



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

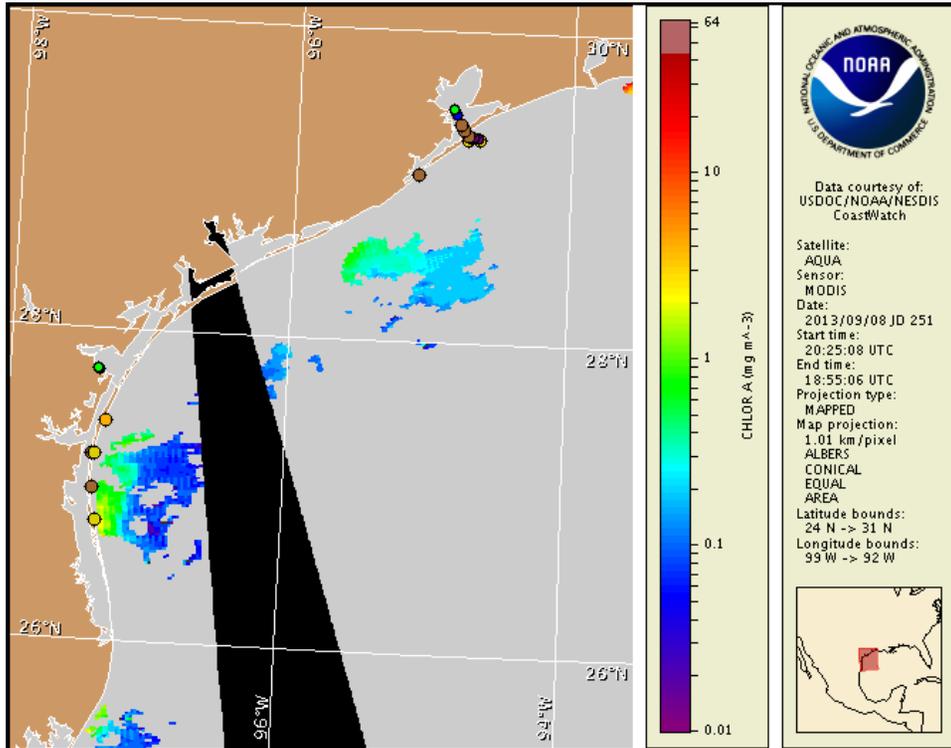
Monday, 09 September 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, September 5, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from August 30 to September 6: 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

Not present to medium concentrations of *Karenia brevis* (commonly known as Texas red tide) are present along the coast of Texas. *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, September 9 to Thursday, September 12 is listed below:

Region: Forecast (Duration)

Bolivar Peninsula region: Low (M-Th)

Galveston Island region: Moderate (M-Th)

Bay region-Galveston Bay: Low (M-Th)

San Luis Pass to Sargent Beach region: Low (M-Th)

Padre Island National Seashore region: High (M-T, Th), Moderate (W)

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

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Texas Department of State Health Services and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. No reports of respiratory irritation or dead fish have been received over the past few days.

There are currently patches of a bloom of the algae *Aureoumbra lagunensis* in the upper Laguna Madre region. This algae species does not produce the respiratory irritation associated with the Texas red tide caused by *Karenia brevis*, but it may cause discolored water and fish kills.

Analysis

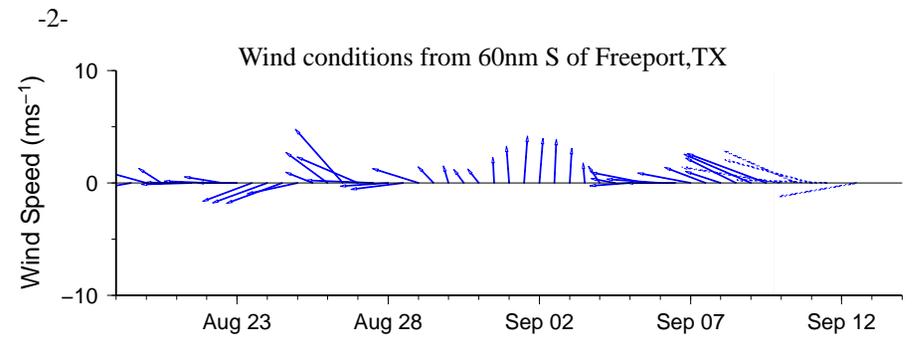
A harmful algal bloom of *Karenia brevis* has been identified in the Bolivar Peninsula, Galveston, San Luis Pass to Sargent Beach and Padre Island National Seashore (PINS) regions of Texas. No new *K. brevis* samples have been received. Last week, samples collected from the Galveston Island, Galveston Bay, and Bolivar Peninsula regions indicated *K. brevis* concentrations ranged between 'not present' and 'low b' (TPWD, 9/2-3), while samples from the PINS region indicated that *K. brevis* concentrations ranged between 'not present' and 'medium' (TPWD, 8/30-9/4).

Over the past few days, MODIS Aqua imagery (9/8, shown left) has been obscured by clouds, limiting analysis. In MODIS Aqua imagery from 9/5 (not shown), clouds obscured the region from PINS to south of the Rio Grande, but elevated chlorophyll (3-8 $\mu\text{g/L}$) was visible stretching along- and offshore the coast from High Island to the Mustang Island region, with patches of high to very high chlorophyll (10 to $>20 \mu\text{g/L}$) remaining visible along the coast northeast of the Bolivar Peninsula region and also in small patches stretching along Galveston Island to the Matagorda Island region. Elevated chlorophyll is not necessarily indicative of the presence of *K. brevis* and could also be due to the resuspension of benthic chlorophyll and sediments along the coast. In situ sampling is necessary to confirm the presence of *K. brevis*.

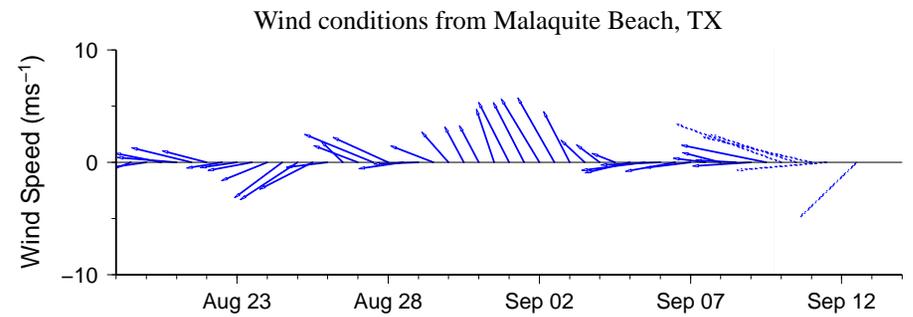
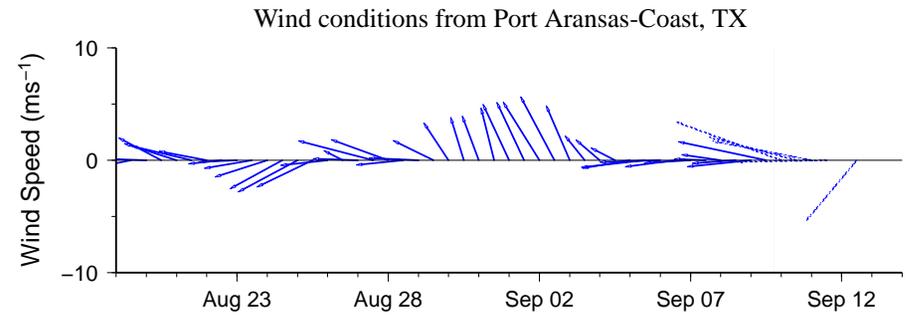
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 70 km south from the Bolivar Roads Pass

region, 100 km south from the Sargent Beach region, 80 km south from the PINS 0 mile marker, and 40 km south from the PINS 45 mile marker, with a potential transport of 120 km south from the Port Aransas region, from September 8-12.

Kavanaugh, Yang



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).

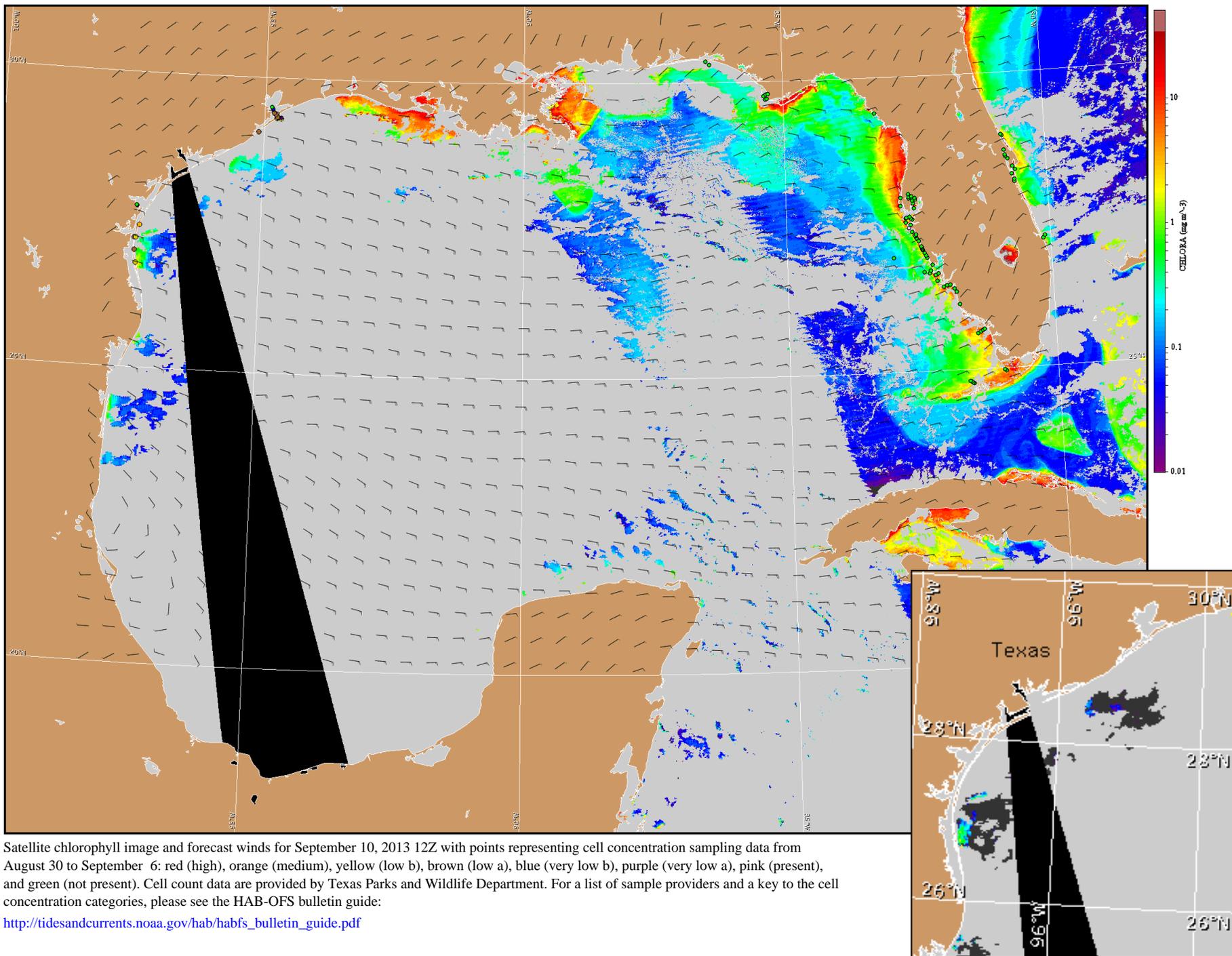


Wind Analysis

Galveston Region: East winds (15kn, 8m/s) today. Southeast winds (10-15kn, 5-8m/s) tonight. East winds (10-15kn) Tuesday through Wednesday night. East winds (5-15kn, 3-8m/s) Thursday.

Port Aransas: East winds (10-20kn, 5-10m/s) today through Thursday.

Padre Island National Seashore Region: East winds (15kn, 8m/s) today. Southeast winds (15kn) tonight. East winds (15kn) Tuesday through Wednesday. Northeast winds (15kn) Thursday.



Satellite chlorophyll image and forecast winds for September 10, 2013 12Z with points representing cell concentration sampling data from August 30 to September 6: 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).