



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

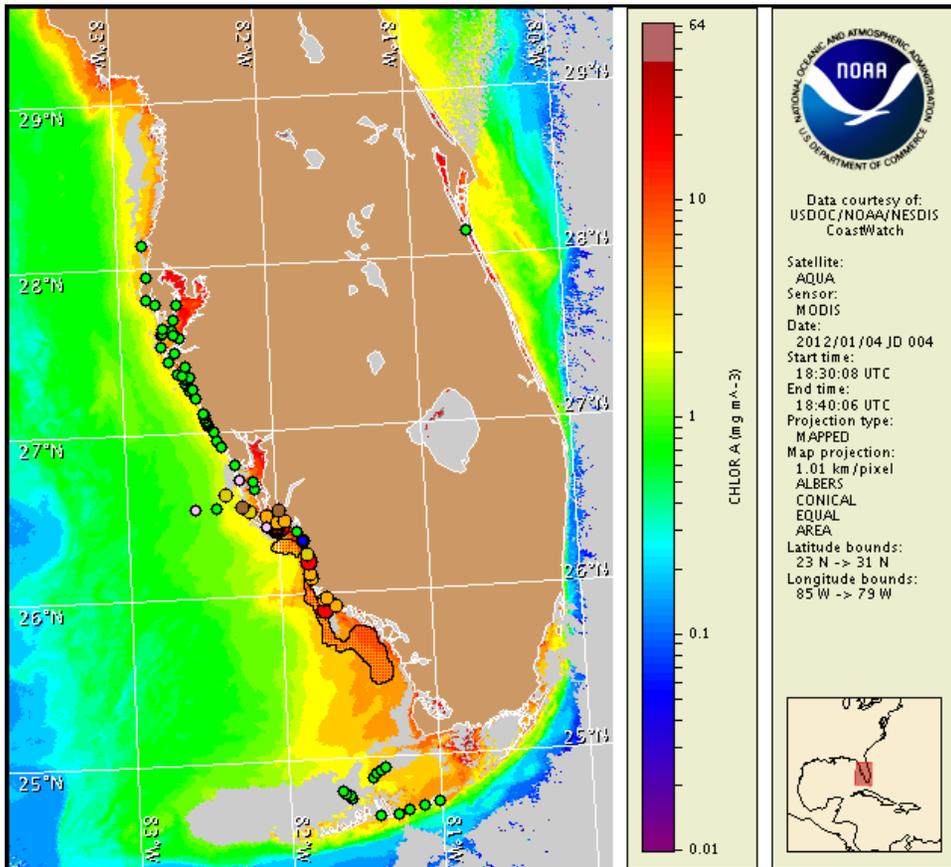
Thursday, 05 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, January 3, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 26 to January 5 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/habfs_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 persists in the San Carlos Bay region of Lee County and alongshore and offshore central and southern Lee County, Collier County, and northern Monroe County. A harmful algal bloom was also last identified on 12/12 on the Atlantic side of the Florida Keys; associated very low respiratory impacts are possible in this region through Sunday. In the San Carlos Bay region of Lee County, in the coastal Sanibel Island region of Lee County, and in the Marco Island region of central Collier County, patchy high impacts are possible today through Sunday. In southern Lee County, patchy moderate impacts are possible today and Saturday, with patchy low impacts possible on Friday and patchy very low impacts possible on Sunday. In northern Collier County, patchy low impacts are possible today through Sunday, with patchy high impacts possible on Friday night. In northern Monroe County patchy very low impacts are possible today through Sunday, with patchy moderate impacts possible on Friday night. No additional respiratory impacts are expected elsewhere at the coast in southwest Florida or in the Florida Keys today through Sunday, January 8.

Analysis

Southwest Florida: A patchy harmful algal bloom persists in the San Carlos Bay region of Lee County and alongshore and offshore central and southern Lee, Collier and northern Monroe counties. Samples this week identified an intensification of *Karenia brevis* concentrations in the Marco Island region of central Collier County from 'medium' on 12/29 to 'high' on 1/3 (FWRI, CCPCD). In addition, 'low a' *K. brevis* concentrations were newly identified at Shell Island in the northeastern San Carlos Bay region of Lee County on 1/1 (FWRI), and background to 'low b' *K. brevis* concentrations were detected approximately 6-7 miles offshore Cayo Costa (FWRI, 12/31) and approximately 2 miles offshore Redfish Pass ('low a') in northern Lee County (FWRI, 1/1). No *K. brevis* was detected in samples collected alongshore Pinellas, Manatee, Sarasota and Charlotte counties this week (FWRI, 12/29-1/3). Additional sample information can be obtained through FWRI at <http://myfwc.com/research/redtide/events/status/statewide/>.

Recent MODIS imagery (1/4, shown left) continues to indicate elevated chlorophyll levels (3-10 $\mu\text{g/L}$) alongshore southwest Florida from northern Lee County to Cape Sable in Monroe County. However, chlorophyll levels in general appear to have weakened substantially alongshore Collier County and offshore southern Lee and Collier counties since 12/31. Distinctly higher chlorophyll levels (8-11 $\mu\text{g/L}$) are continually visible within the San Carlos Bay region and extending alongshore and up to 6 miles offshore southern Lee County. An elevated chlorophyll feature (4-9 $\mu\text{g/L}$) is also visible south of Cape Romano, alongshore and offshore of the Ten Thousand Islands region. No significant elevated chlorophyll features are visible in recent imagery where background to 'low b' *K. brevis* concentrations were detected offshore northern Lee County. Continued sampling in the San Carlos Bay region and alongshore and offshore southern Lee County and Collier County is highly recommended.

Florida Keys: No new sample information is available this week for the Florida Keys region, including along the Atlantic side of the Middle to Upper Florida Keys where a very patchy bloom containing up to 'medium' *K. brevis* concentrations was detected on 12/11-12/12 (FWRI, NOAA). No *K. brevis* has been found north of the Lower Keys or alongshore the Lower and Middle Keys from Ramond Key east to Key Colony Beach

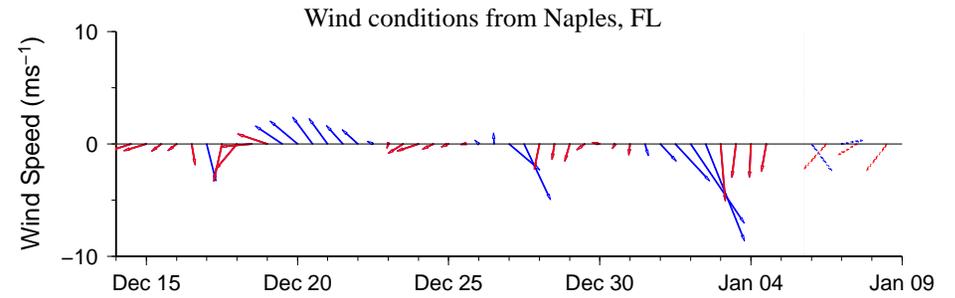
(MML,12/28-12/30) .

Elevated chlorophyll levels ($3-4\mu\text{g/L}$) are visible in recent MODIS imagery along the Atlantic side of the Lower Keys and along the Atlantic and Gulf sides of the Middle Keys. Sampling is recommended. No significant elevated chlorophyll features are visible south of the eastern Middle Keys or the Upper Keys.

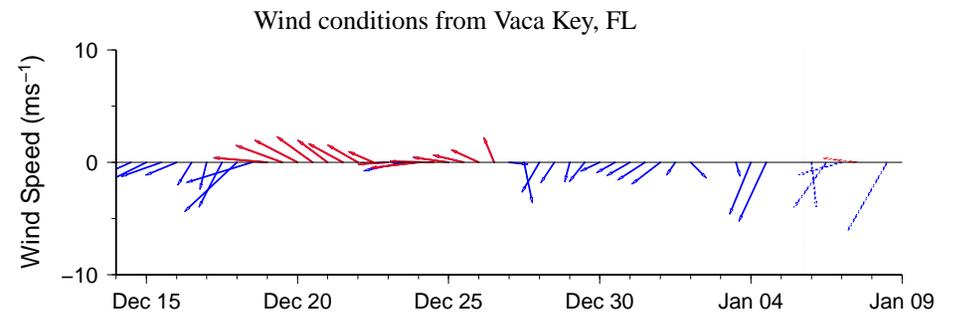
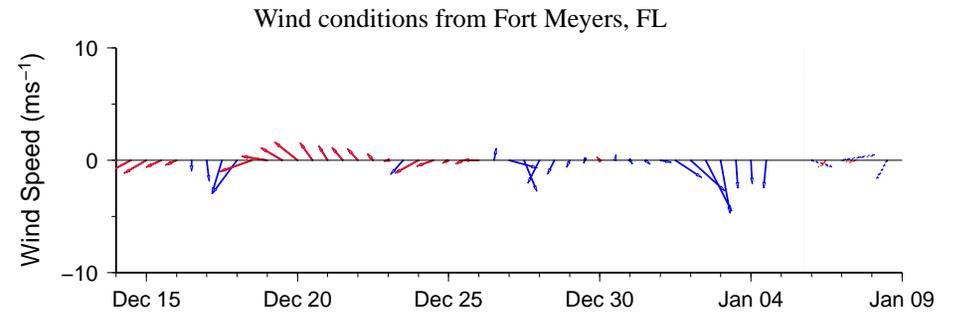
Slight bloom intensification is possible in Collier County through Sunday. Continued southward transport of the bloom along Lee County will likely be minimal through Sunday; however bloom patches located in Collier and Monroe County may continue to transport southward through Sunday. Forecasted winds may minimize eastward transport of bloom concentrations in the Florida Keys region today through Sunday.

-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).

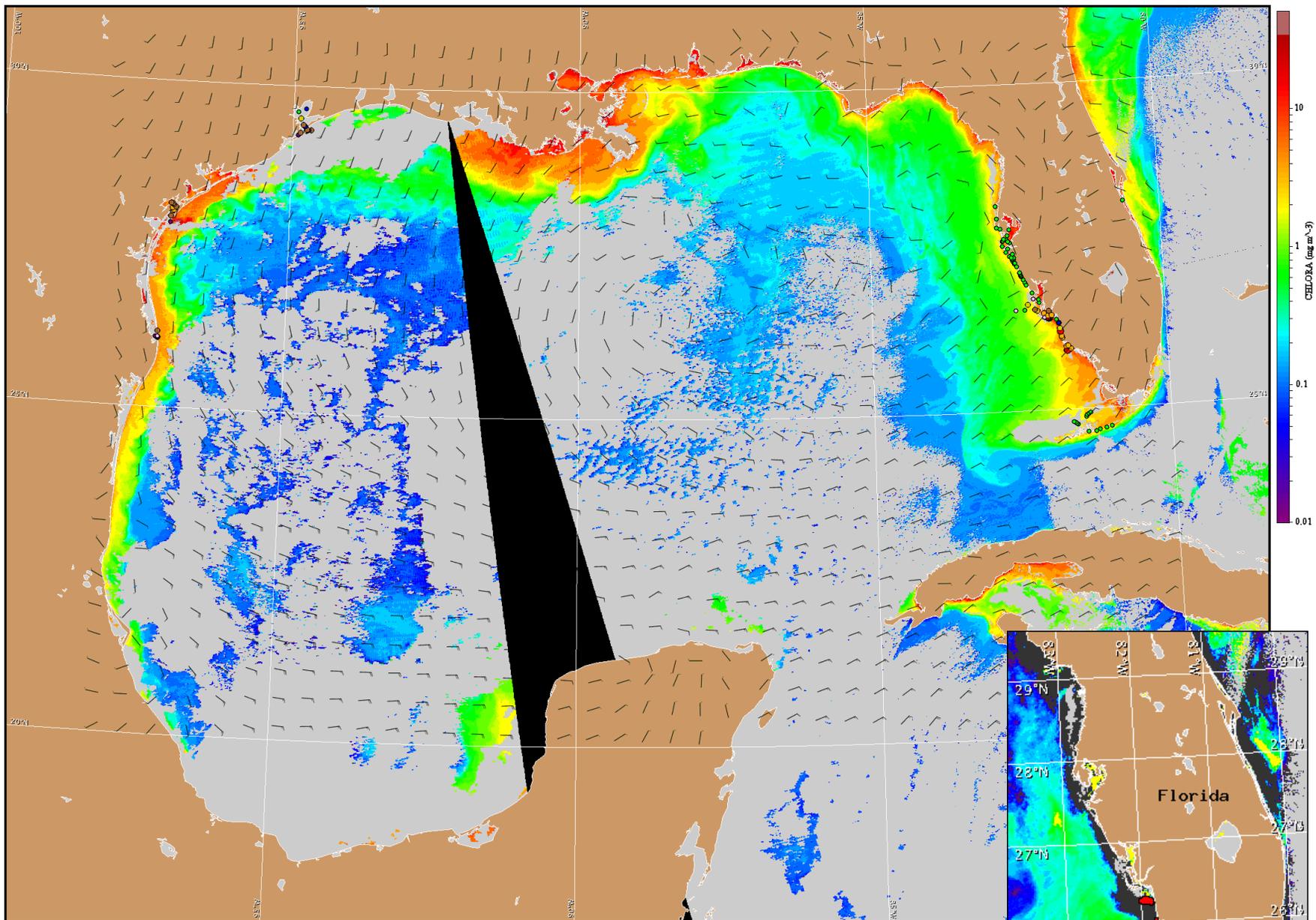


Wind Analysis

Pinellas to Lee Counties: Northwest winds today (10kn, 5m/s), becoming north tonight (5kn, 3m/s). East winds Friday, shifting southwest (5kn, 3m/s). South winds Friday night and Saturday (5-10kn, 3-5m/s). Southeast winds Saturday night through Sunday (10kn, 5m/s).

Collier and Monroe Counties: North winds today (8-13kn, 4-7m/s). Northeast to east winds Friday (5-13kn, 3-7m/s). West to southwest winds Friday night (5-7kn, 3-4m/s). East to northeast winds Saturday (5-6kn, 3m/s). North to northeast winds Saturday night (5-12kn, 3-6m/s). East winds Sunday (10-13kn, 5-6m/s).

Florida Keys: North to northeast winds today (10-15kn, 5-8m/s). Northeast to east winds Friday (10kn, 5m/s). East winds Saturday and Sunday (10-15kn, 5-8m/s).



Satellite chlorophyll image and forecast winds for January 6, 2012 12Z with cell concentration sampling data from December 26 to January 5 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/habfs_bulletin_guide.pdf

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).