



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

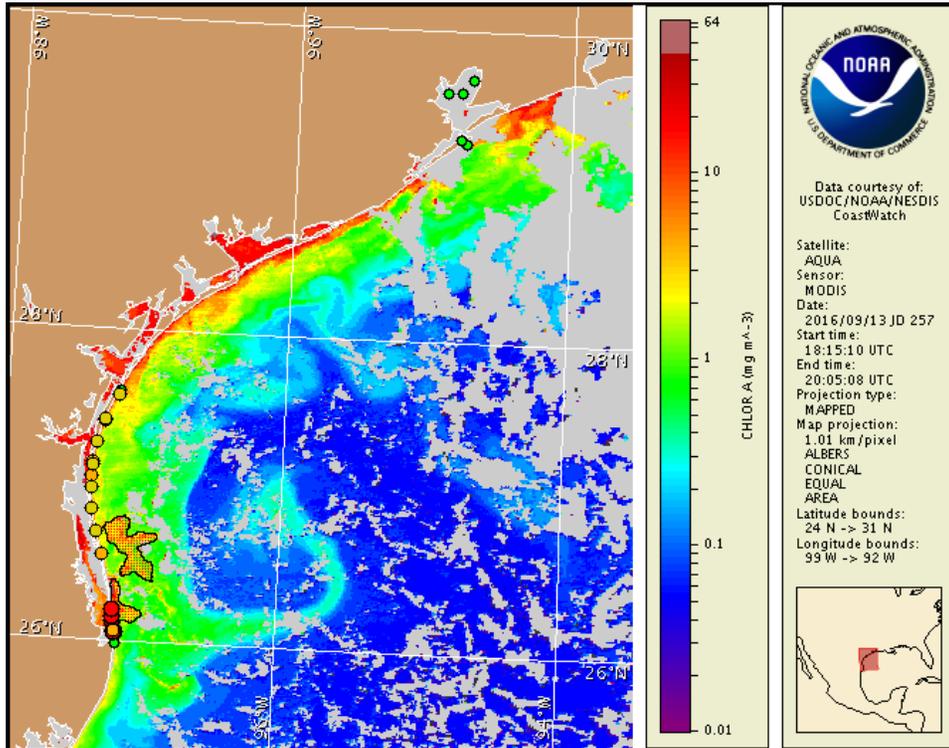
Thursday, 15 September 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 12, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 5 to 14: 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 the Port Aransas/Mustang Island region to the Rio Grande region. *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 15 through Monday, September 19 is listed below:

County Region: Forecast (Duration)

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

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

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

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

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

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

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Respiratory irritation has been reported from the Padre Island National Seashore region and from the South Padre Island region. Dead fish were reported in the South Padre Island region.

Analysis

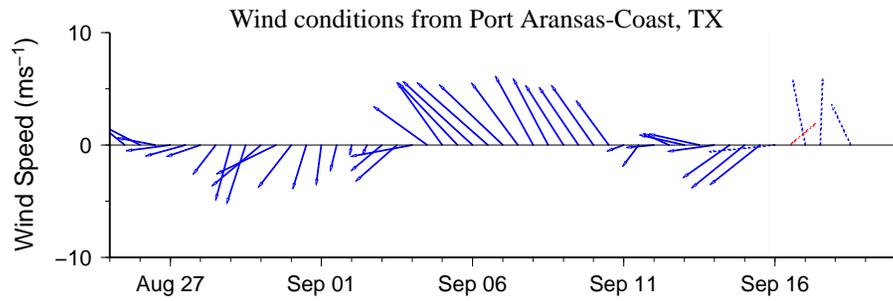
Recent samples collected along- and offshore the coast of Texas from Galveston Bay to the Rio Grande region have identified 'not present' to 'high' concentrations of *Karenia brevis*, with the highest concentrations collected from Beach Access 6 to the Rio Grande region and within the Lower Laguna Madre (TPWD; 9/12-14). In the Aransas Pass to PINS region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates that *K. brevis* ranges between 'not present' and 'very low b' concentrations (TAMU; 9/12-15). In the PINS region, samples indicate 'low a' to 'medium' *K. brevis* concentrations (TPWD; 9/12). In the Beach Access 6 to Rio Grande region and in the Lower Laguna Madre to Laguna Vista bay regions samples indicate 'not present' to 'high' concentrations of *K. brevis* are present with the highest concentrations observed at the Isla Blanca Boat Ramp (TPWD; 9/13-14). For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (9/13; shown left) is partially obscured by clouds along the Texas coast from Sabine Pass to the Galveston Island region, limiting analysis. Patches of elevated to high chlorophyll (2-18 $\mu\text{g/L}$) are visible from Sabine Pass to Galveston Island. Elevated chlorophyll from Sabine Pass to Galveston Island 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 chlorophyll (2-18 $\mu\text{g/L}$) are present from San Luis Pass to Aransas Pass and patches of elevated to very high chlorophyll (3 to >20 $\mu\text{g/L}$) are visible from Mansfield Pass to the Rio Grande. Chlorophyll appears to be highest in the area from Mansfield Pass to Beach Access 6; additional sampling is recommended. Several elevated to high chlorophyll filaments are visible offshore the PINS region to south of the Rio Grande, some extending over 40km offshore.

Forecast models based on predicted near-surface currents indicate a maximum transport

of 10 km south from the Port Aransas region, and negligible transport from PINS Mile Marker #15, and from Brazos Santiago Pass from September 13-18.

Lalime, Kavanaugh



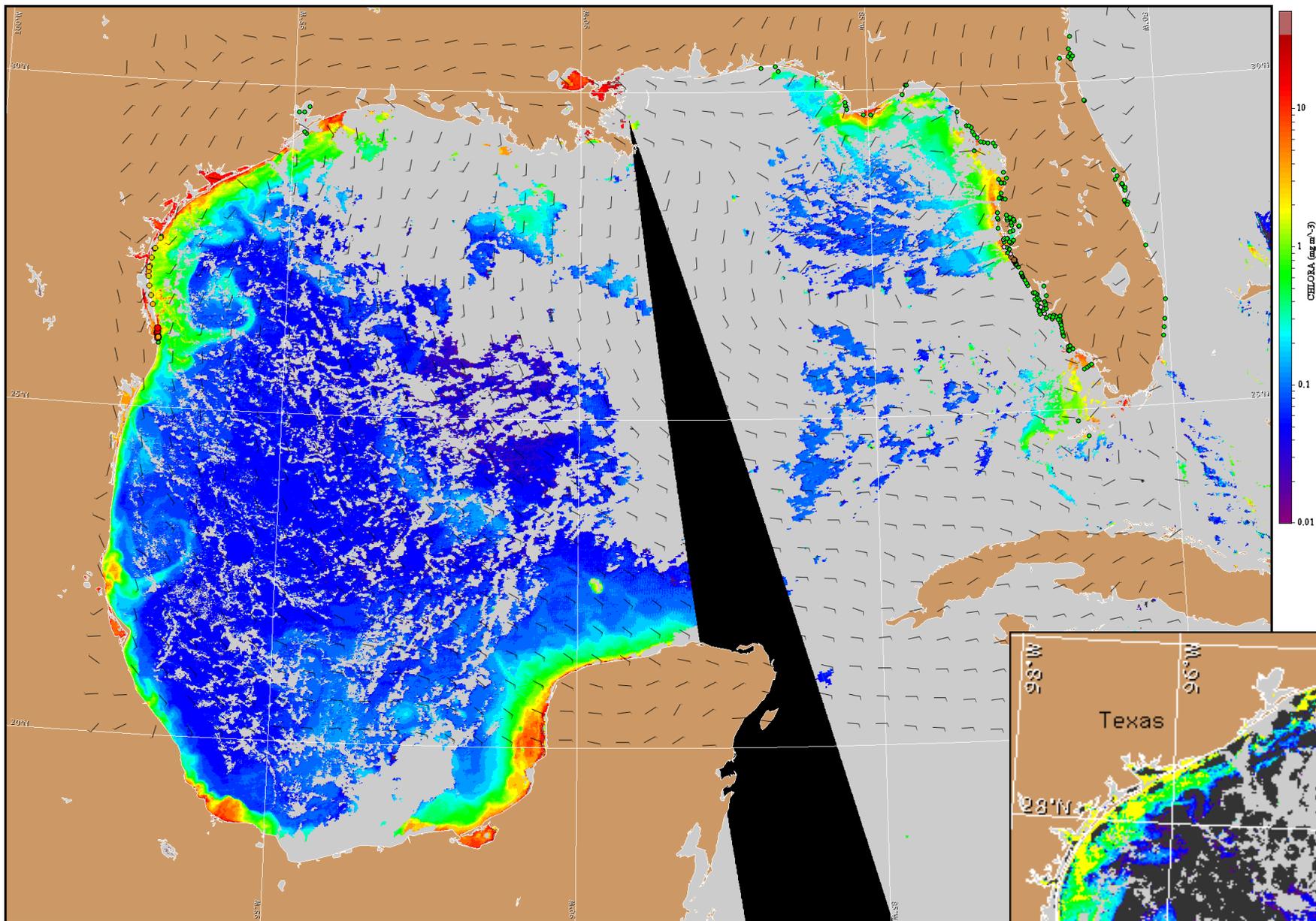
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.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

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Wind Analysis

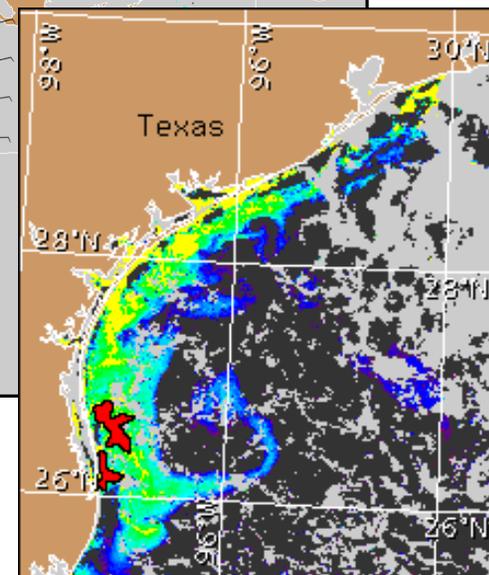
Baffin Bay to Port Aransas: Northeast to east winds (10-15kn, 5-8m/s) through tonight becoming southeast (5-10kn, 3-5m/s) after midnight. South to southeast winds (5-15kn, 3-8m/s) Friday through Monday.

Baffin Bay to Port Mansfield: Northeast winds (7-11kn, 4-6m/s) today. East winds (7-10kn, 4-5m/s) tonight. South to southeast winds (7-13kn, 4-7m/s) Friday through Sunday night. East winds (7-11kn, 4-6m/s) Monday.



Satellite chlorophyll image and forecast winds for September 16, 2016 12Z with points representing cell concentration sampling data from September 5 to 14: 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).