



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

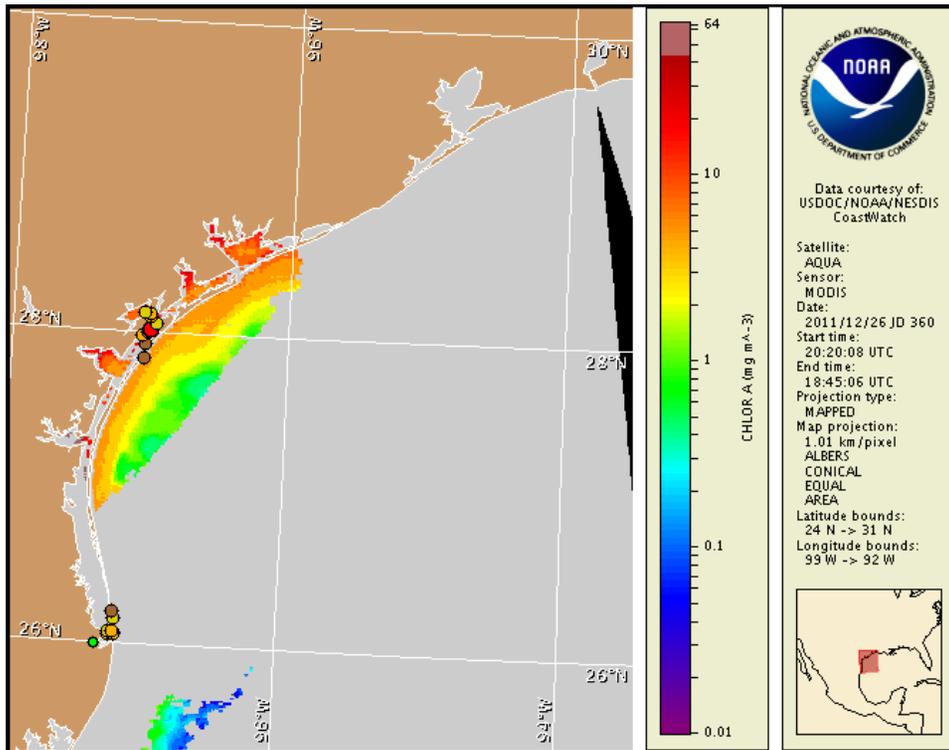
Tuesday, 27 December 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Wednesday, December 21, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 17 to 22 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/habofs_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, within the Matagorda Bay area, in the Port Aransas/Aransas Bay area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, and within the lower Laguna Madre. Patchy moderate impacts are possible in Port Aransas/Corpus Christi Bay area today and patchy high impacts are possible Wednesday. Patchy moderate impacts are also possible alongshore the South Padre Island region and within the lower Laguna Madre today and Wednesday. Water samples last identified harmful algal blooms in the Galveston Bay area on December 12, in the Matagorda Bay area on December 14, alongshore the Padre Island National Seashore region on November 28, and within the Brownsville Ship Channel on December 2. Associated respiratory impacts remain possible in these areas. No additional impacts are expected at the coast in Texas today through Wednesday, December 28. All Texas bays and coastal waters remain closed to commercial and recreational oyster harvesting due to blooms of the harmful algae *Karenia brevis* (red tide).

Analysis

A harmful algal bloom continues along much of the Texas coastline.

No new samples have been received from the Galveston or Matagorda Bay regions. The most recent samples identified 'low a' to 'medium' *Karenia brevis* concentrations in the Galveston Bay region, and 'not present' to 'high' concentrations in the Matagorda Bay region (12/5-14; TPWD). Within the Matagorda Bay region, discolored water and dead fish have been reported in Caracahua Bay, and discolored water and feeding birds have been reported in the east arm of Matagorda Bay (12/20; TPWD).

In the Port Aransas region, samples collected from Aransas and Copano bays last week indicate 'low a' to 'high' *K. brevis* concentrations (12/21; TPWD). In central Aransas Bay, *K. brevis* concentrations remain 'high' offshore Key Allegro (12/21; TPWD). *K. brevis* concentrations decreased in two locations just south of Key Allegro, with 'low a' concentrations identified at ARA 11 at ICWW #49, and 'medium' concentrations identified within Cove Harbor (12/21; TPWD), where 'medium' and 'high' concentrations were last identified (respectively) on 12/15 (TPWD). 'Low b' concentrations were identified in north central Aransas Bay at ARA 7 at Long Reef, as well as within Copano Bay at Lap Reef, where 'low a' concentrations were identified on 12/14 (TPWD). 'Medium' concentrations were identified nearby at the Copano Bay Causeway and also remain offshore Fulton (12/21; TPWD). In southern Aransas Bay, *K. brevis* concentrations remain at 'low a' at ARA 13 at Long Reef/St. Jose Island (12/21; TPWD). The most recent samples from the UTMSI Pier indicated 'low a' *K. brevis* concentrations on the Gulf side of Aransas Pass (12/21; TPWD). Dead fish continue to be reported in the Rockport Harbor area, most recently reported off Water Street in front of the Laguna Reef Hotel (12/19; TPWD). Discolored water and dead fish have also been reported in the Nueces Bay area of Corpus Christi (12/21; TPWD).

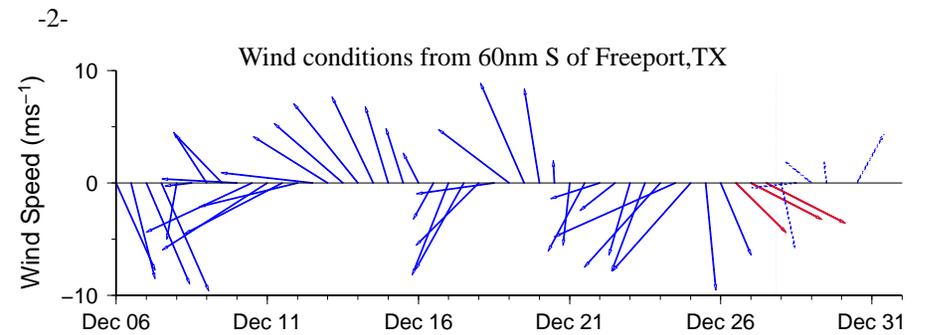
No samples have been received from alongshore Padre Island National Seashore since 'medium' to 'high' *K. brevis* concentrations were identified on 11/28 (TPWD). No new samples have been received alongshore South Padre Island, where the most recent samples indicated 'low b' to 'medium' *K. brevis* concentrations (12/19-20; TPWD).

Concentrations within Brazos Santiago Pass remain at 'medium' (12/21-22; TPWD). On the eastern side of the lower Laguna Madre, samples also continue to identify 'medium' concentrations at the Isla Blanca boat ramp and at the east end of the Queen Isabella Causeway (12/21-22; TPWD). Near Port Isabel, samples indicate 'low b' to 'medium' concentrations at the west end of the Causeway and an increase from 'very low b' to 'medium' concentrations within Canal C at Long Island Village (12/22; TPWD). The most recent sample collected within the Brownsville Ship Channel at the San Martin boat ramp indicated that *K. brevis* is not present (12/20; TPWD).

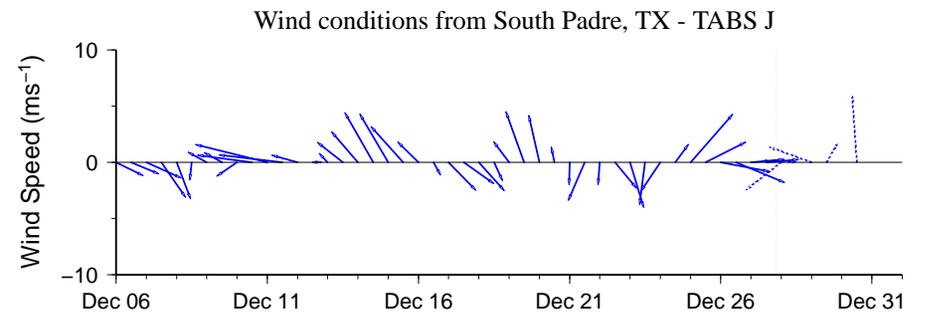
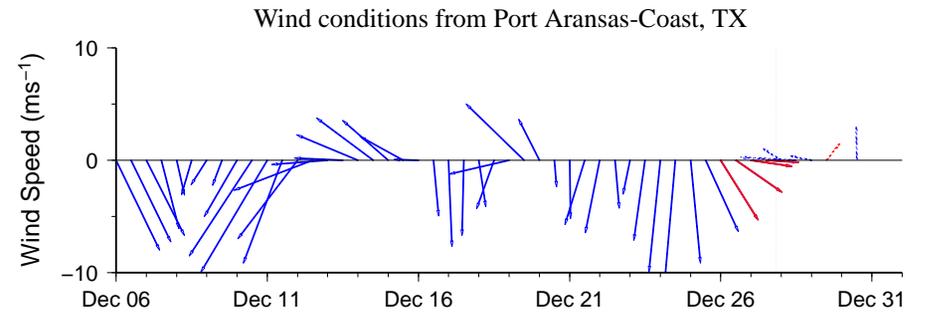
Recent imagery along the Texas coastline remains mostly obscured by clouds, limiting analysis. In imagery from 12/26 (MODIS; page 1) elevated chlorophyll (2-8 $\mu\text{g/L}$) is visible along- and offshore from the Matagorda Peninsula to Padre Island National Seashore. No further analysis along the Texas coastline is possible at this time. 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 based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 60km north from the Galveston Bay region, 90km north from the Matagorda Peninsula region, 40km north from Port Aransas, 10km north along the Padre Island National Seashore region, and 15km north from Brazos Santiago Pass from December 26-30. Forecasted winds will decrease the potential for impacts in the Galveston, Matagorda, and Aransas/Corpus Christi Bay regions today and Wednesday, and increase the potential for impacts alongshore the South Padre Island region and within the lower Laguna Madre.

Derner, 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).

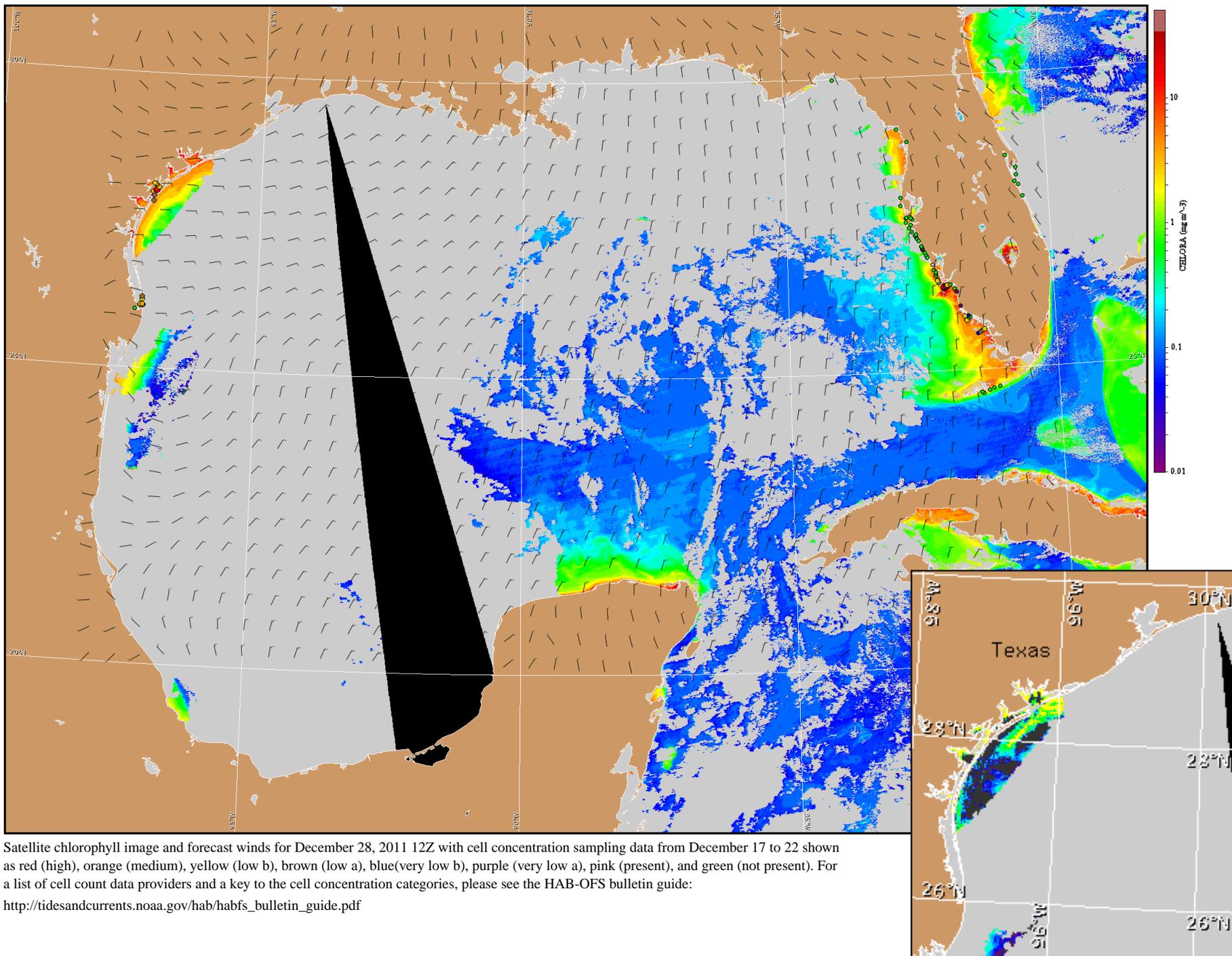


Wind Analysis

Galveston/Freeport: Northwest winds (10-15kn, 5-8m/s) today. North winds (5-10kn, 3-5m/s) tonight becoming northeast after midnight. East winds (5-10kn) Wednesday.

Port Aransas: Northwest winds (5-10kn) today, shifting north in the late afternoon. Northeast winds (5kn, 3m/s) shifting east after midnight. Southeast winds (5-10kn) Wednesday.

South Padre: Northwest winds (10kn, 5m/s) today, shifting north in the afternoon. Light winds tonight through Wednesday becoming southeast (10kn) Wednesday afternoon. East winds (10kn) Wednesday night, becoming light later in the evening.



Satellite chlorophyll image and forecast winds for December 28, 2011 12Z with cell concentration sampling data from December 17 to 22 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:

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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).