



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

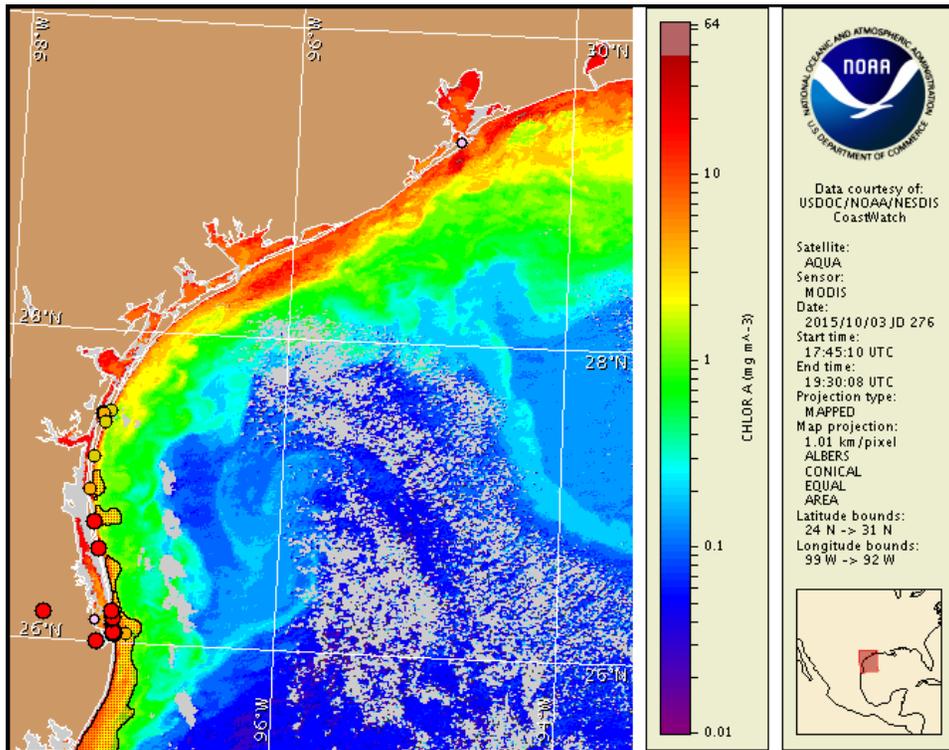
Monday, 05 October 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, October 1, 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 25 to October 2: 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

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 Monday, October 5 through Thursday, October 8 is listed below:

Region: Forecast (Duration)

Matagorda Peninsula region: Low (M), High (Tu-Th)

Bay region-Matagorda Bay: Moderate (M-Th)

Bay region-San Antonio Bay to Espiritu Santo Bay: Moderate (M-Th)

Bay region-Aransas Bay to Aransas Pass: High (M-Th)

Bay region-Corpus Christi Bay: High (M-Th)

Aransas Pass to PINS region: High (M-Th)

Bay region-Upper Laguna Madre: High (M-Th)

Padre Island National Seashore region: High (M-Th)

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

Beach Access 6 to Rio Grande region: High (M-Th)

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

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Respiratory irritation, fish kills, and discolored water have been reported along South Padre Island. Fish kills have also been reported along Boca Chica Beach. Reports of discolored water have also been received from Corpus Christi Bay.

Analysis

Karenia brevis concentrations range from 'not present' to 'high' from Galveston Bay to the Rio Grande. Along the upper Texas coast samples collected last week from the Imaging FlowCytobot at Pelican Island indicate that *K. brevis* concentrations remain at background concentrations (TPWD; 10/1-10/2). The Imaging FlowCytobot at UTMSI Pier in Port Aransas continues to identify *K. brevis* at low concentrations (TAMU; 10/1-5). Discolored water was reported from Corpus Christi Bay where up to high concentrations of *K. brevis* were previously detected. Samples collected along the PINS region indicate *K. brevis* concentrations increase southward along the coast, with the highest concentrations sampled at PINS mile markers 45 and 57. Up to high concentrations of *K. brevis* continue to be observed along South Padre Island and in Brazos Santiago Pass and the Lower Laguna Madre while samples collected near the Convention Center have maintained low concentrations (TPWD; 10/1-10/2). Fish kills have been reported from various locations in the bloom area. For more information, refer to the Texas Parks and Wildlife Red Tide Status. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (10/3, shown left) shows patches of elevated to very high chlorophyll (2 to >20 $\mu\text{g/L}$) are present along- and offshore the Texas coast adjacent to where *K. brevis* has been confirmed from cell concentrations. Patches are visible up to 12 miles offshore the Mustang Island region with a band stretching along the Padre Island

National Seashore, and additional patches visible up to 20 miles offshore South Padre Island stretching to south of the Rio Grande.

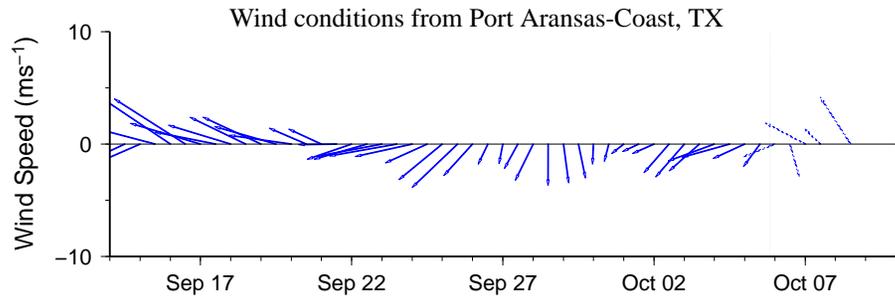
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 50 km south from Pass Cavallo, 40 km south from the Port Aransas region, and 50 km south from Brazos Santiago Pass from October 3 to October 8.

Lalime, Kavanaugh

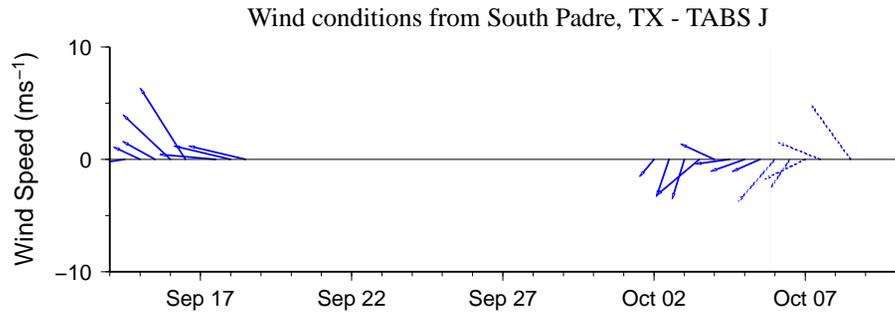
Wind Analysis

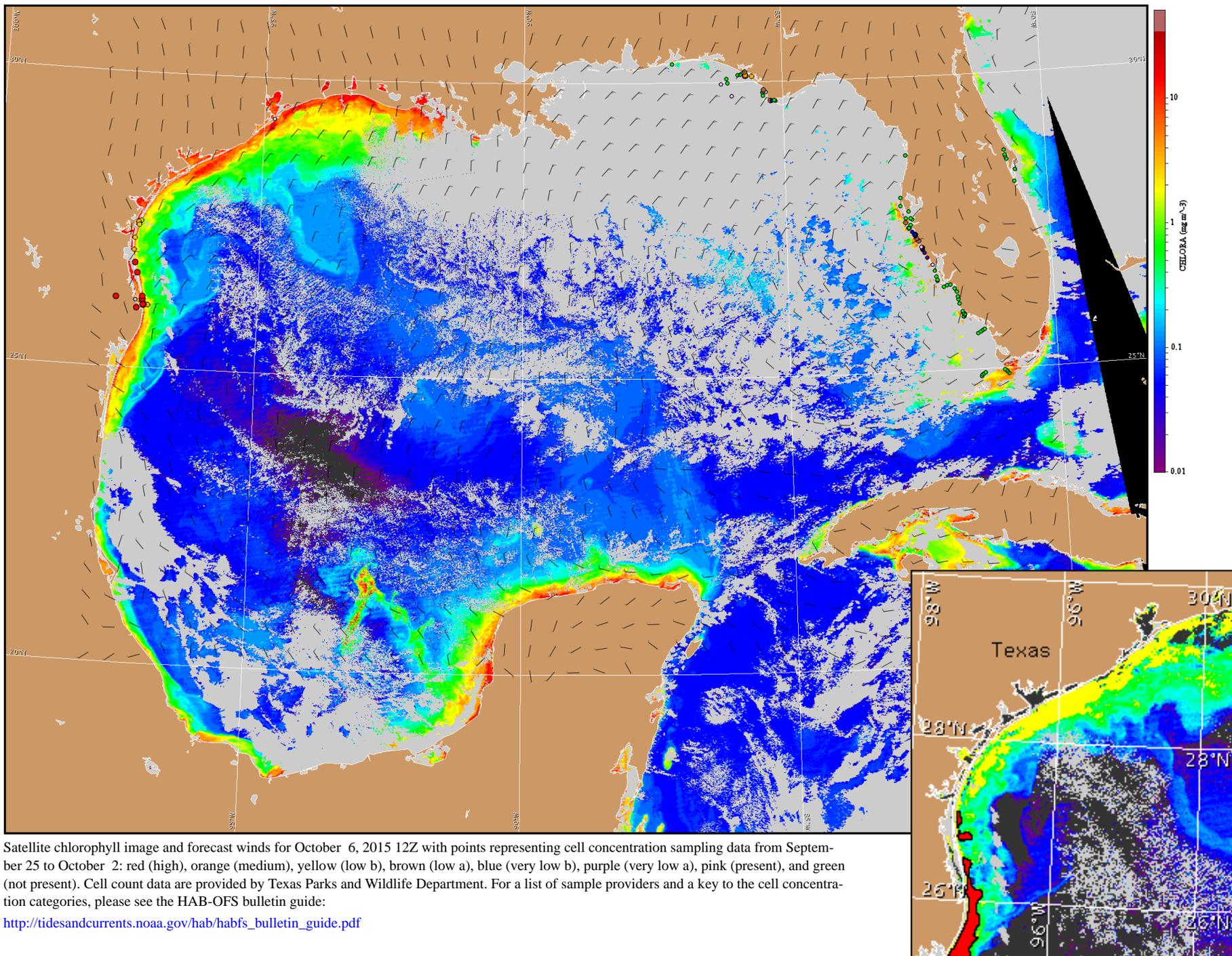
Port Aransas to Baffin Bay: Northeast to east winds (5-10kn, 3-5m/s) today through tonight. North winds (5-10kn) Tuesday shifting northeast Tuesday afternoon. Southeast winds (5-15kn, 3-8m/s) Tuesday night through Thursday.

Port Mansfield to the Rio Grande: North winds (7-12kn, 4-6m/s) today. Northeast winds (7-12kn) tonight through Tuesday. Southeast to east winds (7-16kn, 4-8m/s) Tuesday night through Thursday.



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 6, 2015 12Z with points representing cell concentration sampling data from September 25 to October 2: 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).