



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

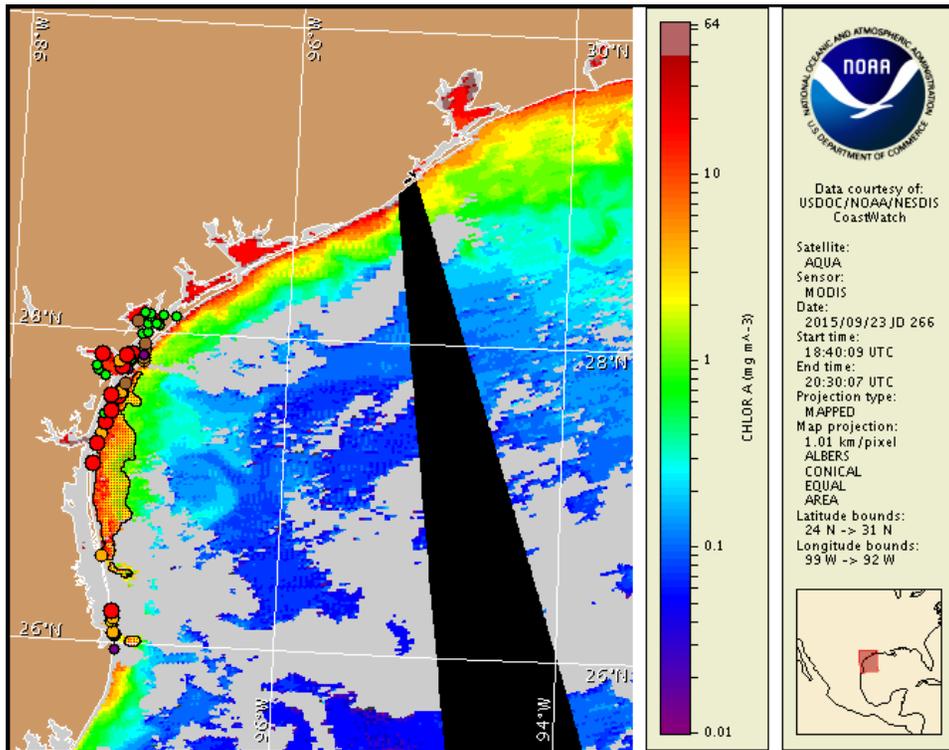
Thursday, 24 September 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 21, 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 14 to 23: 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 Thursday, September 24 through Monday, September 28 is listed below:

Region: Forecast (Duration)

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

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

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

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

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

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

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

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

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

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Dead fish and respiratory irritation have been reported from the Aransas Pass to Padre Island National Seashore region, South Padre Island, and within the Upper Laguna Madre. Respiratory irritation has also been reported within the Lower Laguna Madre.

Analysis

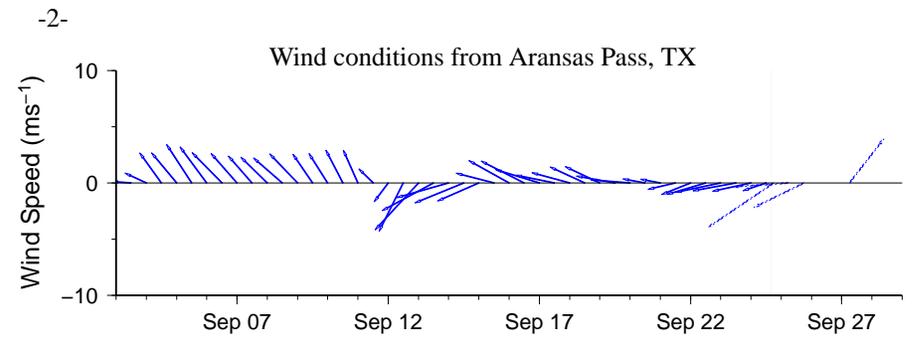
Karenia brevis concentrations range from 'not present' to 'high' from Galveston Bay (near Pelican Island) to the Lower Laguna Madre and South Padre Island regions. Recent samples indicated that while *K. brevis* is 'not present' throughout much of Aransas Bay, 'very low a' to 'high' concentrations were identified along Copano Bay (Island Mooring Channel), at the south end of Aransas Bay, and within Redfish Bay and the Lydia Ann Channel (TPWD; 9/17-22). Samples collected on 9/22 throughout Corpus Christi Bay range from 'not present' along the city-side of the Bay to 'medium' and 'high' at Indian Point Park and in/around the ship channel (TPWD); 'very low b' and 'high' *K. brevis* concentrations were also identified in the Upper Laguna Madre (TPWD, 9/21-23). Samples collected alongshore Aransas Pass, Mustang Island, and the PINS region continue to identify 'medium' to 'high' concentrations, with 'low a' concentrations along Mustang Island State Park (9/17-23). Several new samples collected along South Padre Island to the Rio Grande identified 'very low a' to 'high' concentrations along South Padre Island (highest concentrations at Beach Access Rd 6), 'low b' to 'medium' concentrations in the Brazos Santiago Pass area, and 'very low a' concentrations along Boca Chica State Park (TPWD; 9/17-23). *K. brevis* concentrations within the Lower Laguna Madre range from 'low b' to 'medium' (TPWD; 9/23). Recent sampling from Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, shows concentrations of *Karenia brevis* exceeding 10,000 cells/L (TAMU; 9/21-24). An Imaging FlowCytobot located in Galveston at Pelican Island has identified 'background' *K. brevis* concentrations (TAMU; 9/16-24). Slight to moderate respiratory irritation has been reported from Aransas Pass to South Padre Island at Bob Hall Pier, Packery Channel Jetty, PINS Mile

Markers 0-19, and the Isla Blanca Boat Ramp at Brazos Santiago Pass (TPWD; 9/22-23). An active fish kill is ongoing at U.T Pier and the Port Aransas Jetties. Reports of dead fish continue from Packery Channel to Pita Island in Upper Laguna Madre (TPWD (9/22-23). For information on area shellfish restrictions, contact the Texas Department of State Health Services.

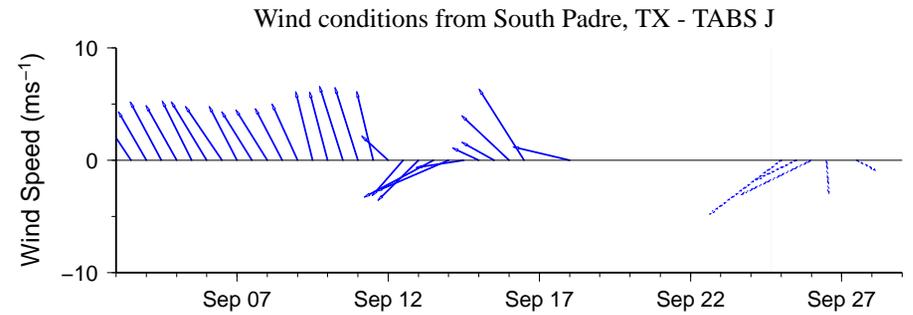
Recent MODIS Aqua imagery (9/22, shown left) is partially obscured by clouds along- and offshore the Texas coast from PINS to South Padre Island, limiting analysis. Patches of elevated to high chlorophyll (2-18 $\mu\text{g/L}$) are present along- and offshore the Texas coast from Sabine Pass to the Rio Grande, with the largest patch of anomalously high chlorophyll situated along- and offshore PINS and South Padre Island.

Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 30 km south from the Port Aransas region, 40 km south from PINS Mile Marker #15, and 50 km south from Brazos Santiago Pass from September 23-27.

Keeney, Derner



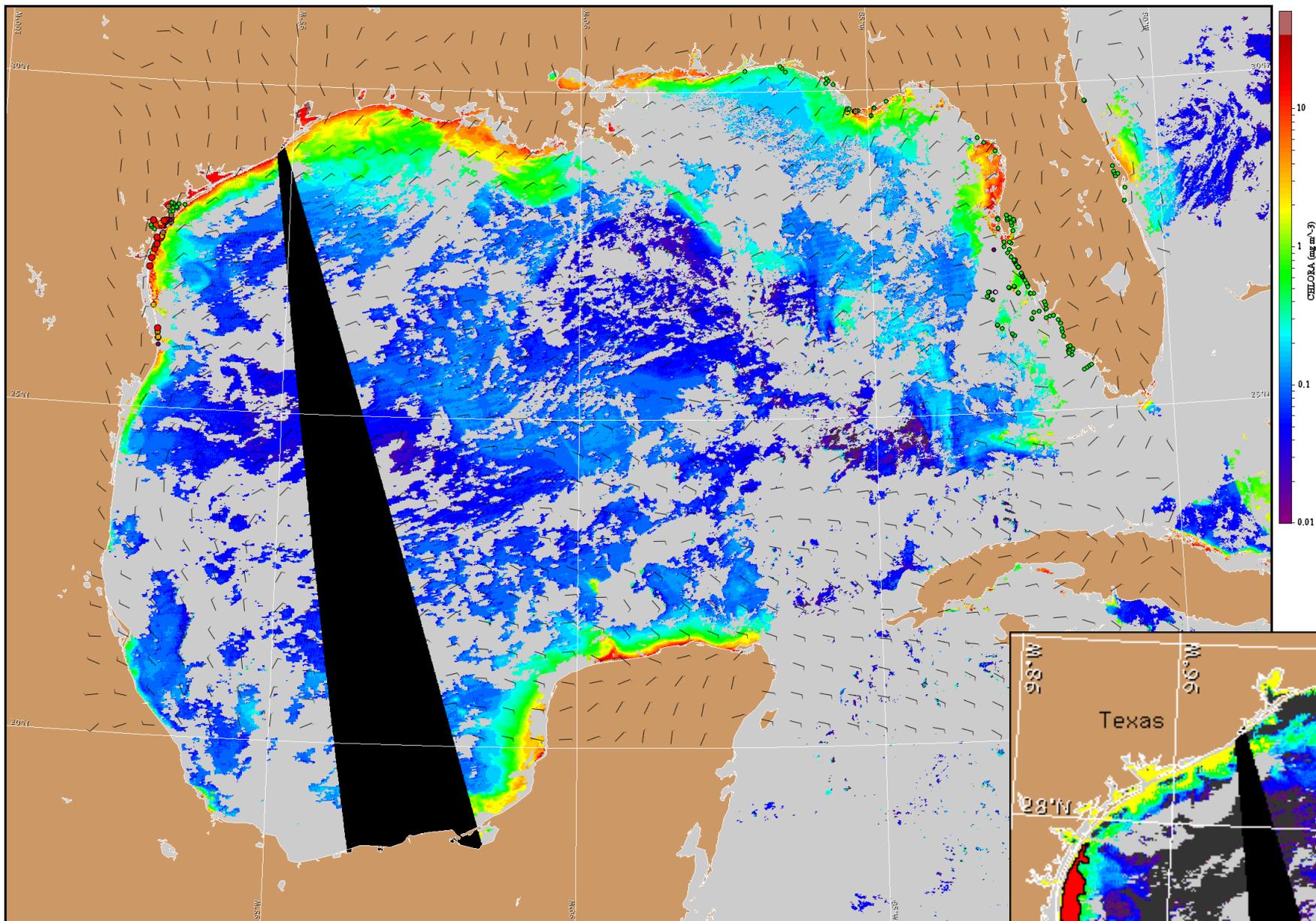
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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



Wind Analysis

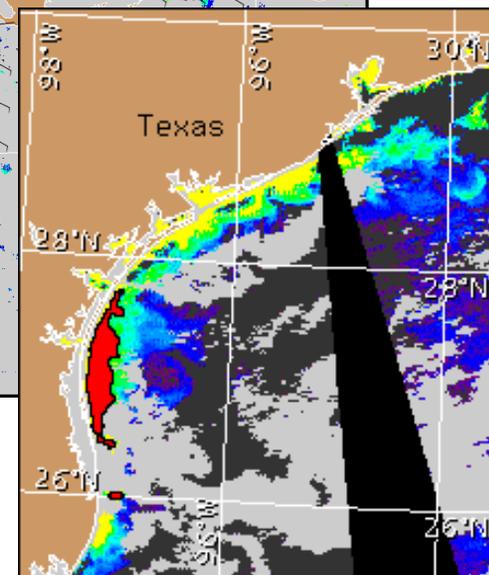
Port Aransas to Baffin Bay: East to northeast winds (5-15kn, 3-8m/s) today through Monday afternoon.

Port Mansfield to the Rio Grande: North to Northeast winds (7-16kn, 4-8 m/s) today through Monday afternoon.



Satellite chlorophyll image and forecast winds for September 25, 2015 12Z with points representing cell concentration sampling data from September 14 to 23: 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).