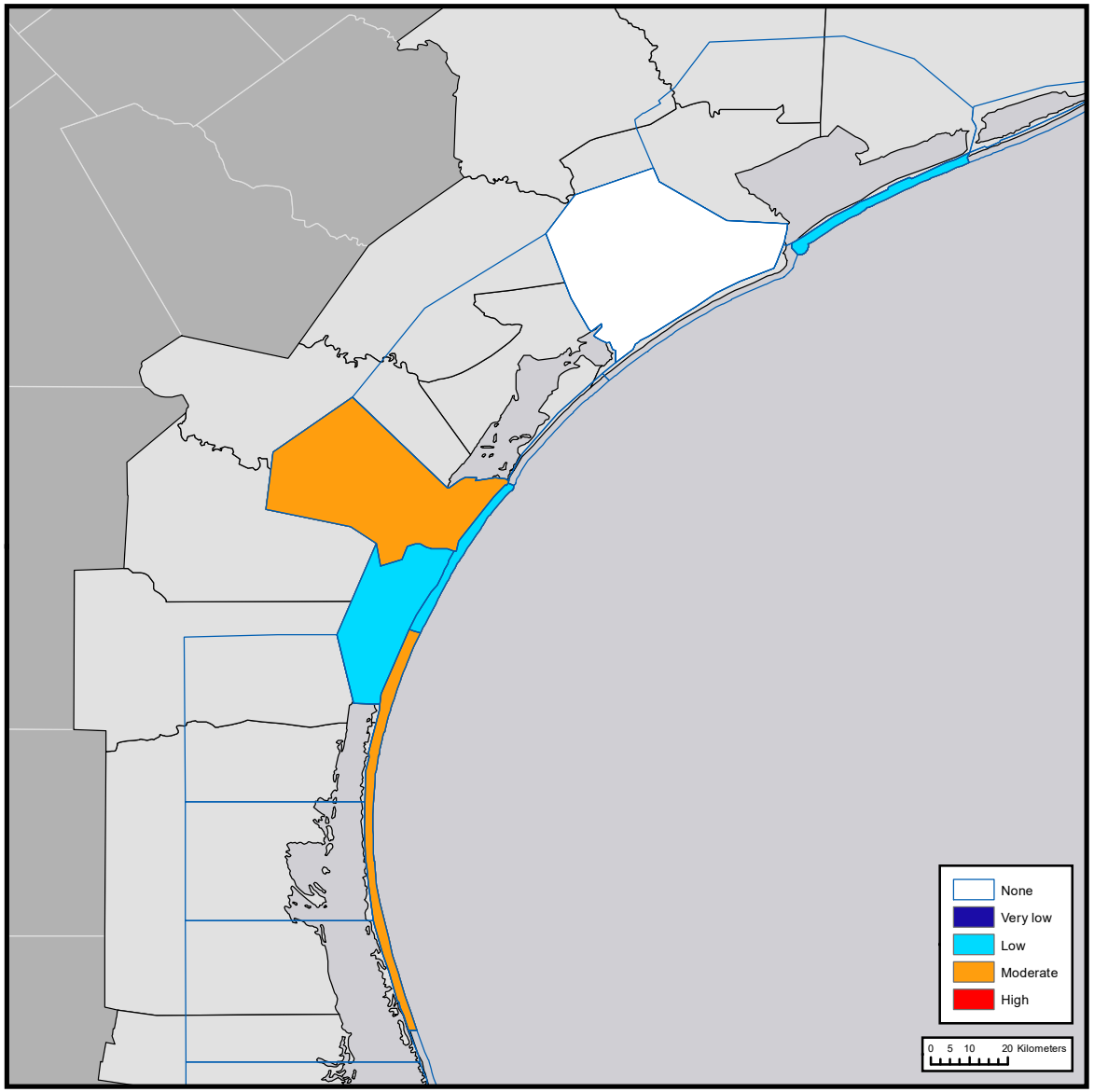
Gulf of Mexico Harmful Algal Bloom Bulletin

Thursday, September 20, 2018
NOAA National Ocean Service
NOAA Satellite and Information Service
NOAA National Weather Service

Region: Texas

Instructions for viewing this geospatial pdf are available at: https://go.usa.gov/xn9g2.



The image above is the top layer in a series of maps for 09-20-18 to 09-24-18 displaying the highest level of potential respiratory irritation forecasts in each region.

Conditions Report

Not present to medium concentrations of *Karenia brevis* (commonly known as red tide) are present along- and offshore portions 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.

Recently Reported Impacts (Listed by Forecast Region):

Respiratory irritation: None
Dead fish: None

Definition of respiratory irritation levels.

	AFFECTED POPULATION				
RESPIRATORY IRRITATION LEVEL	NONE	CHRONIC RESPIRATORY CONDITION	SENSITIVE TO RED TIDE	GENERAL PUBLIC *(MILD SYMPTOMS)*	GENERAL PUBLIC *(INTENSE SYMPTOMS)*
None	X				
Very low		X			
Low		X	X		
Moderate		X	X	X	
High		X	X	X	X

Additional Resources

Health Information:

Texas Department of State Health Services:
http://www.dshs.texas.gov/seafood/harmful-algal-blooms.aspx
Other resources: https://go.usa.gov/xQNWp

Recent, Local Observations and Data:

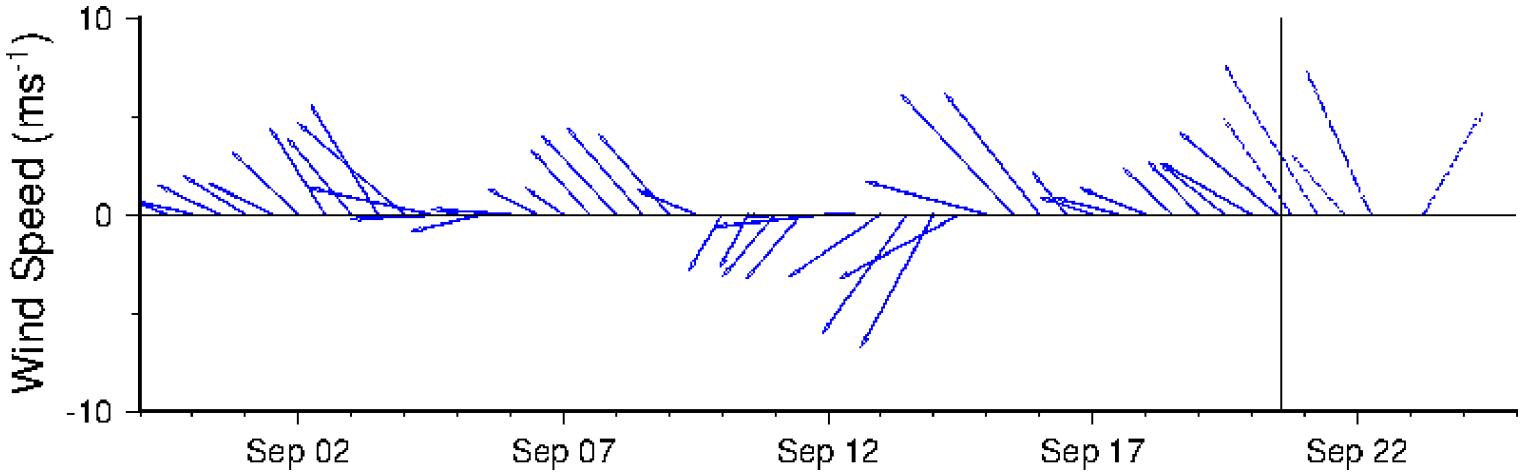
Texas Parks and Wildlife Department Red Tide Status:
https://tpwd.texas.gov/landwater/water/environconcerns/hab

State Name	Region	Thu 09/20	Fri 09/21	Sat 09/22	Sun 09/23	Mon 09/24		
Texas								
	HIGH ISLAND to SABINE PASS-Gulf Coast							
	BOLIVAR PENINSULA-Gulf Coast							
	GALVESTON BAY-Bay Regions	none	none	none	none	none		
	GALVESTON ISLAND-Gulf Coast							
	WEST BAY-Bay Regions							
	CHRISTMAS BAY-Bay Regions							
	SAN LUIS PASS to SARGENT BEACH-Gulf Coast							
	EAST MATAGORDA BAY-Bay Regions							
	SARGENT BEACH to COLORADO RIVER MOUTH-Gulf Coast							
	MATAGORDA BAY-Bay Regions							
	MATAGORDA PENINSULA-Gulf Coast	low	low	low	low	low		
	SAN ANTONIO BAY/ESPIRITU SANTO BAY-Bay Regions	none	none	none	none	none		
	MATAGORDA ISLAND-Gulf Coast							
	ARANSAS BAY to ARANSAS PASS-Bay Regions							
	SAN JOSE ISLAND-Gulf Coast							
	CORPUS CHRISTI BAY-Bay Regions	moderate	moderate	moderate	moderate	moderate		
	PORT ARANSAS/MUSTANG ISLAND to PINS-Gulf Coast	low	low	low	low	low		
	UPPER LAGUNA MADRE-Bay Regions	low	low	low	low	low		
	PADRE ISLAND NATIONAL SEASHORE (PINS)-Gulf Coast	moderate	moderate	moderate	moderate	moderate		
	BAFFIN BAY to LAND CUT-Bay Regions							
	LAND CUT-Bay Regions							
	LAGUNA MADRE-Land Cut to Bennie's Shack-Bay Regions							
	LAGUNA MADRE-Bennie's Shack to Cullen Channel-Bay Regions							
	LOWER LAGUNA MADRE to LAGUNA VISTA-Bay Regions							
	MANSFIELD PASS to BEACH ACCESS 6-Gulf Coast							
	BEACH ACCESS 6 to RIO GRANDE-Gulf Coast							

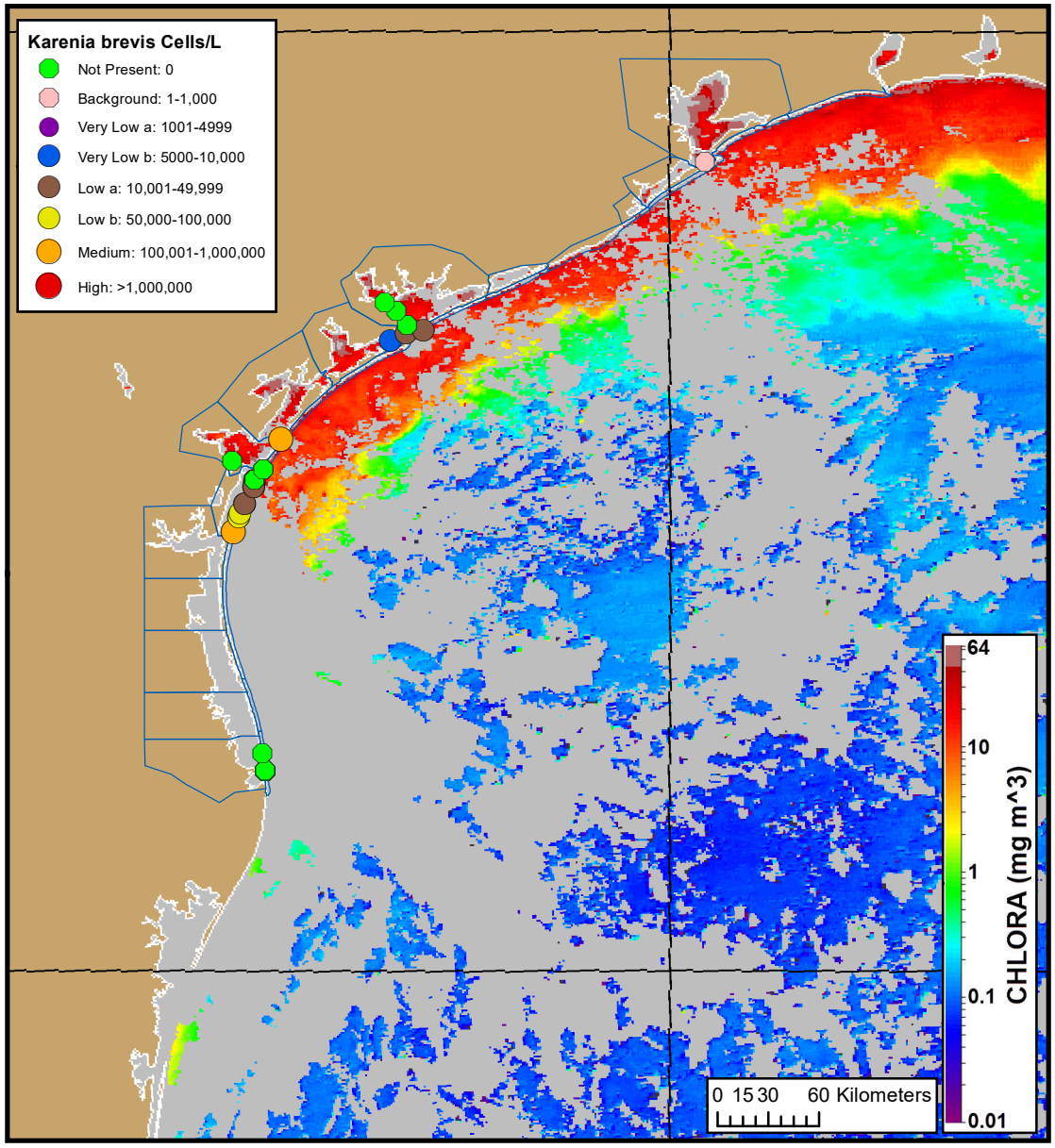
The table lists the highest level of potential respiratory irritation forecast. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction.

Cells are marked 'none' if *K. brevis* was detected, but no respiratory irritation is forecasted in the region. Cells are blank if no *K. brevis* has been detected in the region.

Wind conditions from Port Aransas-Coast, TX



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). A text summary of the marine forecast by region is available from NWS at http://go.usa.gov/xnRax.



Karenia brevis cell concentration sampling data from: 09/10/18 through 09/18/18. 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: https://tidesandcurrents.noaa.gov/hab/hab_publication/GOMX_HAB_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/environconcerns/hab/redtide/status.phtml.

MODIS Aqua satellite chlorophyll image (09/19/18) with possible *K. brevis* HAB areas shown by red polygon(s).

Analysis

Summary of Recent Water Samples:

***K. brevis* Cell Concentrations:**
Range: Not Present to Medium
Date: 09/10-09/18
Source: TPWD, TAMU

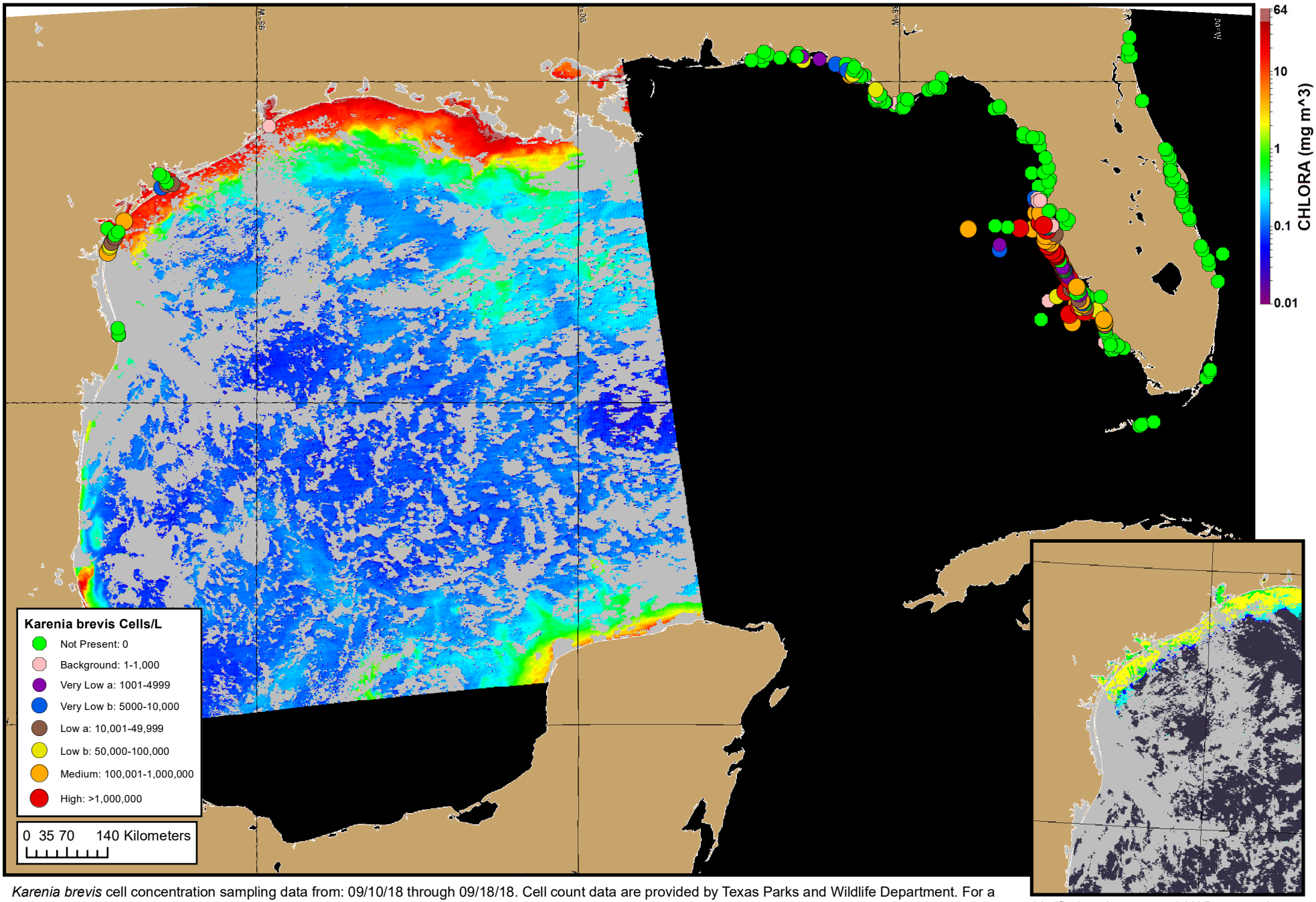
Imagery:

In recent ensemble imagery (MODIS Aqua, 9/19), patches of elevated to very high chlorophyll (2 to >20 µg/L) with the optical characteristics of *K. brevis*are present along- and offshore the Texas coast from Sabine Pass to Corpus Christi Bay. However, field sampling indicates the current *K. brevis* bloom does not match this extent and elevated chlorophyll is most likely due to the resuspension of benthic chlorophyll and sediments along the coast.

Forecasts:

Forecast models based on predicted near-surface currents indicate a negligible transport of surface *K. brevis* concentrations along the coast from Port Aransas from September 19-23.

Davis, Ludema



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Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 4 analysis for interpretation).

MODIS Aqua satellite chlorophyll image (09/19/18).