-11 miles north to northeast of Harbor Key on 4/2, where several 'low b' samples were also identified (4/2; MML).

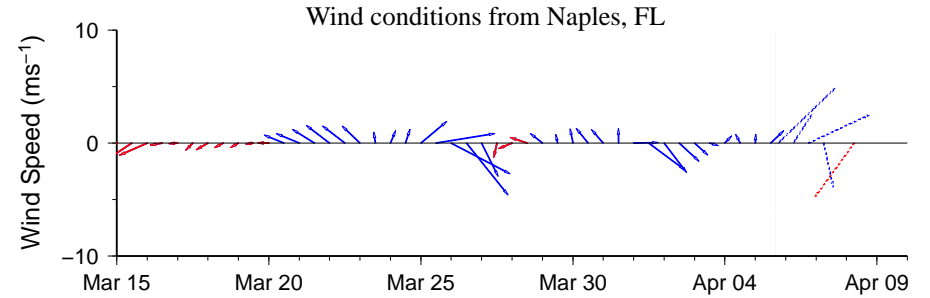
An elevated chlorophyll feature is visible in recent MODIS imagery north of the Lower Keys, including approximately 6-12 miles northeast of the Content Key (Harbor Key) area where low to medium concentrations of *K. brevis* have been reported. This feature stretches north in patches to a much higher chlorophyll feature that is visible alongshore and offshore Cape Sable (reported above for southwest Florida). Elevated chlorophyll ($3-6\mu\text{g/L}$) also remains visible throughout the Gulfside Lower Keys region, with

distinctly high chlorophyll patches ($>10\mu\text{g/L}$) less than 1 mile northwest of Key West at $24^{\circ}36'4''\text{N}$ $81^{\circ}48'26''\text{W}$ and in the eastern Marquesas Keys region. Very slightly elevated chlorophyll ($<2\mu\text{g/L}$) is also visible in the Dry Tortugas region where reports of reddish discolored water have been received. Continued sampling throughout the Lower Keys region is recommended as confirmed *K. brevis* continue to transport south from the southwest Florida coast.

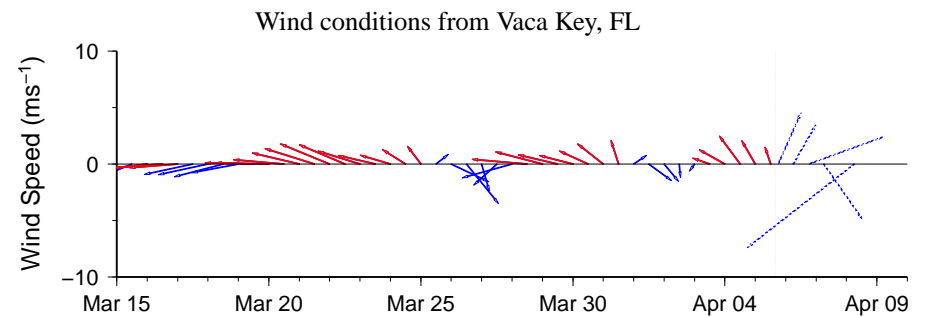
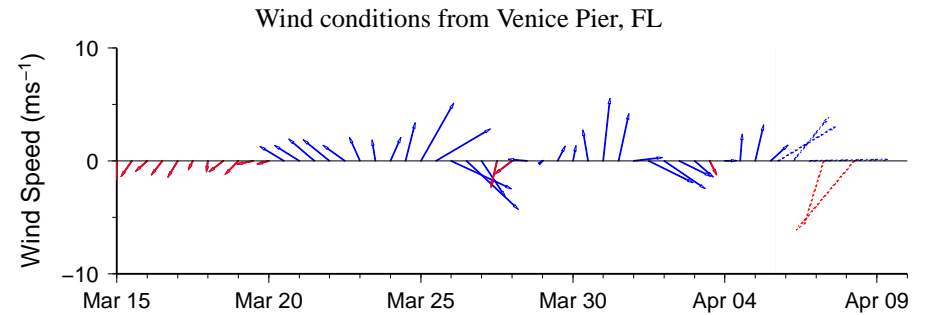
Forecasted winds may transport the bloom further west and possibly closer to shore on Saturday and Sunday.

Derner, Fisher, Yang

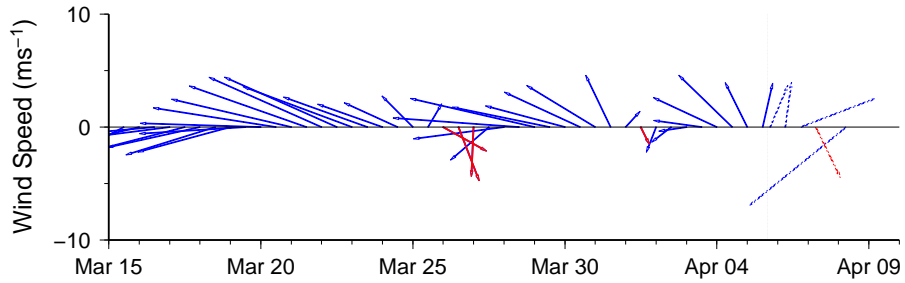
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Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical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



Wind conditions from Sand Key, FL

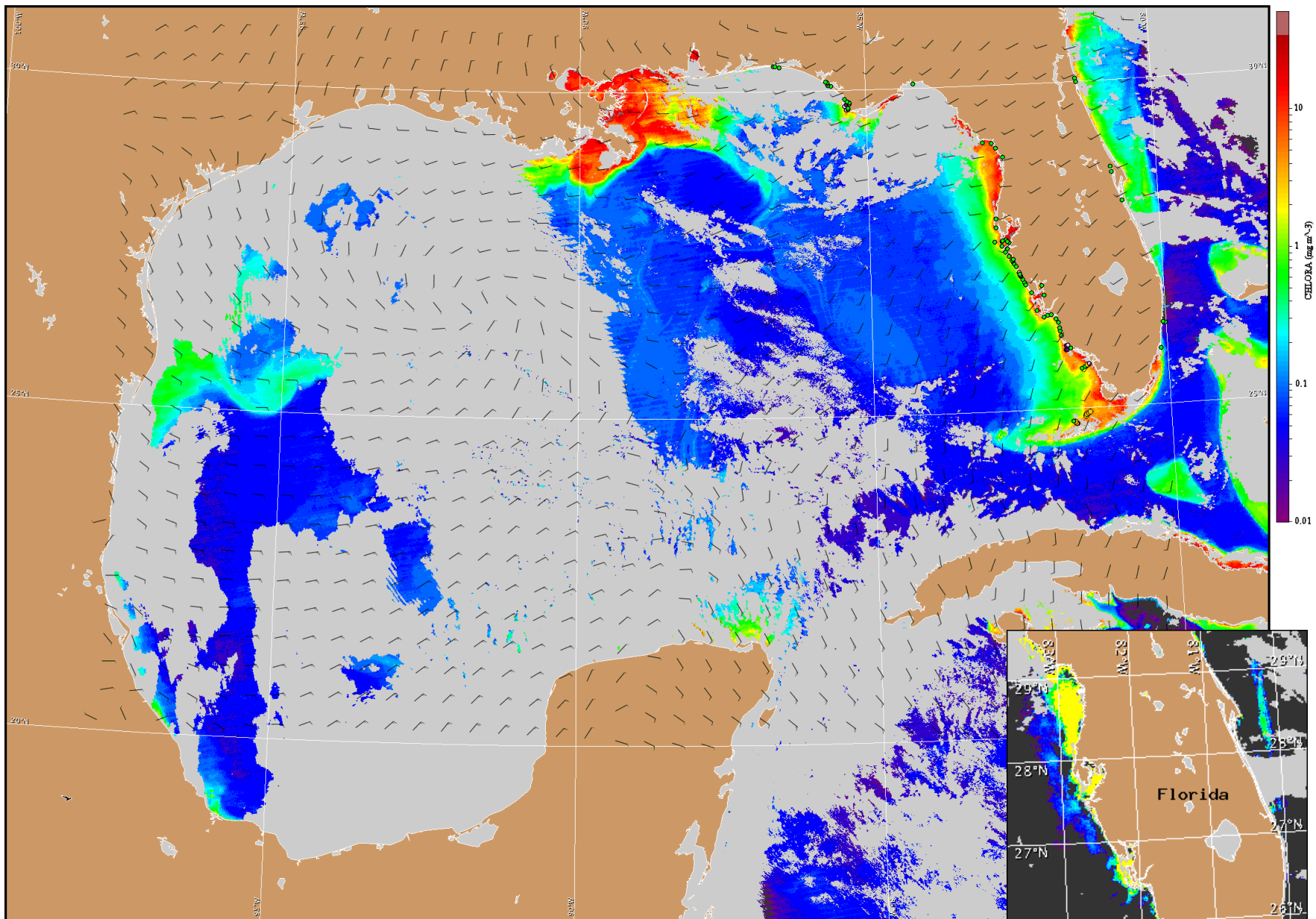


Wind Analysis

Collier to Monroe Counties: Southwest to west winds today (10-17kn, 5-9m/s). West winds Friday, shifting northwest Friday night (17-22kn, 9-11m/s). East northeast winds (16-21kn, 8-11m/s) Saturday through Sunday.

Gulf side of Florida Keys: South to southwest wind today (10-15kn, 5-8m/s). West winds Friday, shifting northwest to north Friday night (10-15kn, 5-8m/s). North to northeast winds Saturday (15kn, 8m/s). Northeast to east winds Sunday (15-20kn, 8-10m/s).

Pinellas to Lee Counties: Southwest to west (15kn, 8m/s). Northwest winds Friday (20kn, 10m/s), becoming northeast Friday night. Northeast winds Saturday through Sunday (15-20kn, 8-10m/s).



Satellite chlorophyll image and forecast winds for April 6, 2012 06Z with cell concentration sampling data from March 26 to April 4 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 HAB-OFS 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).