



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

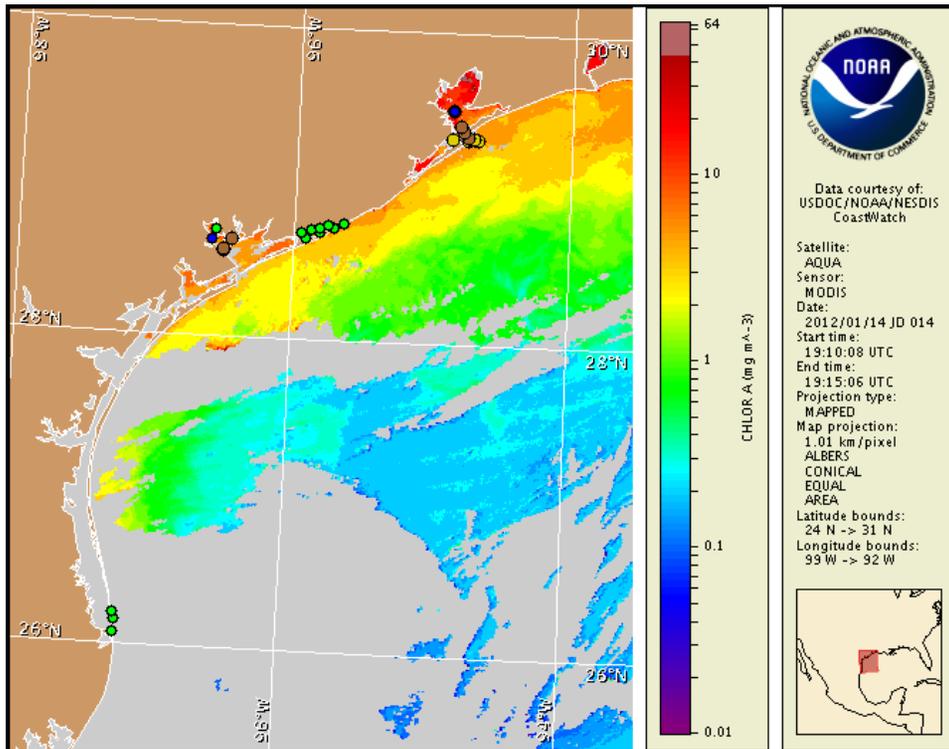
Tuesday, 17 January 2012

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, January 12, 2012



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from January 7 to 15 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/habfbs_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 along the Texas coast. Patchy moderate impacts are possible in the Galveston and Matagorda Bay area's today and tomorrow. Water samples last identified harmful algal blooms in the Port Aransas/Corpus Christi Bay area, alongshore South Padre Island, and within the lower Laguna Madre on January 5, and alongshore the Padre Island National Seashore region on November 28. Associated respiratory impacts remain possible in these areas. No additional impacts are expected at the coast in Texas today through Wednesday, January 18. All Texas bays and coastal waters remain closed to commercial and recreational oyster harvesting due to blooms of the harmful algae *Karenia brevis* (red tide).

Analysis

A harmful algal bloom continues in patches along much of the Texas coastline; however, samples and satellite imagery indicate that *Karenia brevis* concentrations are dissipating in some regions.

In the Galveston region, sampling efforts on January 11 identified 'very low b' to 'low b' *K. brevis* concentrations within southern Galveston Bay and Bolivar Roads Pass (TPWD). Samples collected within Galveston Bay indicated 'low a' concentrations at Houston Ship Channel (HSC) markers 25, 35, and 55, and 'very low b' concentrations at HSC marker 47 (1/11; TPWD). Within the Bolivar Roads Pass region, samples collected along the eastern side of the channel and within the Galveston Ship Channel indicated 'low a' to 'low b' concentrations. 'Low b' *K. brevis* concentrations were also identified within West Galveston Bay at Campbell Bayou (1/11; TPWD).

In the Matagorda Bay region, several samples collected throughout East Matagorda Bay and within Matagorda Harbor indicate that *K. brevis* is not present (1/10; TPWD). Just north of Matagorda Bay, samples in Lavaca and Keller bays range from 'not present' to 'low b' (1/9; TPWD). Two samples collected at the mouth of Lavaca Bay identified 'low a' to 'low b' concentrations; farther north, a sample offshore Port Lavaca indicated 'very low b' concentrations and a sample collected near Point Comfort indicated that *K. brevis* is not present (1/9; TPWD). One sample collected alongshore the north side of Keller Bay indicated 'low a' concentrations (1/9; TPWD).

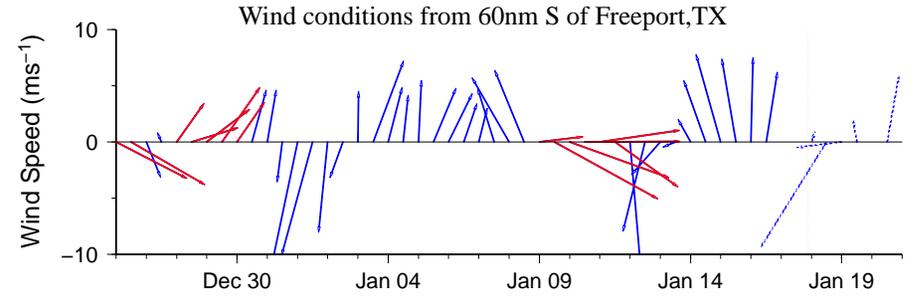
No new samples have been received from the Port Aransas/Corpus Christi Bay region, where the most recent samples indicated that *K. brevis* concentrations range from 'not present' to 'high' (1/4-5; TPWD). In addition, new samples are not available for the South Padre Island and lower Laguna Madre regions, where the most recent samples and reports have indicated that *K. brevis* is not present (1/11; TPWD, Texas Coastal Naturalist).

Recent MODIS imagery (1/14; shown left) is partially obscured by clouds along the Texas coastline from Port Aransas to the Rio Grande, limiting analysis. Elevated chlorophyll (3 to 7 $\mu\text{g/L}$) is visible along- and offshore the Texas coastline from Sabine Pass to Port Aransas. Elevated chlorophyll at the coast is not necessarily indicative of the bloom's extent and may be due to the continued resuspension of benthic chlorophyll and sediments; in-situ sampling is required to confirm the presence of *K. brevis*.

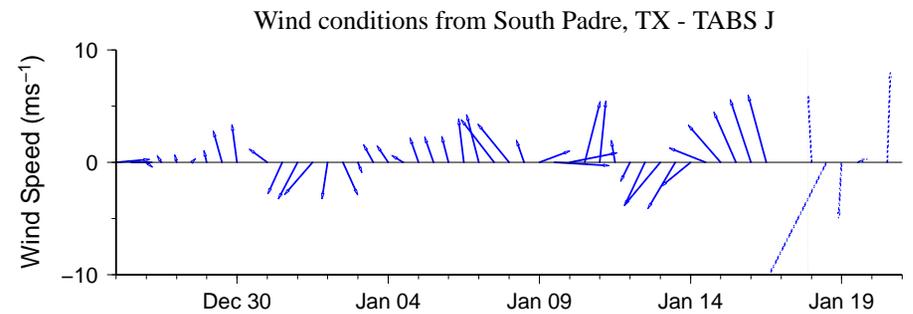
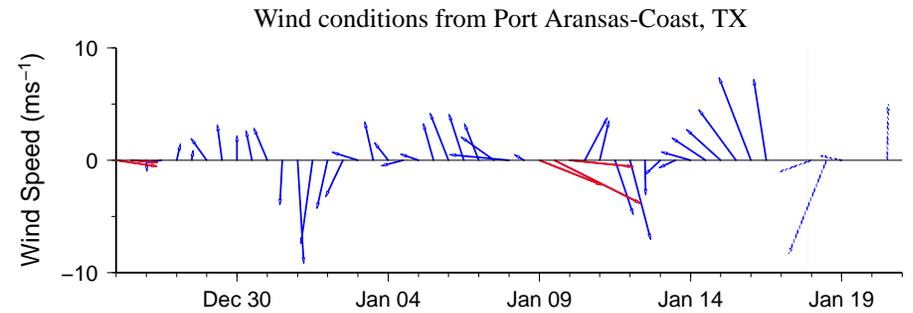
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 40km south from the Galveston Bay and Matagorda Peninsula regions, <10km north (negligible) from the Port Aransas region, 40km north along the Padre Island National Seashore region, and 90km north from Brazos Santiago Pass from January 16 to 19. Onshore winds forecasted today and tomorrow may increase the potential for impacts along the Texas coastline.

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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).

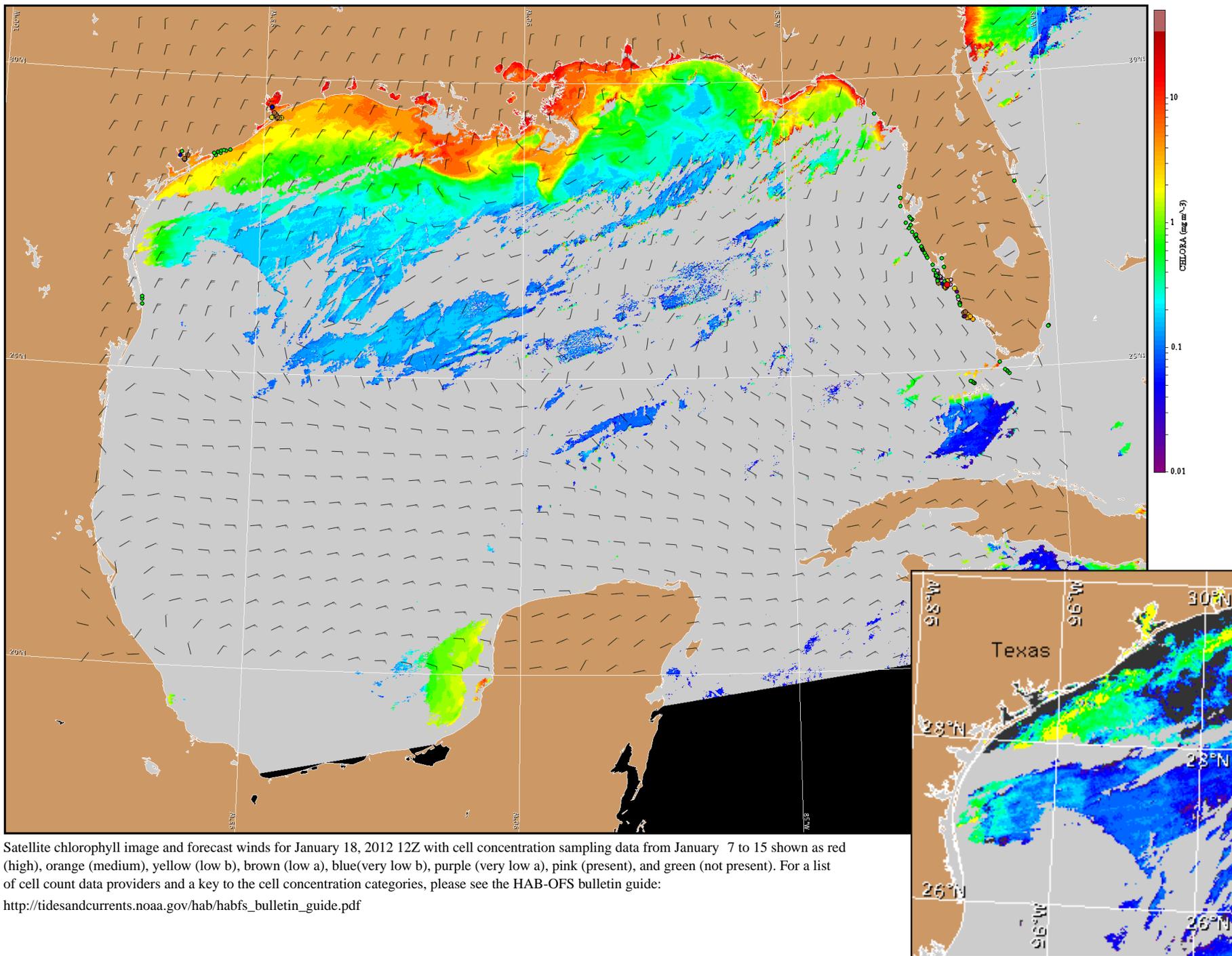


Wind Analysis

Galveston/Freeport: South winds (5-15kn, 3-8m/s) today becoming west winds (10-15kn, 5-8m/s) tonight. North to northeast winds (10-20kn, 5-10m/s) Wednesday becoming east winds (5-10kn, 3-5m/s) Wednesday night.

Port Aransas: South winds (5-20kn, 3-10m/s) today becoming northeast winds (10-20kn) tonight through Wednesday. East winds (5-10kn) Wednesday night.

South Padre: South winds (15-20kn, 8-10m/s) today becoming east winds (10kn, 5m/s) tonight. North to northeast winds (10-20kn) Wednesday.



Satellite chlorophyll image and forecast winds for January 18, 2012 12Z with cell concentration sampling data from January 7 to 15 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).