



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

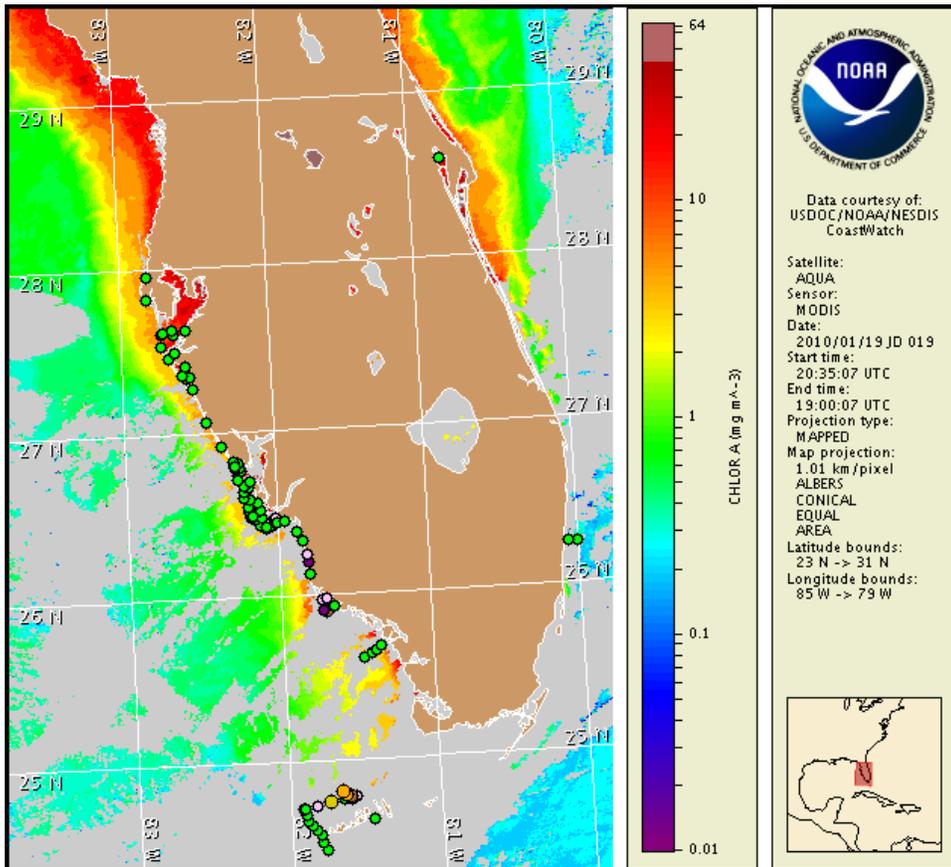
21 January 2010

NOAA Ocean Service

NOAA Satellites and Information Service

NOAA National Weather Service

Last bulletin: January 19, 2010



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from January 11 to 19 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 HABFS bulletin guide:

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

Please note the following restrictions on all SeaWiFS imagery derived from CoastWatch.

1. Data are restricted to civil marine applications only; i.e. federal, state, and local government use/distribution is permitted.
2. Image products may be published in newspapers. Any other publishing arrangements must receive GeoEye approval via the CoastWatch Program.

Conditions Report

A harmful algal bloom has been identified in patches in northern to central Collier County and offshore in the gulfside region of the Lower Florida Keys. Reports of respiratory irritation have been received alongshore northern Collier County this week. Patchy low impacts are possible today through Saturday and patchy very low impacts are possible on Sunday in northern to central Collier County. Also, harmful algae was last identified in patches in the Pine Island Sound region on January 11. Patchy very low impacts are possible in the Pine Island Sound region today through Sunday. No additional respiratory irritation impacts due to Florida Red Tide are expected at the coast in the Florida Keys region or elsewhere alongshore southwest Florida today through Sunday, January 24.

Dead fish have been reported in several counties alongshore southwest Florida due to abnormally cold water temperatures. Dead fish smell, while unpleasant, does not produce the same respiratory irritation as the Florida Red Tide caused by *Karenia brevis*.

Analysis

Patchy harmful algal blooms have been confirmed in northern to central Collier County and north of the Lower Florida Keys. 'Low a' *Karenia brevis* concentrations were identified at Caxambas Pass in central Collier County and 'very low a' concentrations were identified at Clam Pass and South Marco Beach in northern Collier County on 1/19 (CCPCPD, FWRI). Also, four 'low a' to 'medium' *K. brevis* concentrations were identified approximately 3-7 miles north of the Lower Florida Keys on 1/18-1/19 (MML).

Remnants of a harmful algal bloom may still be present in the Pine Island Sound region where 'very low a' *K. brevis* concentrations or less were detected on 1/11-1/13 (FWRI). No recent sample information is available south of Sanibel Island where 'medium' *K. brevis* concentrations were last identified on 1/7 (FWRI). No elevated chlorophyll features are visible in recent imagery alongshore southwest Florida from Pinellas to Lee County.

Slight respiratory irritation continued to be reported at several beaches in northern Collier County this week (MML, CCPCPD, 1/18-1/20). Several reports of dead fish have also been received this week in several locations along the coast of southwest Florida from Pasco to Monroe counties (MML, FWRI, CCPCPD). The fish kill events are a result of unusually cold water temperatures. The unpleasant smell from the dead fish may be contributing, in part, to the respiratory irritation in northern Collier County.

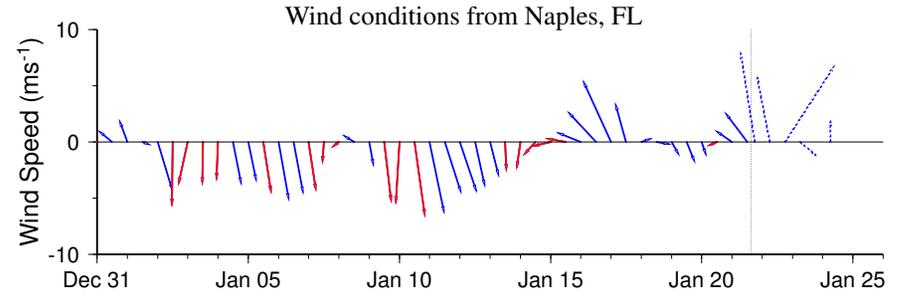
Elevated chlorophyll levels (5-9 $\mu\text{g/L}$) continue to be visible in recent MODIS imagery (1/19, shown) among clouds near shore and offshore northern to central Collier County (maximum visible chlorophyll located offshore Marco Island at 25°55'20"N 81°50'W). Recent SeaWiFS imagery (1/20, not shown) shows a patchy elevated chlorophyll feature stretching alongshore and offshore of the Lower Florida Keys including the region where 'low a' to 'medium' *K. brevis* concentrations were identified. This feature stretches further eastward to the Content Keys and into the Florida Bay region. Elevated chlorophyll features in the Florida Bay region are not necessarily indicative of harmful algae presence.

Northerly transport of the bloom identified in Collier County is possible through Sunday. Onshore winds today through Saturday will increase the potential for impacts at the beach in Collier County. Intensification of this bloom is not expected through Sunday. Variable winds forecasted through Sunday will likely minimize transport of the bloom located north of the Lower Florida Keys.

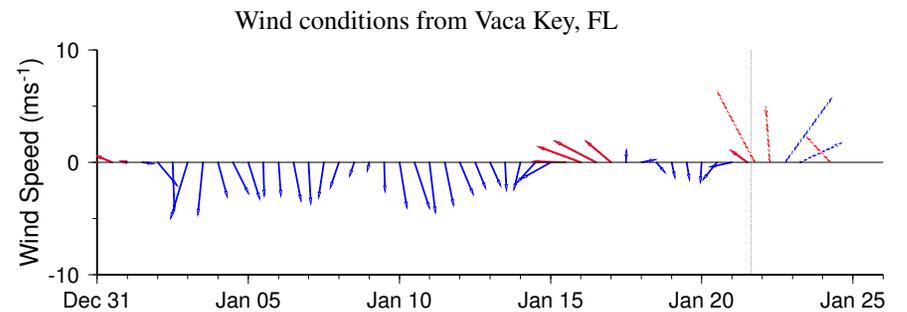
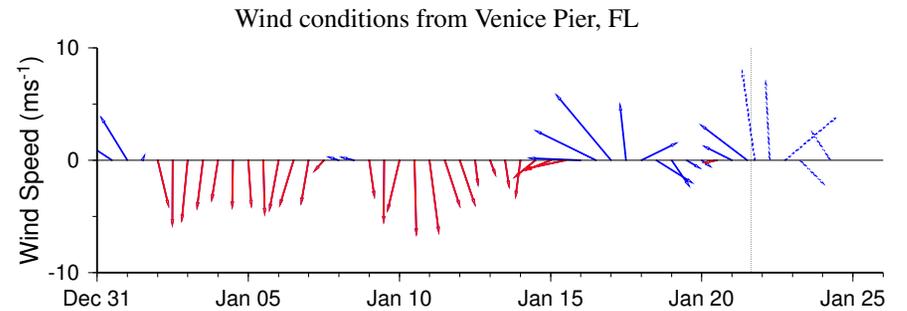
Due to technical difficulties SeaWiFS imagery is currently unavailable for display. MODIS imagery is shown on this bulletin.

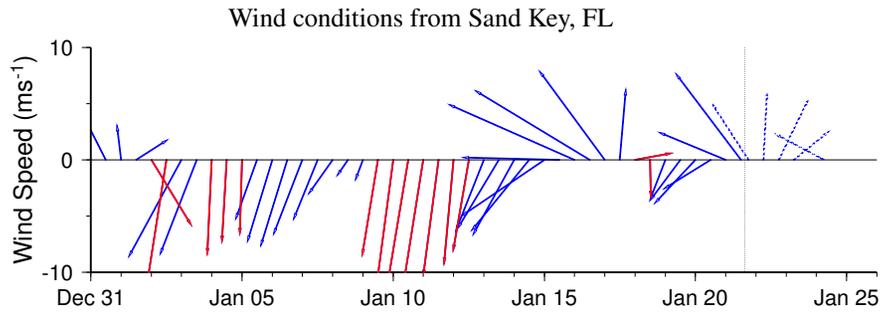
-Fisher, Lindley

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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).

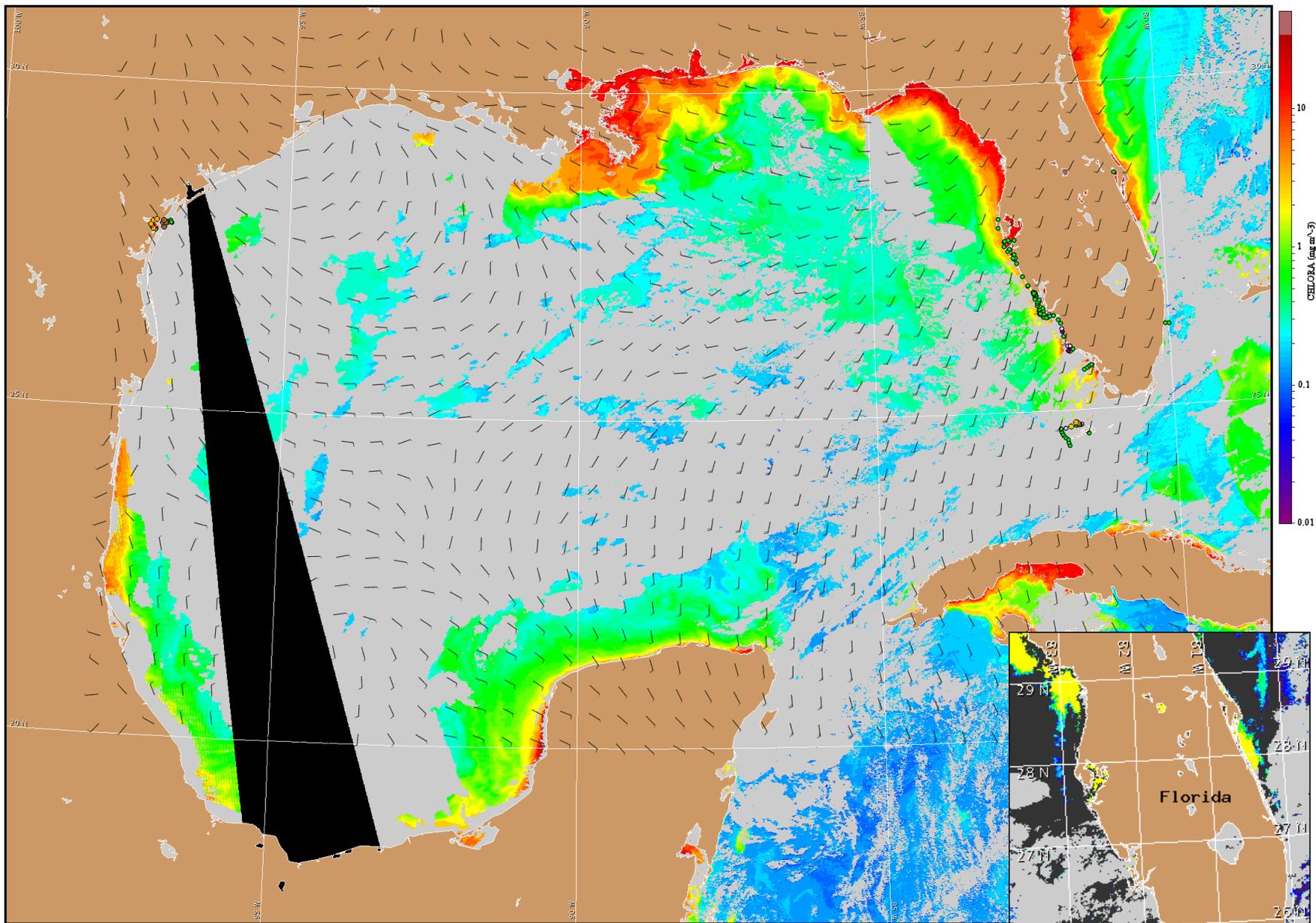




Wind Analysis

SW Florida: South winds today (10-20kn, 5-10m/s). South to southwest winds tonight (6-15kn, 3-8m/s). Southwest to west winds Friday (10-15kn, 5-8m/s). Variable winds Friday night (5-10kn, 3-5m/s). South to southeast winds Saturday (5-15kn, 3-8m/s) through Sunday (15-20kn, 8-10m/s).

FL Keys (gulfside): Southeast to south winds today (10-15kn, 5-8m/s), shifting south to southwest tonight. Southwest to west winds Friday (10-15kn). Variable winds Friday night (5-10kn, 3-5m/s). Northeast to east winds Saturday (10-15kn). Southeast winds Sunday (10-15kn).



Satellite chlorophyll image and forecast winds for January 22, 2010 12Z with Cell concentration sampling data from January 11 to 19 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 HABFS 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).