



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

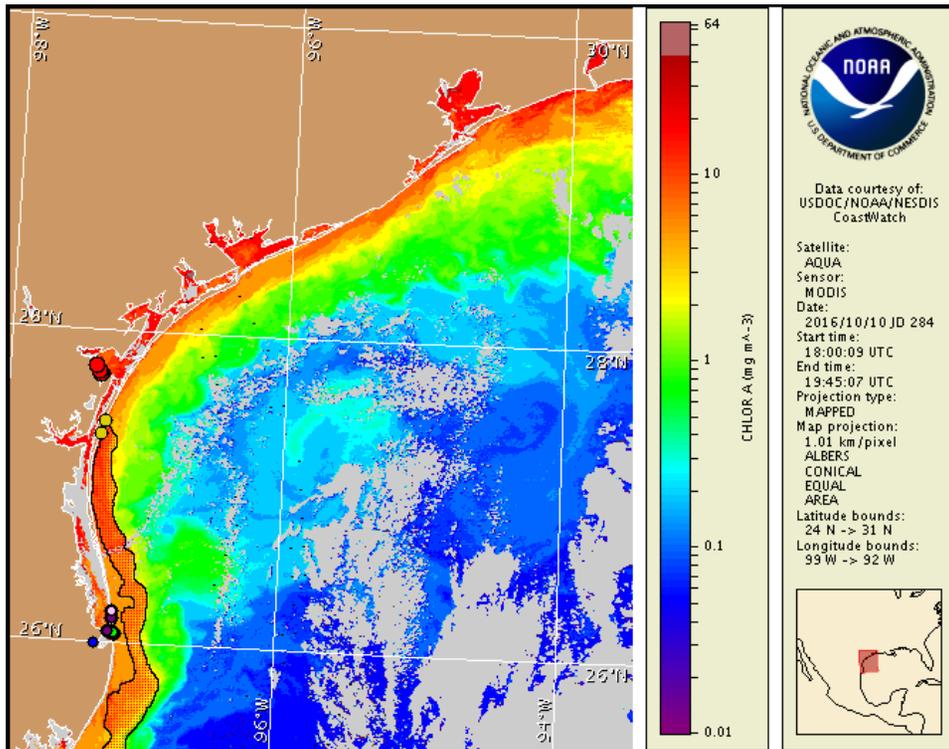
Tuesday, 11 October 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, October 6, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 1 to 10: 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/hab_publication/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 Corpus Christi Bay to Rio Grande regions. *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 Tuesday, October 11 to Thursday, October 13 is listed below:

County Region: Forecast (Duration)

Bay region-Corpus Christi Bay: Moderate (Tu-Th)

Port Aransas/Mustang Island to PINS: Low (Tu-Th)

Padre Island National Seashore region: Moderate (Tu-Th)

Mansfield Pass to Beach Access 6 region: Moderate (Tu-Th)

Beach Access 6 to Rio Grande region: Moderate (Tu-Th)

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

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

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Over the past few days, reports of respiratory irritation have been received from the Corpus Christi Bay and the Beach Access 6 to Rio Grande regions.

Analysis

Karenia brevis concentrations range between 'not present' and 'high' along the Texas coast from Aransas Pass to the Rio Grande (TPWD; 10/5-10/10). In the Corpus Christi Bay region, sampling on October 10 identified up to 'high' concentrations alongshore Cole Park, Robert Drive, and Swanter Park, where previous sampling on 9/20 indicated *K. brevis* was not present (TPWD). Sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates *K. brevis* concentrations have increased to 'very low a' from 'background' (TAMU; 10/6-10). Alongshore the Padre Island National Seashore, 'low b' *K. brevis* concentrations were detected (TPWD; 10/5). In the Beach Access 6 to Rio Grande, and Lower Laguna Madre and Laguna Vista regions, sampling on 10/5-6 indicated up to 'medium' *K. brevis* concentrations; however, resampling on 10/10 indicated *K. brevis* concentrations decreased to 'very low a' (TPWD). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at:

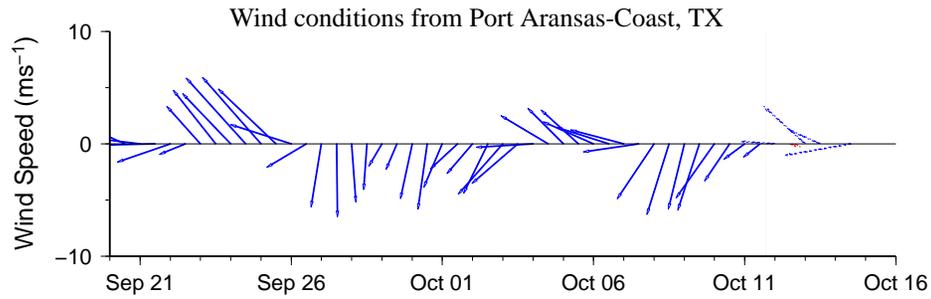
<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>.

For information on area shellfish restrictions, contact the Texas Department of State Health Services.

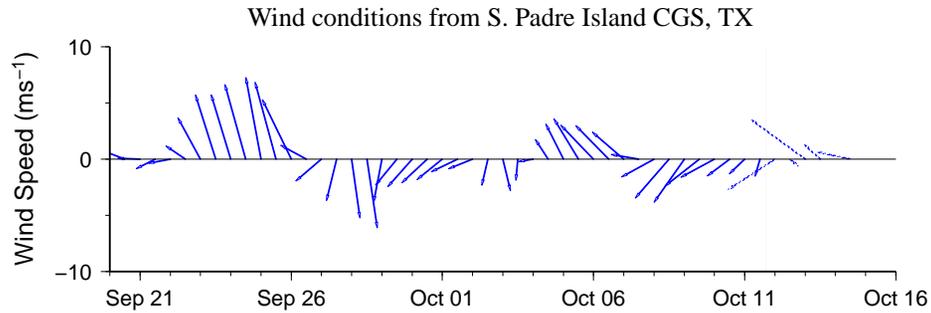
In recent MODIS Aqua imagery (10/10; shown left), elevated to very high chlorophyll (2 to $>20\mu\text{g/L}$) is visible along- and offshore from Sabine Pass to Pass Cavallo, but elevated chlorophyll in this region is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast. Patches of elevated to high ($4\text{-}15\mu\text{g/L}$) chlorophyll are visible extending along- and offshore the Texas coast 10-25km offshore Matagorda Island, 10-15km offshore Mustang Island, alongshore the PINS region, 5-25km offshore South Padre Island and stretching approximately 370km south of the Rio Grande.

Forecast models based on predicted near-surface currents indicate a maximum transport of >150 km south from the Port Aransas region, >150 km south from PINS Mile Marker #15, and >150 km south from Brazos Santiago Pass from October 10-14.

Davis, Kavanaugh



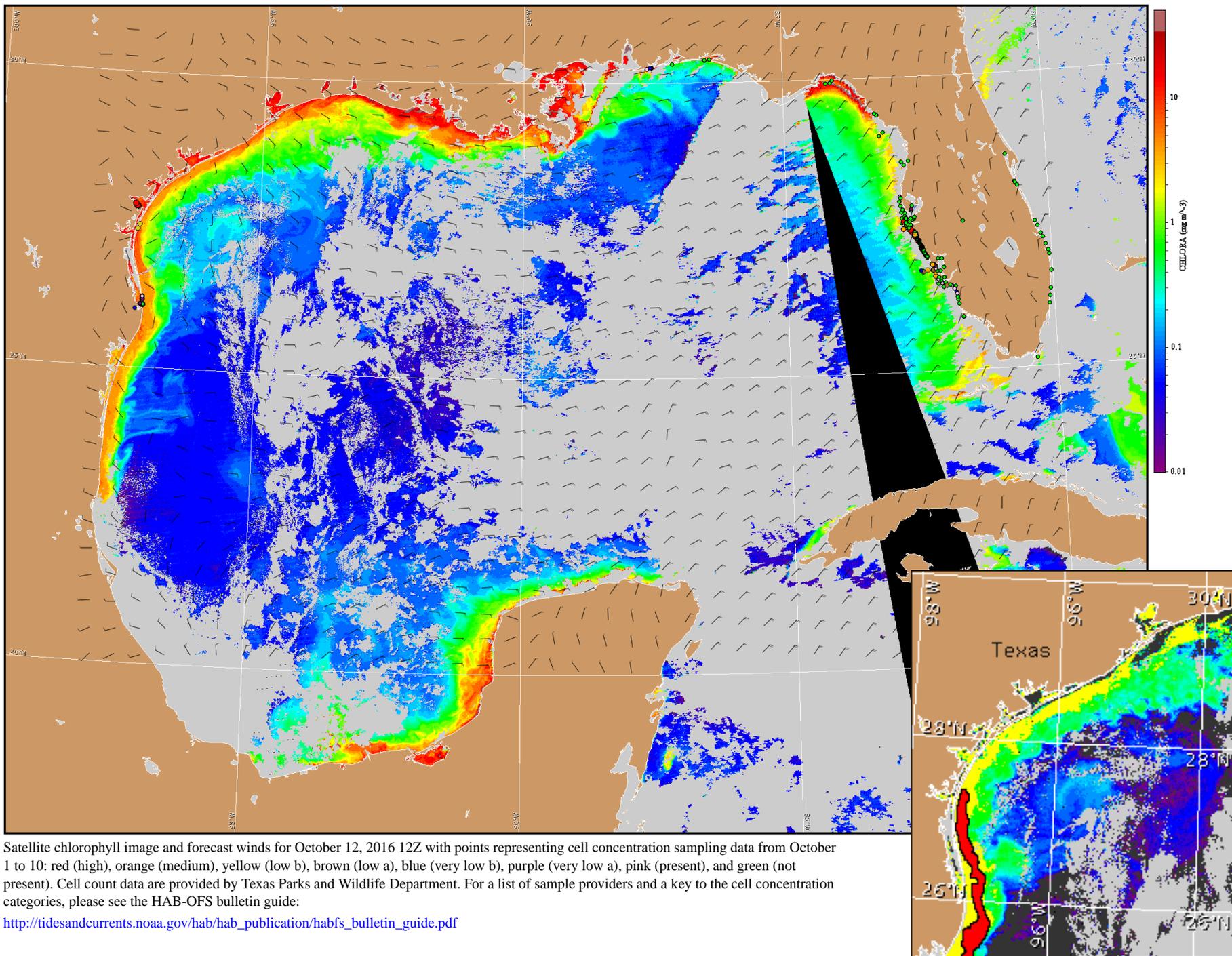
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Wind Analysis

Baffin Bay to Port Aransas: Northeast to east winds (5-10kn, 3-5m/s) today becoming southeast winds (10-15kn, 5-8m/s) tonight through Thursday.

Port Mansfield to Rio Grande: Northeast winds (7-10kn, 4-5m/s) today. East winds (7-10kn) tonight becoming southeast winds (7-14kn, 4-7m/s) after midnight through Thursday then shifting east (11-14kn, 6-7m/s) in the afternoon. Southeast winds (11-16kn, 6-7m/s) Thursday evening.



Satellite chlorophyll image and forecast winds for October 12, 2016 12Z with points representing cell concentration sampling data from October 1 to 10: 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).