



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

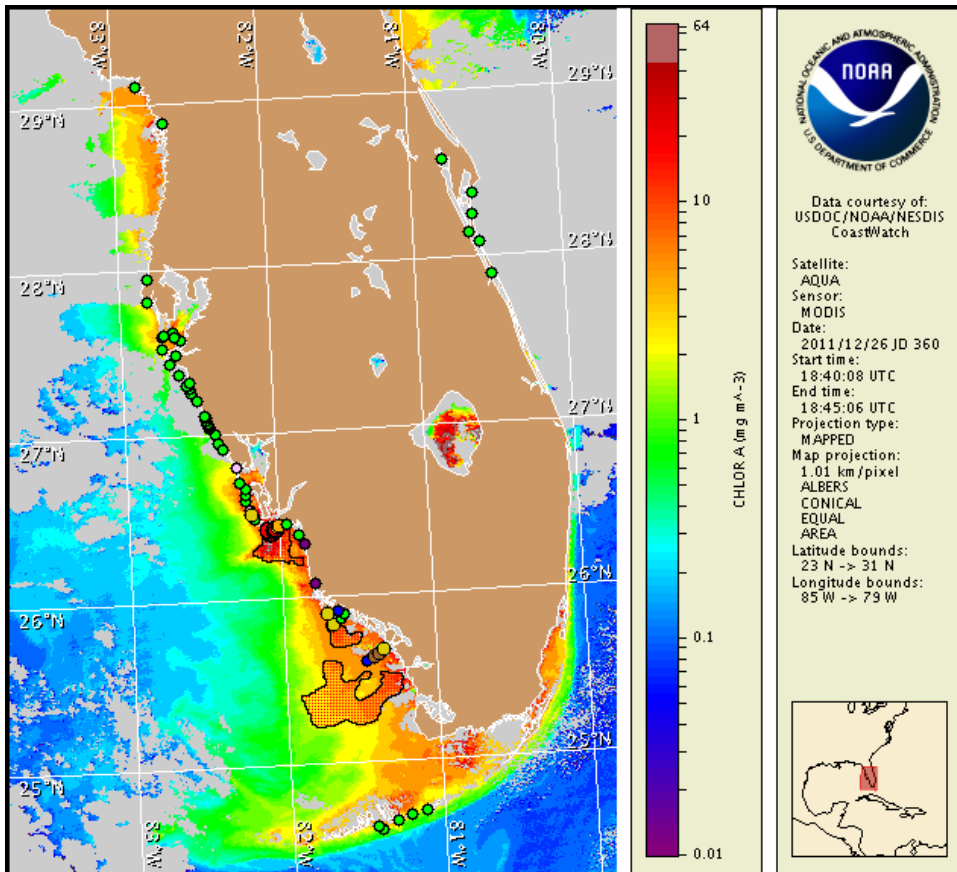
Tuesday, 27 December 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, December 22, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 17 to 22 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 moderate respiratory impacts at the coast remain possible on the Atlantic side of the Florida Keys today, with patchy very low impacts possible Wednesday. In the coastal Sanibel Island region of Lee County, patchy high impacts are possible today and patchy low impacts are possible Wednesday. In central Collier County, patchy high impacts are possible today and patchy very low impacts are possible Wednesday. In the San Carlos Bay region of Lee County, patchy moderate impacts are possible today through Wednesday. In northern Monroe County patchy moderate impacts are possible today and patchy very low impacts are possible Wednesday. In northern Collier County patchy low impacts are possible today and patchy very low impacts are possible tomorrow. In southern Lee County, patchy very low impacts are possible today through Wednesday. No additional respiratory impacts are expected elsewhere at the coast in southwest Florida or in the Florida Keys today through Wednesday, December 28.

Analysis

Florida Keys: Sample reports provided late last week by FWRI identified a very patchy *Karenia brevis* bloom on the Atlantic side of the Florida Keys on 12/11-12/12. The bloom was located approximately 2 miles southwest of Munson Island in the Lower Keys, extending eastward to approximately 1-22 miles south of the Middle Keys (from Key Colony Beach to Craig Key), and approximately 2 miles southeast of Key Largo in the Upper Keys (NOAA). (Note: Samples identifying this bloom are unavailable for display on the map shown at left.) *K. brevis* concentrations at that time ranged from background to 'medium', however no additional samples are available to confirm present conditions of this bloom. Recent MODIS imagery (12/26, shown left) indicates a large area of elevated chlorophyll (3-6 µg/L) in the Gulf side region of the Florida Keys, extending from Florida Bay to the eastern edge of the Lower Keys. An elevated chlorophyll feature (2-3 µg/L) is also visible on the Atlantic side of the Lower Keys extending alongshore of the Newfound Harbor Keys eastward to Little Duck Key. Continued sampling both in the Gulf side and Atlantic side regions of the Keys is highly recommended.

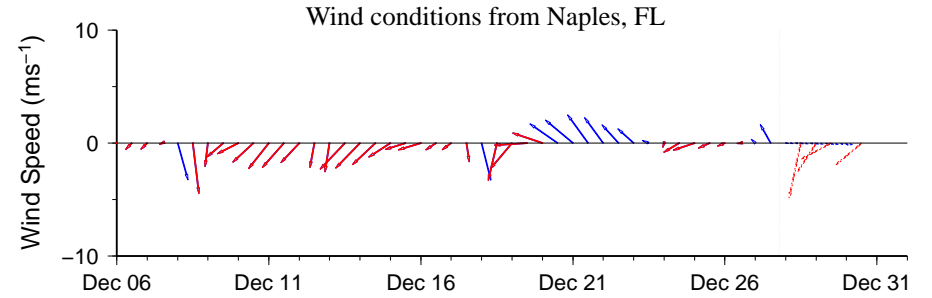
Southwest Florida: A patchy harmful algal bloom persists in the San Carlos Bay region of Lee County and alongshore and offshore central and southern Lee County, Collier County and northern Monroe County. Due to the Christmas holiday, no new sample information is available since last reported on 12/22. In summary, *K. brevis* concentrations are up to 'high' alongshore and offshore Sanibel Island, up to 'medium' in the San Carlos Bay region of Lee County, up to 'low b' alongshore central Lee County near Captiva Pass, up to 'very low a' in southern Lee County, up to 'low a' in northern Collier County, up to 'medium' in the Marco Island and Cape Romano region of central Collier County, and up to 'low b' in northern Monroe County (12/17-12/22; FWRI, MML). No reports of bloom related impacts have been received over the past week. Additional sample information can be obtained through FWRI at <http://myfwc.com/research/redtide/events/status/statewide/>. Recent MODIS imagery continues to indicate elevated to high levels of chlorophyll (3 to >10 µg/L) alongshore and offshore southwest Florida from Sanibel Island in central Lee County to Cape Sable in Monroe County. An area of notably higher

chlorophyll levels ($25\text{-}40\mu\text{g/L}$) is visible approximately 2-14 miles south of Sanibel Island, 9 miles west of Lovers Key State Park, 12-20 miles west of Bonita Beach, and is primarily located between $26^{\circ}24'47''\text{N}$ $82^{\circ}1'9''\text{W}$ and $26^{\circ}16'55''\text{N}$ $82^{\circ}6'44''\text{W}$. Chlorophyll levels are also very high ($>20\mu\text{g/L}$) approximately 2 miles offshore Bonita Beach. Continued sampling is recommended throughout the bloom region.

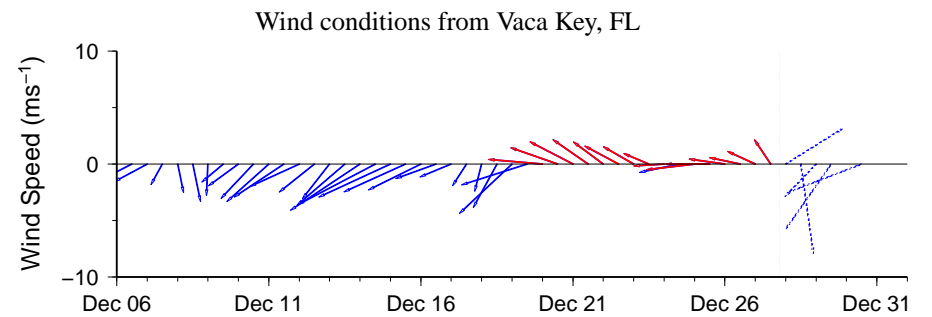
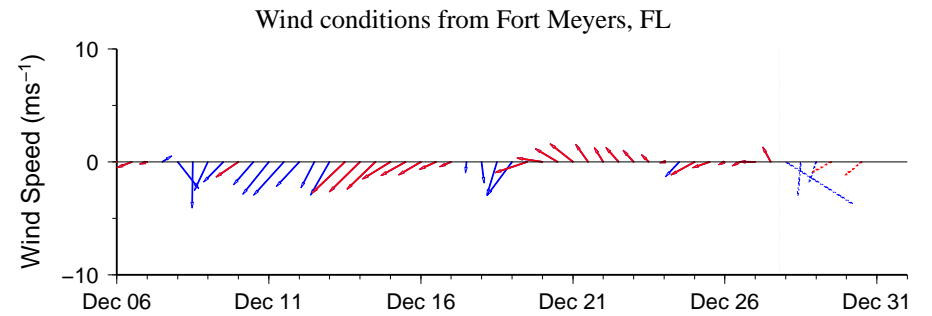
Forecasted onshore winds will increase the potential for impacts today throughout the bloom regions in southwest Florida and the Keys. Potential for impacts should lessen Wednesday. Conditions today and Wednesday do not favor bloom intensification. Continued southerly transport of the bloom along the southwest Florida coast is possible today and Wednesday. Forecasted winds may transport the bloom located on the Atlantic side of the Keys further east today.

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).

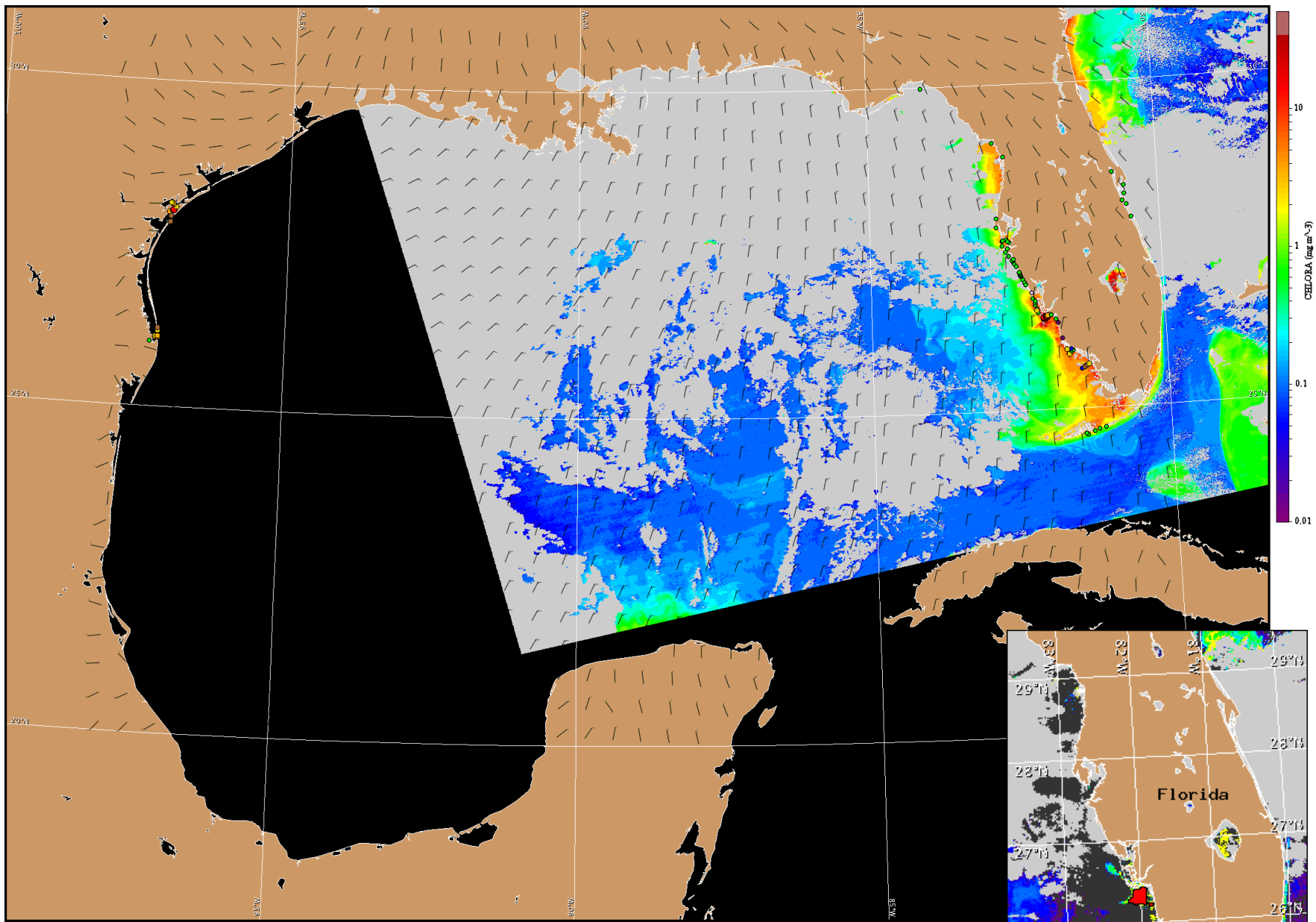


Wind Analysis

Pinellas-Lee Counties: Southwest to west winds today (15kn, 8m/s), becoming north tonight through Wednesday (10-15kn, 5-8m/s). Northeast winds Wednesday night (10kn, 5m/s).

Collier-Monroe Counties: South southeast winds today becoming southwest (11-15kn, 6-8m/s). West northwest winds tonight, becoming north northwest (13-18kn, 6-9m/s). North to northeast winds Wednesday and Wednesday night (8-18kn, 4-9m/s).

Florida Keys: Southeast to south winds today, becoming southwest (10-15kn, 5-8m/s). Northwest to north winds tonight (15kn, 8m/s), becoming gusty. North to northeast winds Wednesday and Wednesday night (10-20kn, 5-10m/s).



Satellite chlorophyll image and forecast winds for December 28, 2011 12Z with cell concentration sampling data from December 17 to 22 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).