



# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

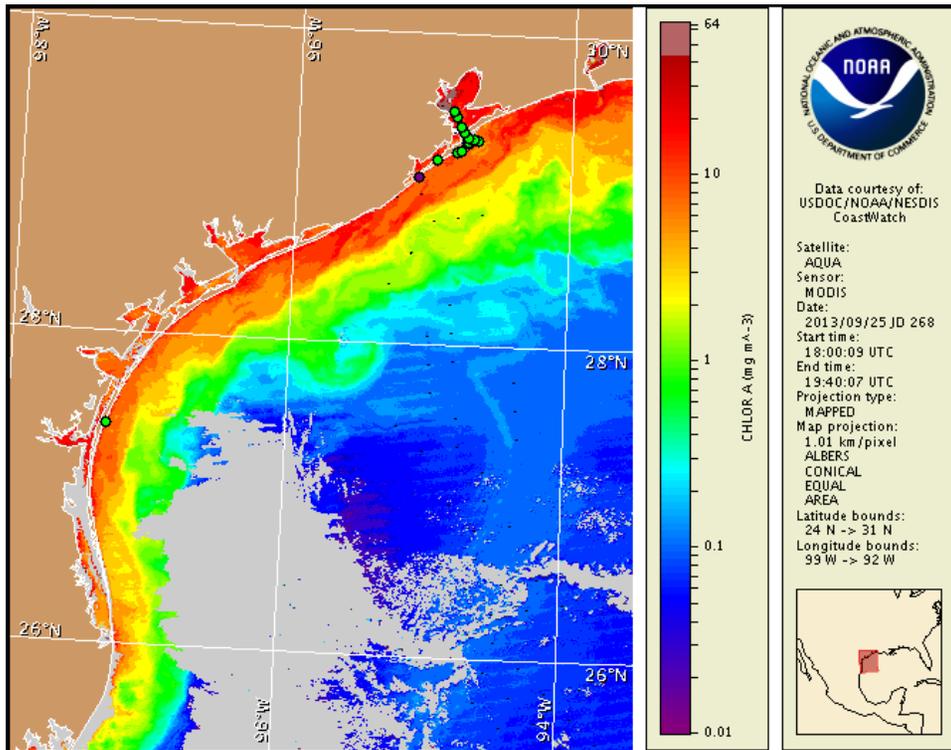
Thursday, 26 September 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 23, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 16 to 24: 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

Not present to very low 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 Thursday, September 26 to Monday, September 30 is listed below:

**Region:** Forecast (Duration)

**Port Aransas/Mustang Island to Padre Island National Seashore region:** Very Low (Th-Su), None (M)

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

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](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](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

No new samples have been received since late last week, when samples collected in the Galveston Island, Galveston Bay, and Bolivar Peninsula regions indicated that *K. brevis* concentrations were 'not present' (TPWD; 9/19). In the Port Aransas region, Texas A&M University's Imaging Flow Cytobot indicates *K. brevis* concentrations ranging between 'not present' and 'very low a' at Port Aransas (TAMU, TPWD; 9/26). No new samples have been received from the Padre Island National Seashore (PINS) region since samples collected last week indicated that *K. brevis* concentrations ranged between 'not present' and 'very low b' (TPWD; 9/18). No impacts have been reported from anywhere along the Texas coast over the last few days (TPWD; 9/23-26).

In recent MODIS Aqua imagery (9/25, shown left) a band of elevated to high chlorophyll (2 to >10 µg/L) is visible along- and offshore the coast from Sabine Pass to south of the Rio Grande, with patches of very high chlorophyll (>20 µg/L) in the High Island to Sabine Pass region. Elevated chlorophyll is most likely not indicative of the presence of *K. brevis* and is probably due to the resuspension of benthic chlorophyll and sediments along the coast.

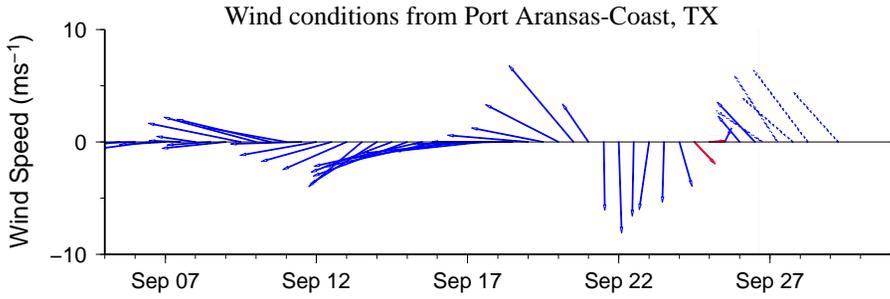
Forecast models based on predicted near-surface currents indicate a maximum transport of *K. brevis* concentrations from coastal sample locations of 10 km south from the Port Aransas region from September 25-29.

Kavanaugh, Derner

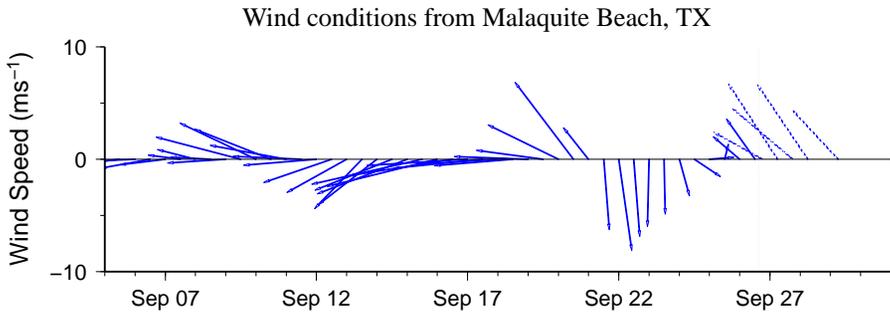
## Wind Analysis

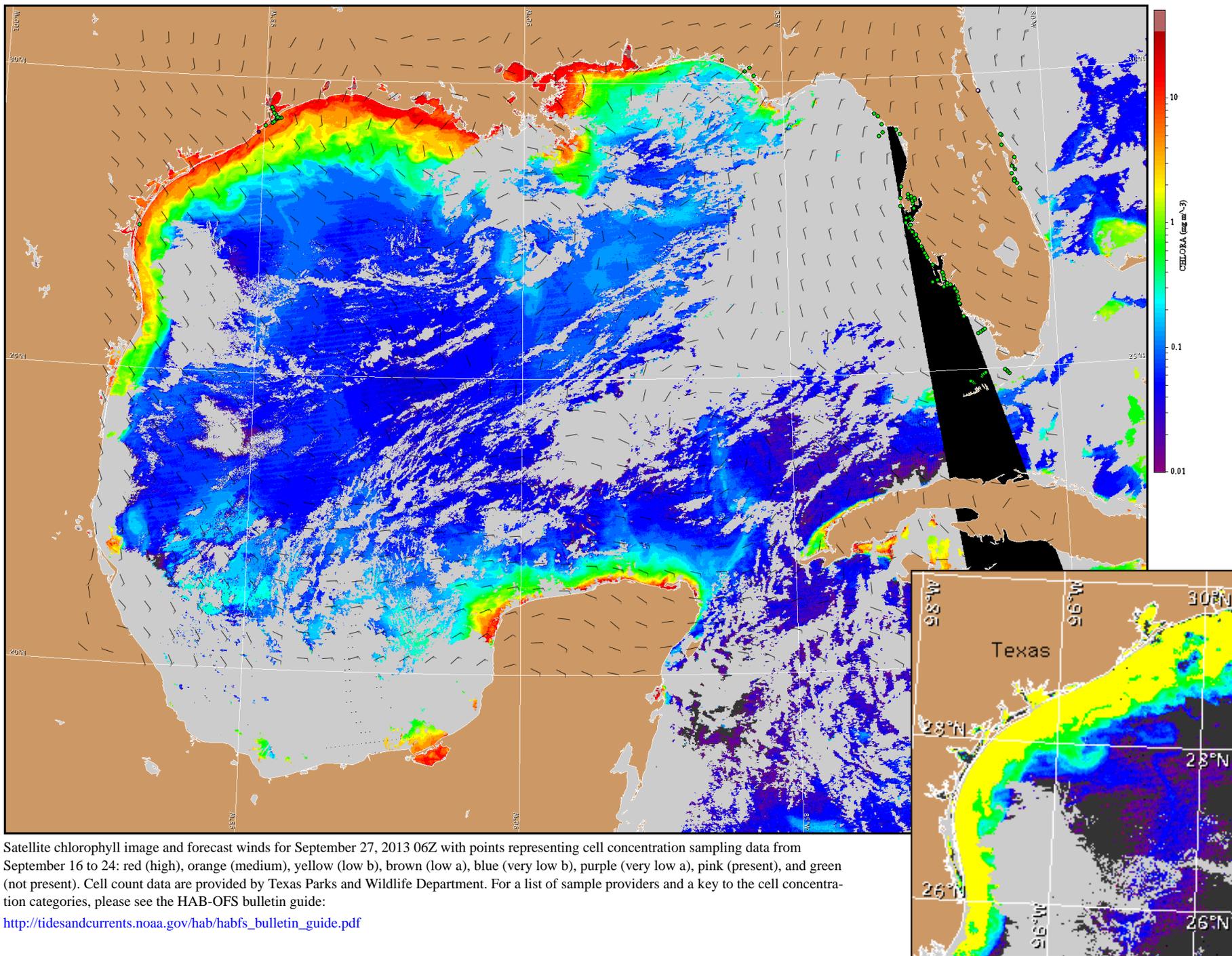
**Port Aransas:** South winds (5-10kn, 3-5m/s) today becoming southeast winds (5-15kn, 3-8m/s) through Sunday, increasing to 15-20kn (8-10m/s) Friday night. Southwest winds (5-10kn) Monday.

**Padre Island National Seashore Region:** Light winds becoming southeast winds (15-20kn, 8-10m/s) today through Sunday. South winds (10kn, 5m/s) 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 September 27, 2013 06Z with points representing cell concentration sampling data from September 16 to 24: 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).