



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

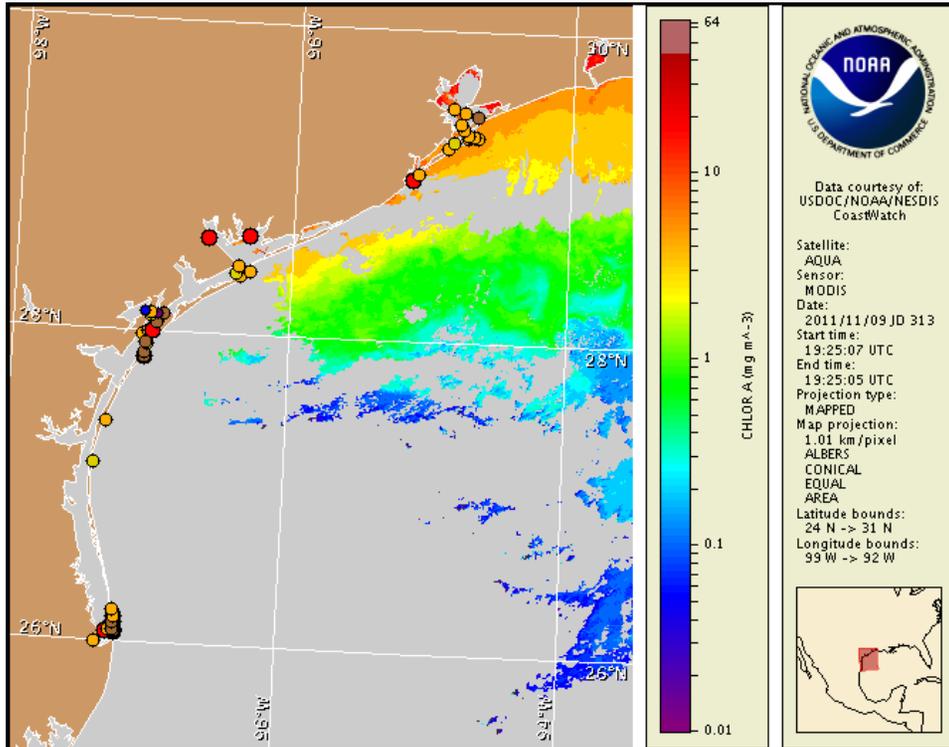
Thursday, 10 November 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 7, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from October 31 to November 9 shown as red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data 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

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

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, alongshore the Matagorda Peninsula and within Matagorda Bay, in the Aransas Pass area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, within the lower Laguna Madre, and within the Brownsville Ship Channel area. Patchy high impacts are possible today through Sunday in the South Padre Island region and within the lower Laguna Madre, today through Saturday along the Padre Island National Seashore region, Friday through Sunday in the Galveston/Freeport, Matagorda, and Port Aransas/Corpus Christi regions, and today within the Brownsville Ship Channel. Patchy moderate impacts are possible Sunday along Padre Island National Seashore, and Friday through Sunday within the Brownsville Ship Channel. Patchy low impacts are possible today in the Galveston/Freeport, Matagorda, and Port Aransas/Corpus Christi regions. No additional impacts are expected at the coast in Texas today through Sunday, November 13. Respiratory irritation has been reported from the Aransas Pass/Mustang Island region and alongshore the Padre Island National Seashore and South Padre Island regions. Dead fish and discolored water have been reported from the Matagorda and Aransas Bay regions and alongshore South Padre Island. Dead fish have also been reported in the Mustang Island area.

Analysis

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, alongshore the Matagorda Peninsula and within Matagorda Bay, in the Aransas Pass area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, within the lower Laguna Madre, and within the Brownsville Ship Channel area.

Samples collected in the Galveston Bay region on 11/7 indicate that 'medium' *Karenia brevis* concentrations continue to be present at the coast, within Bolivar Roads Pass, and within the southern portion of Galveston Bay. Six samples collected within Galveston Bay at Houston Ship Channel Markers 25, 35, 47, and 55 and Oyster Leases 301, and 414 indicate that *K. brevis* concentrations range between 'low a' and 'medium' (11/7; TPWD). *K. brevis* concentrations appear to have increased slightly within and outside Bolivar Roads Pass and within the Galveston Ship Channel, with 5 new samples all indicating 'medium' concentrations where 'low b' to 'medium' concentrations were last reported on 10/31 (11/7; TPWD). No impacts have been reported from the Galveston region.

One sample received from the Matagorda Bay region, at the Perry R. Bass hatchery intake, indicates 'high' *K. brevis* concentrations (11/7; TPWD). Samples last collected in the Matagorda and Espiritu Santo Bay regions indicated 'low b' to 'high' concentrations (11/1; TPWD). A heavy bloom has been noted in Lavaca Bay, Carancahua Bay, and Matagorda Bay to Palacios Harbor, with discolored water visible from the TPWD Research Center to Port O'Connor. Dead fish and feeding seagulls have been reported from Turtle Bay near Jensen Point (11/8; TPWD).

In the Aransas/Corpus Christi Bay region, four samples collected near the coast within Aransas Pass indicate that *K. brevis* concentrations remain around 'medium', with one 'low a' and three 'medium' samples collected at the Port Aransas jetties (U.T. Pier) and

UTMSI pier and marina (11/8; TPWD). Several samples collected within Aransas Bay indicate a range of *K. brevis* concentrations from 'very low a' to 'high' (11/7-8; TPWD). 'High' concentrations were found near the center of the bay, with 'medium' concentrations identified from nearby ICWW #49 and Cove Harbor, as well as the northern end of Aransas Bay at the Copano Bay Causeway (11/7; TPWD). Other samples collected at the northern end of Aransas Bay and within Copano Bay included 'low b' concentrations offshore Fulton, 'low a' concentrations at ICWW #7 and Long Reef, 'very low b' concentrations within Copano Bay, and 'very low a' concentrations at the mouth of St. Charles Bay (11/7; TPWD). At the southern end of Aransas Bay, 'low b' concentrations were identified inside Mud Island, and two 'low a' samples were collected from St. Jose Island outside Mud Island (11/8; TPWD). One sample within the Lydia Ann Channel at the lighthouse contained 'low a' *K. brevis* concentrations (11/8; TPWD). Dead fish have been reported along Mustang Island and throughout the Rockport area of Aransas Bay (11/7-8; TPWD). Discolored water has also been reported throughout Aransas Bay (11/8; TPWD).

Two samples collected on Monday continue to confirm 'low b' and 'medium' *K. brevis* concentrations alongshore the Padre Island National Seashore region (PINS mile markers 0 and 18.5; 11/7; TPWD). Respiratory irritation was reported in the area, but no new dead fish were present (11/8; TPWD).

Alongshore South Padre Island (Gulf), nine samples collected from Beach Access 6 to the UTPA Coastal Studies Lab indicate that *K. brevis* concentrations have decreased to 'medium' from 'high' concentrations reported on Monday (11/7-9; TPWD). Samples collected within Brazos Santiago Pass and at the Isla Blanca boat ramp have remained at 'medium' to 'high' over the past few days, with a decrease to 'low b' at the Isla Blanca boat ramp on 11/9 (11/7-9; TPWD). *K. brevis* concentrations within the lower Laguna Madre continue to fluctuate. Two samples collected at Port Isabel indicate that *K. brevis* concentrations have increased to 'high' from 'medium' concentrations reported on 11/2 (11/7-8; TPWD). 'Low a' to 'medium' concentrations are present at the east and west ends of the Queen Isabella Causeway (11/7-9; TPWD). *K. brevis* concentrations at the Sea Ranch Marina have decreased to a range between 'low a' and 'very low a' from 'medium' to 'high' concentrations previously reported 11/2-4 (11/7-9; TPWD). 'Low a' *K. brevis* concentrations continue to be reported three miles north of the Queen Isabella Causeway (Old Parrot Eyes; 11/7-9; TPWD). Two samples collected within the Brownsville Ship Channel at the San Martin Boat ramp indicate that 'medium' concentrations continue to be present in the channel (11/7-8; TPWD). Respiratory irritation, discolored water, dead fish, and feeding birds have been reported alongshore South Padre Island (11/7-8; TPWD). Respiratory irritation and dead fish have been reported from the Long Island area of Port Isabel and dead fish have been reported from the west end of the Brownsville Ship Channel (11/7; TPWD).

Imagery along the Texas coastline has been completely obscured by clouds over the last week, limiting analysis. In MODIS imagery from 11/9 (shown page 1) elevated chlorophyll (2-7 $\mu\text{g/L}$) is visible stretching along- and offshore from Sabine Pass to San Luis Pass. Further analysis along the Texas coastline is not possible at this time. As of late last week (11/4), elevated chlorophyll (1-8 $\mu\text{g/L}$) was visible along much of the Texas coastline. Elevated chlorophyll at the coast may contain *K. brevis* but could also be due to the

continued resuspension of benthic chlorophyll and sediments, making it difficult to determine the extent of blooms from satellite imagery alone.

Forecast models indicate a maximum bloom transport from coastal sample locations of 15km south from the Galveston Bay region, 30km south from the Matagorda Peninsula region, 60km south from the Aransas Pass and Padre Island National Seashore regions, and 100km south from Brazos Santiago Pass from November 9-13. Onshore winds over the next several days will increase the potential for impacts along the Texas coastline.

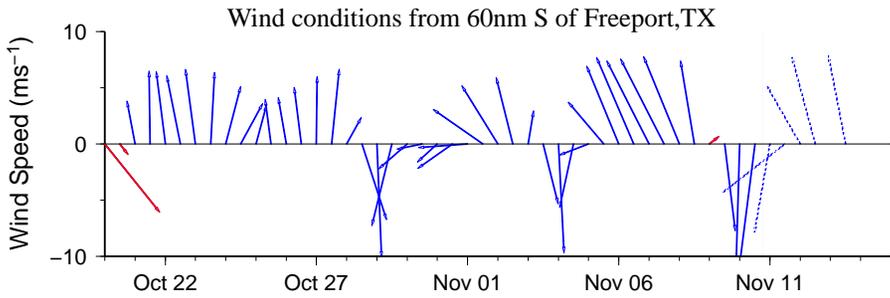
Derner, Kavanaugh

Wind Analysis

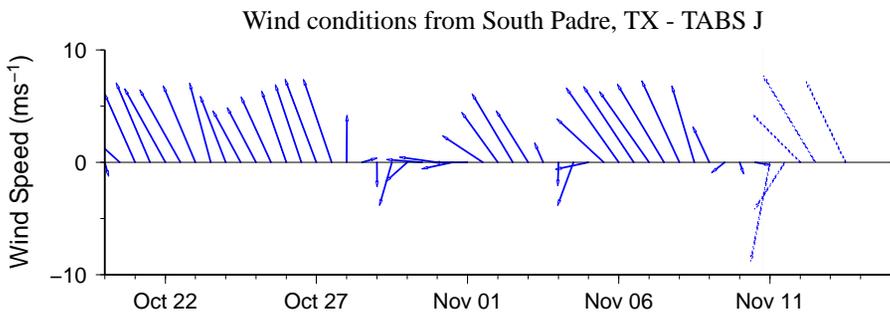
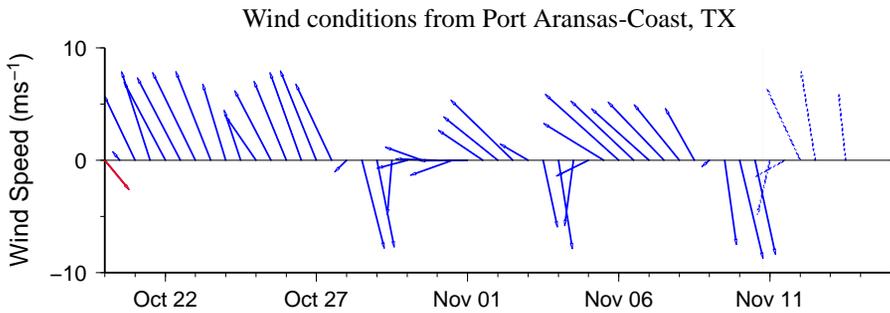
Galveston/Freeport: North winds (10-25kn, 5-13m/s) today and tonight, becoming northeast (5-10kn, 3-5m/s) after midnight. East winds (5-10kn, 3-5m/s) Friday, shifting south Friday afternoon through Sunday (15-20kn, 8-10m/s).

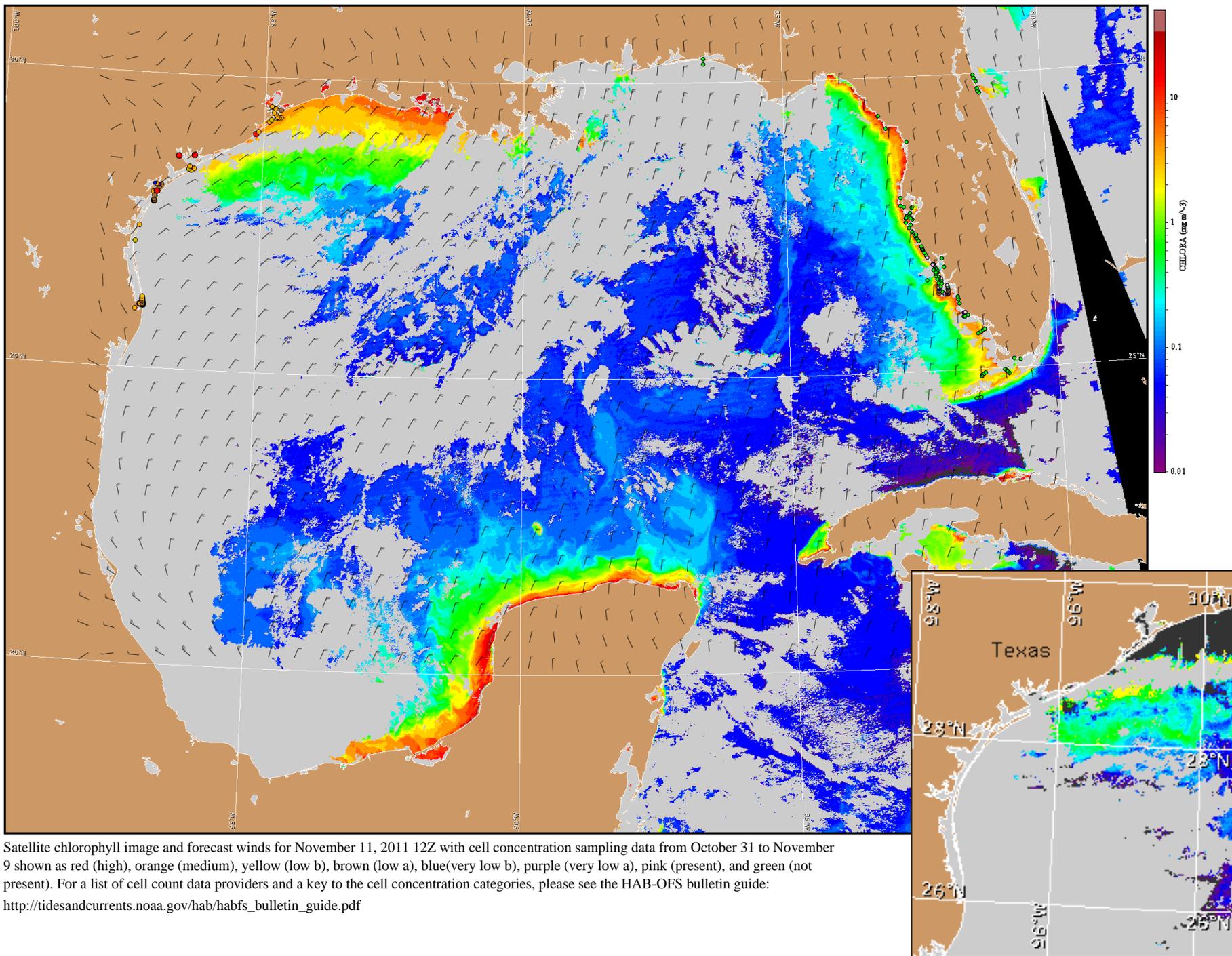
Port Aransas: Northeast to north winds (5-20kn, 3-10m/s) today. East winds (5kn, 3m/s) Friday, shifting southeast (10kn, 5m/s) in the afternoon. South winds (15-20kn) Friday night through Sunday.

South Padre: North winds (15-25kn, 8-13m/s) today. East winds (10kn) Friday, shifting southeast in the afternoon. South winds (15-20kn) Friday night through Sunday.



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 November 11, 2011 12Z with cell concentration sampling data from October 31 to November 9 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data 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

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).