



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

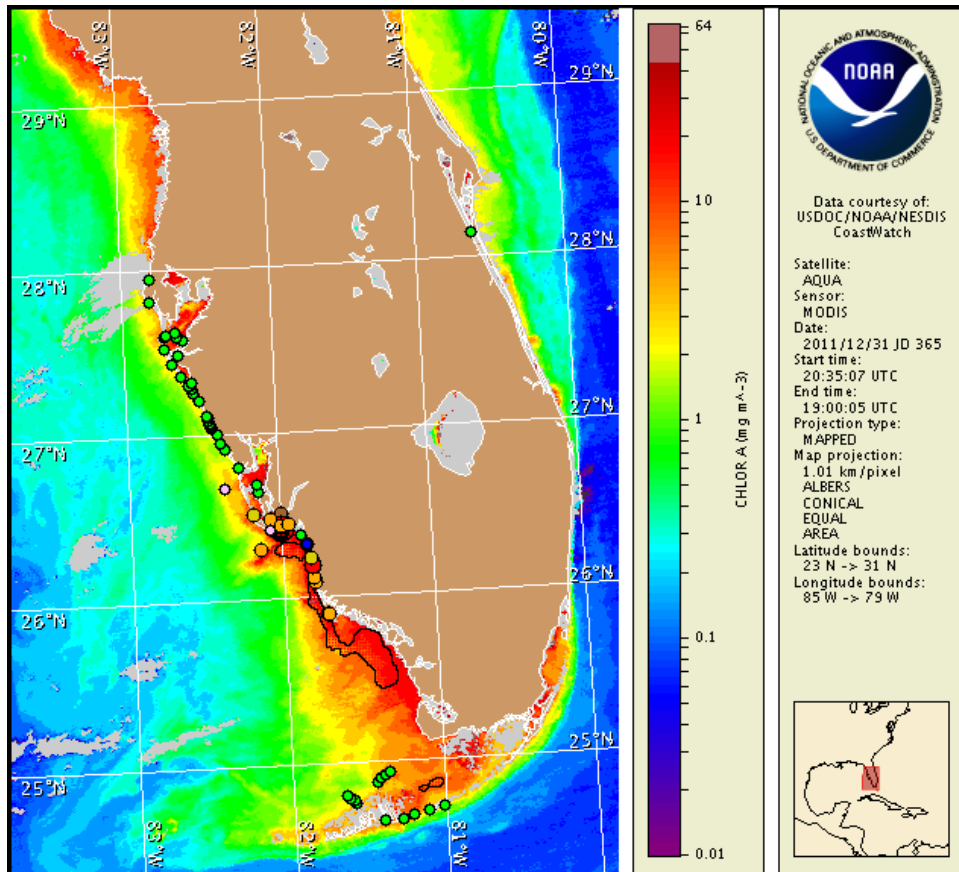
Tuesday, 03 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, December 29, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 24 to January 3 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 today and Wednesday. In the San Carlos Bay region of Lee County and in the Marco Island region of central Collier County, patchy high impacts are possible today and Wednesday. In the coastal Sanibel Island region of Lee County and in northern Collier County, patchy low impacts are possible today and Wednesday. In southern Lee County and northern Monroe County, patchy very low impacts are possible today and Wednesday. No additional respiratory impacts are expected elsewhere at the coast in southwest Florida or the Florida Keys today through Wednesday, January 4.

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 last week identified an intensification of bloom concentrations alongshore northern Collier County which presently range from very low near the northern county border up to medium and high at Clam Pass, Naples Pier, and Marco Island. Medium to high concentrations remain present alongshore and offshore southern Lee County, up to 3.5 miles southeast and 9 miles southwest of Sanibel Island (FWRI, 12/24-12/26). No *K. brevis* was detected in samples collected alongshore Pinellas, Manatee, Sarasota and Charlotte counties last week (FWRI, MML, SCHD; 12/27-12/29). Reports of slight respiratory irritation were received alongshore southern Lee County on Monday (MML). FWRI has also reported many fish kills alongshore and offshore southwest Florida in association with this bloom.

Recent MODIS imagery (12/31, shown left) indicates an intensification of chlorophyll levels throughout the bloom region from central Lee County to Monroe County late last week. Chlorophyll levels southeast and south of Sanibel Island, extending to the Estero Island area, are very high (10 to >40 $\mu\text{g/L}$), which is consistent with the medium to high *K. brevis* concentrations confirmed in that area. Very high chlorophyll levels are also visible at the coast and up to 9 miles offshore central Collier County, including the Cape Romano and Marco Island region. High chlorophyll (10-30 $\mu\text{g/L}$) is present along the entire northern Collier County area, with very high chlorophyll (>40 $\mu\text{g/L}$) visible near Naples Pier and to the south approximately 1-2 miles. Although no recent samples are available for the northern Monroe County area, imagery indicates that the bloom is likely still present at the coast near the Collier-Monroe border and extending offshore to Cape Sable. Continued sampling alongshore and offshore Collier County, and throughout the entire bloom region is highly recommended.

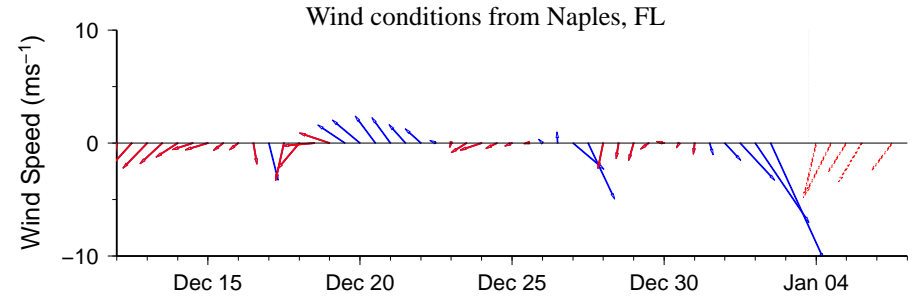
Florida Keys: No additional information is available regarding a very patchy *K. brevis* bloom on the Atlantic side of the Middle to Upper Florida Keys on 12/11-12/12. *K. brevis* concentrations were up to medium at that time (MML, FWRI, NOAA). Samples collected by MML on 12/29-12/30 north of the Lower Florida Keys, and on 12/28 along the Atlantic side of the Lower Florida Keys from south of Summerland Key to the east end of Sevenmile Bridge indicated that *K. brevis* was not present.

An elevated to high chlorophyll feature (5 to >10 $\mu\text{g/L}$) remains visible in recent MODIS imagery within the Gulf side region of the Middle to Lower Keys, extending from 24°52'24"N 81°0'30"W to the Johnson Keys. This feature resembles characteristics common to *K. brevis* blooms; sampling is recommended. No significant elevated chlorophyll features are visible south of the Middle or Upper Keys.

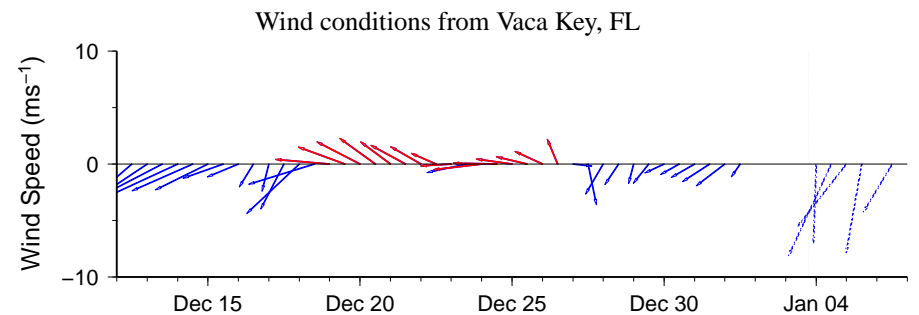
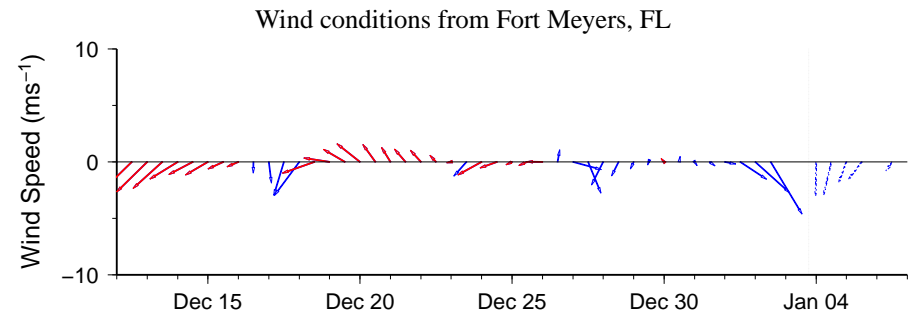
Forecasted north to northeast winds will decrease the potential for impacts in coastal areas of southwest Florida and along the Atlantic side of the Florida Keys today and Wednesday. Bloom intensification and continued southward transport of the bloom along the southwest Florida coast is possible through Wednesday. Forecasted winds may minimize eastward transport of bloom concentrations in the Florida Keys region today and Wednesday; however winds may transport bloom concentrations into the Gulf side region of the Florida Keys today and tomorrow.

-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).

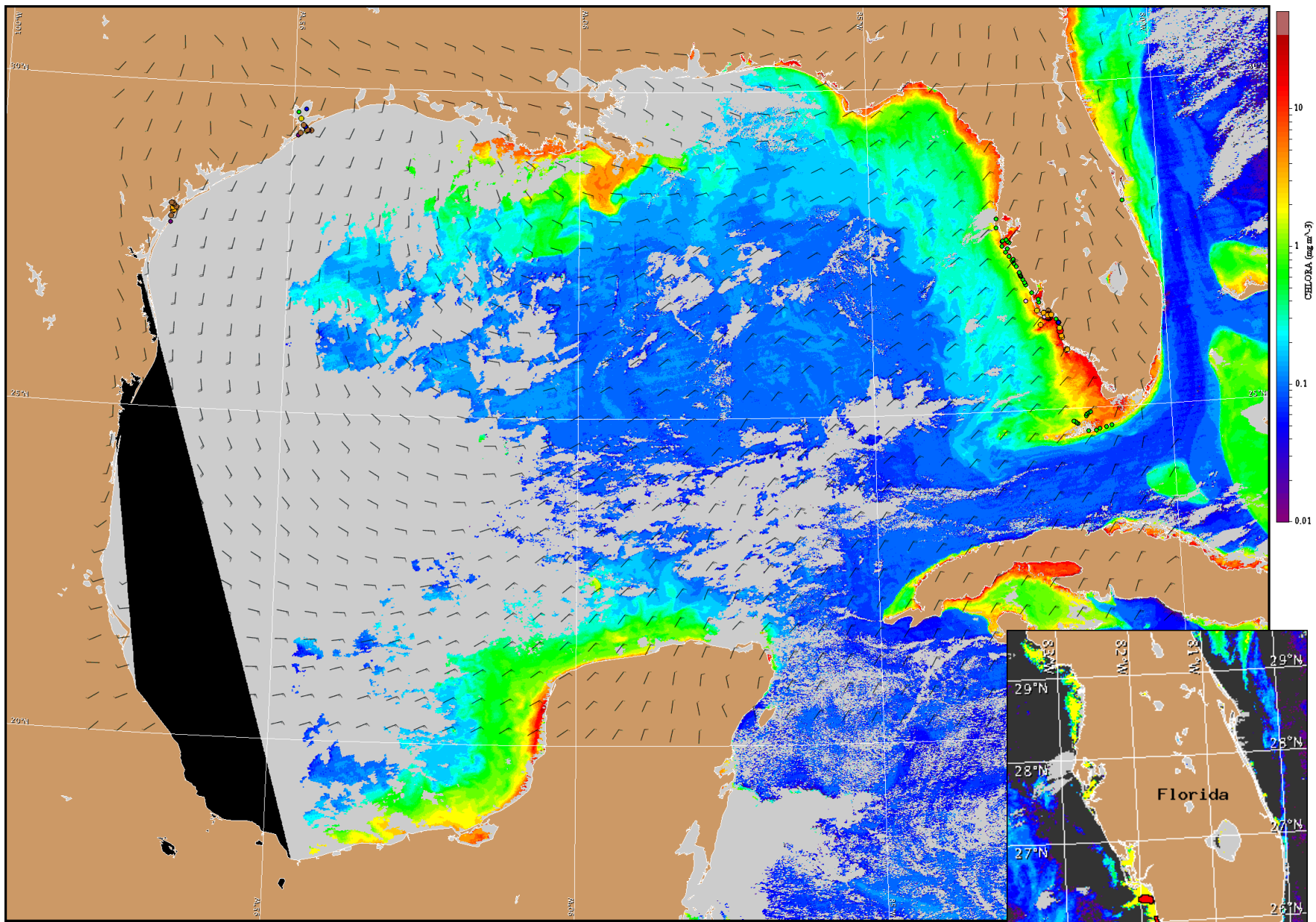


Wind Analysis

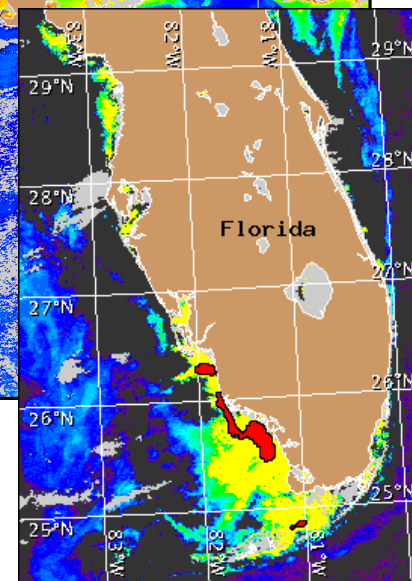
Pinellas to Lee Counties: Strong north winds today (20-25kn, 10-13m/s). Northeast winds tonight weakening to 15kn, 8m/s. Northeast to north winds Wednesday (5-15kn, 3-8m/s). Northwest winds Thursday (10kn, 5m/s).

Collier and Monroe Counties: Strong north winds today (23-28kn, 3-5m/s). North northeast winds tonight and Wednesday (11-21kn, 6-11m/s). North winds Thursday (10-13kn, 5-6m/s).

Florida Keys: Strong northwest to north winds today (25-30kn, 13-15m/s) today. North winds tonight (15-20kn, 8-10m/s). Northeast winds Wednesday (15-20kn, 8-10m/s). North to northeast winds Thursday (10-15kn, 5-8m/s).



Satellite chlorophyll image and forecast winds for January 4, 2012 12Z with cell concentration sampling data from December 24 to January 3 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).