



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

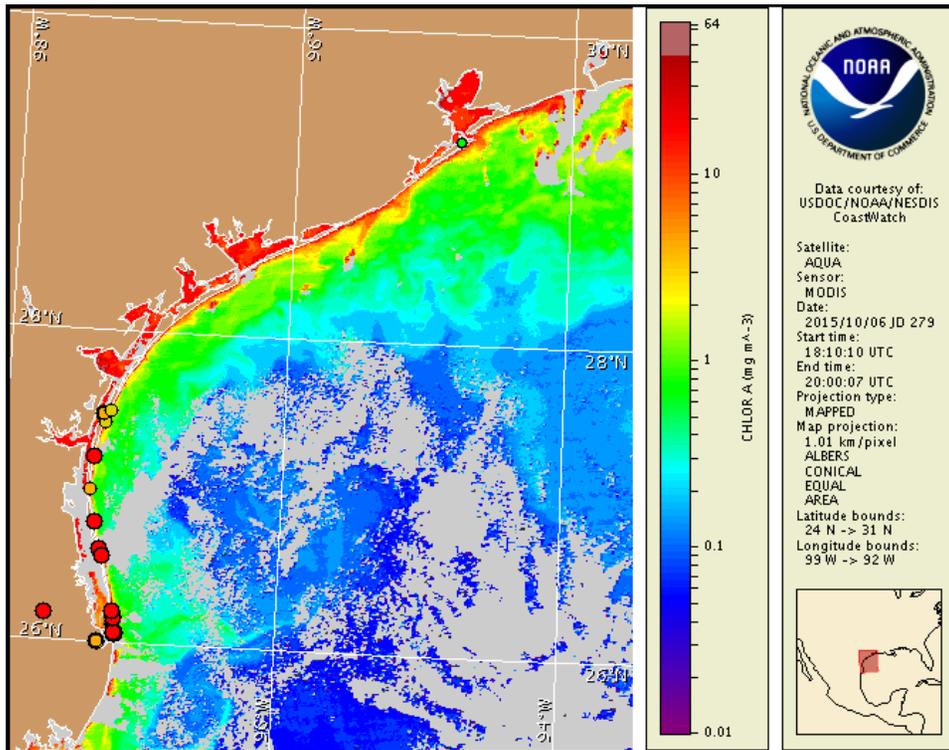
Thursday, 08 October 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 5, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 28 to October 7: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample 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](http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf)

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

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

*Karenia brevis* (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast from Galveston Bay to the Rio Grande. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, October 8 through Tuesday, October 13 is listed below:

**Region:** Forecast (Duration)

**Bay region-Matagorda Bay:** High (Th-Tu)

**Bay region-Corpus Christi Bay:** High (Th-Tu)

**Aransas Pass to PINS region:** Moderate (Th-Tu)

**Bay region-Upper Laguna Madre:** High (Th-Tu)

**Padre Island National Seashore region:** High (Th-Tu)

**Bay region-Lower Laguna Madre to Laguna Vista:** High (Th-Tu)

**Mansfield Pass to Beach Access 6 region:** High (Th-Su,Tu), Low (M)

**Beach Access 6 to Rio Grande region:** High (Th-Su,Tu), Low (M)

**All Other Texas Regions:** None expected (Th-Tu)

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](http://tidesandcurrents.noaa.gov/hab/beach_conditions.html) for recent, local observations. Over the past few days, respiratory irritation was reported in the Matagorda Bay and Port Aransas regions. Fish kills have been reported in Corpus Christi Bay and the Lower Laguna Madre. Reports of discolored water have also been received from southern Corpus Christi Bay.

## Analysis

**\*\*Due to the upcoming federal holiday, the next bulletin will be issued on Tuesday, October 13.\*\***

*Karenia brevis* concentrations range from 'not present' to 'high' from Galveston Bay to the Rio Grande, with the highest concentrations from the PINS mile marker 15 southward to Brazos Santiago Pass (TPWD; 10/5-7). In the Matagorda Bay area, high respiratory irritation was reported at Magnolia Beach and Indianola near where up to 'medium' concentrations of *K. brevis* were detected two weeks ago (TPWD; 9/21). The Imaging Flow-Cytobot at UTMSI Pier in Port Aransas has observed decreasing concentrations of *K. brevis* ranging between 'very low' to 'low' concentrations (TAMU 10/5-8). Discolored water remains present in southern Corpus Christi Bay near where up to 'high' concentrations of *K. brevis* were previously detected (TPWD; 9/22). One report of respiratory irritation was received from Port Aransas (TPWD; 10/5). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at: <http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (10/6, shown left) shows a band of elevated to very high chlorophyll (2 to >20  $\mu\text{g/L}$ ) is present stretching alongshore the Texas coast from the Matagorda Peninsula region to south of the Rio Grande. Patches extend up to 4 miles

offshore the coasts of Matagorda Island and South Padre Island, adjacent to where *K. brevis* has been confirmed from cell concentrations. A large patch is visible over 30 miles south of the Rio Grande.

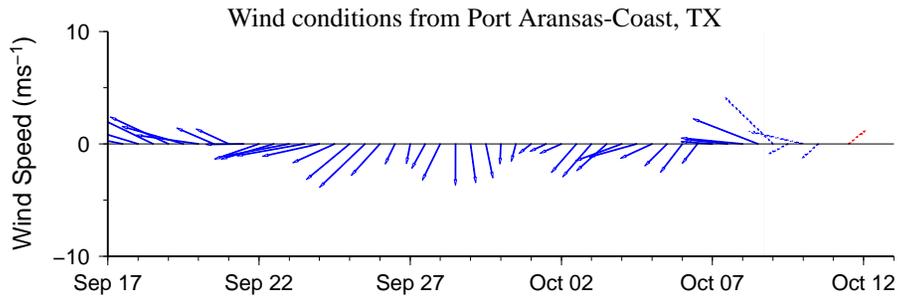
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 110 km south from Pass Cavallo, 100 km south from the Port Aransas region, and 115 km south from Brazos Santiago Pass from October 6 to October 11.

Lalime, Kavanaugh

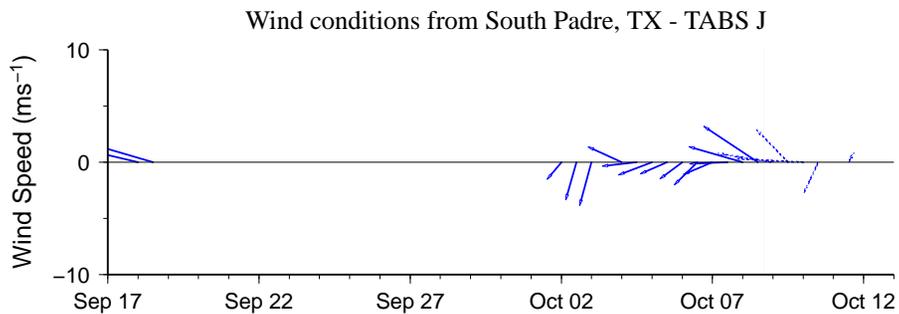
## Wind Analysis

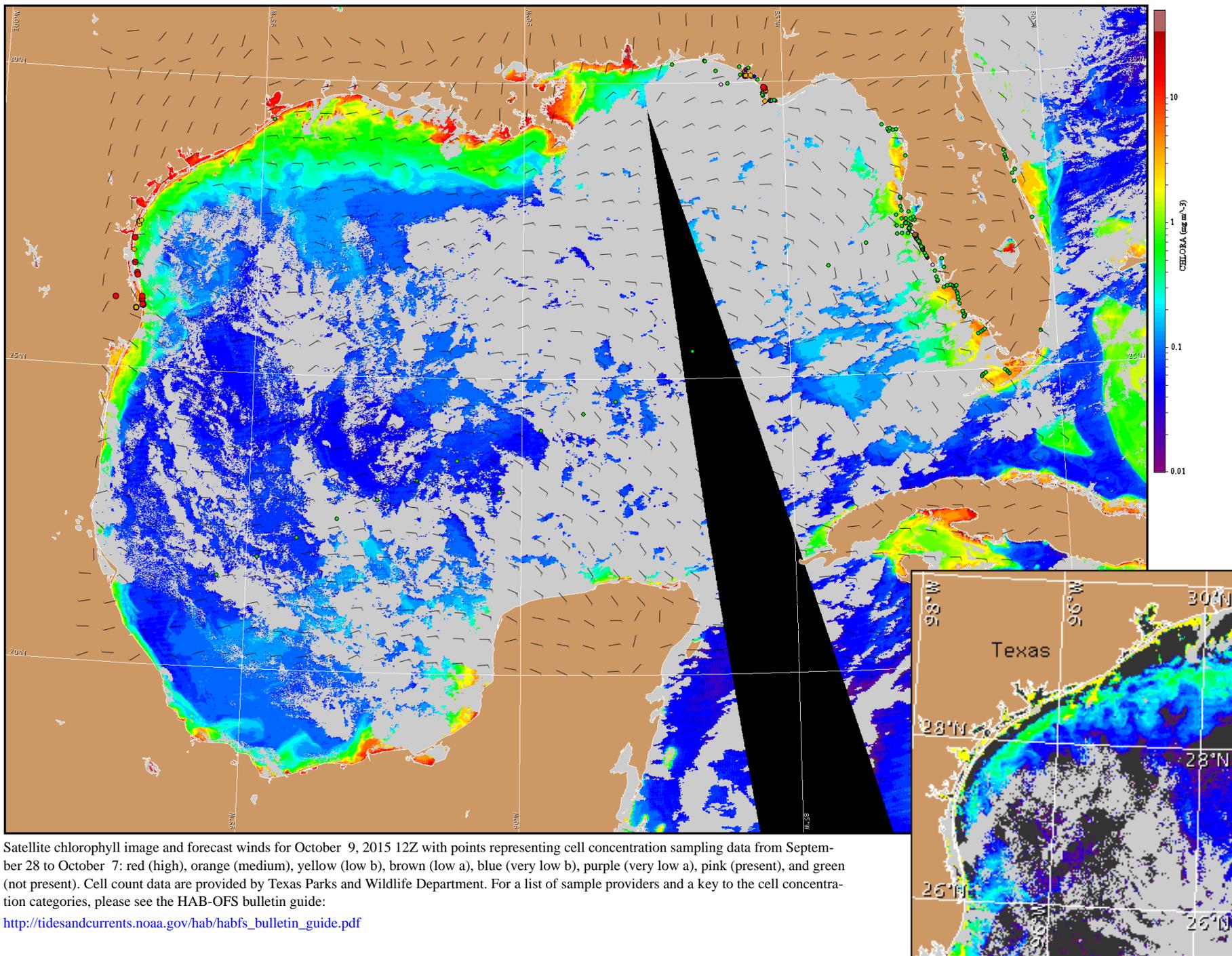
**Port Aransas to Baffin Bay:** East winds (10-15kn, 5-8m/s) today through Friday night becoming southeast (5-10kn, 3-5m/s) after midnight. North winds (5-10kn) Saturday becoming northeast in the afternoon. Southeast winds (5-10kn) Saturday night shifting south after midnight. Southwest to south winds (5-15kn, 3-8m/s) Sunday through Monday.

**Port Mansfield to the Rio Grande:** East to southeast winds (8-14kn, 4-7m/s) today through Friday night. Northeast winds (7-10kn, 4-5m/s) Saturday becoming southeast winds (7-10kn) Saturday night. South winds (8-14kn, 4-7m/s) Sunday through Monday.



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).





Satellite chlorophyll image and forecast winds for October 9, 2015 12Z with points representing cell concentration sampling data from September 28 to October 7: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample 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).