



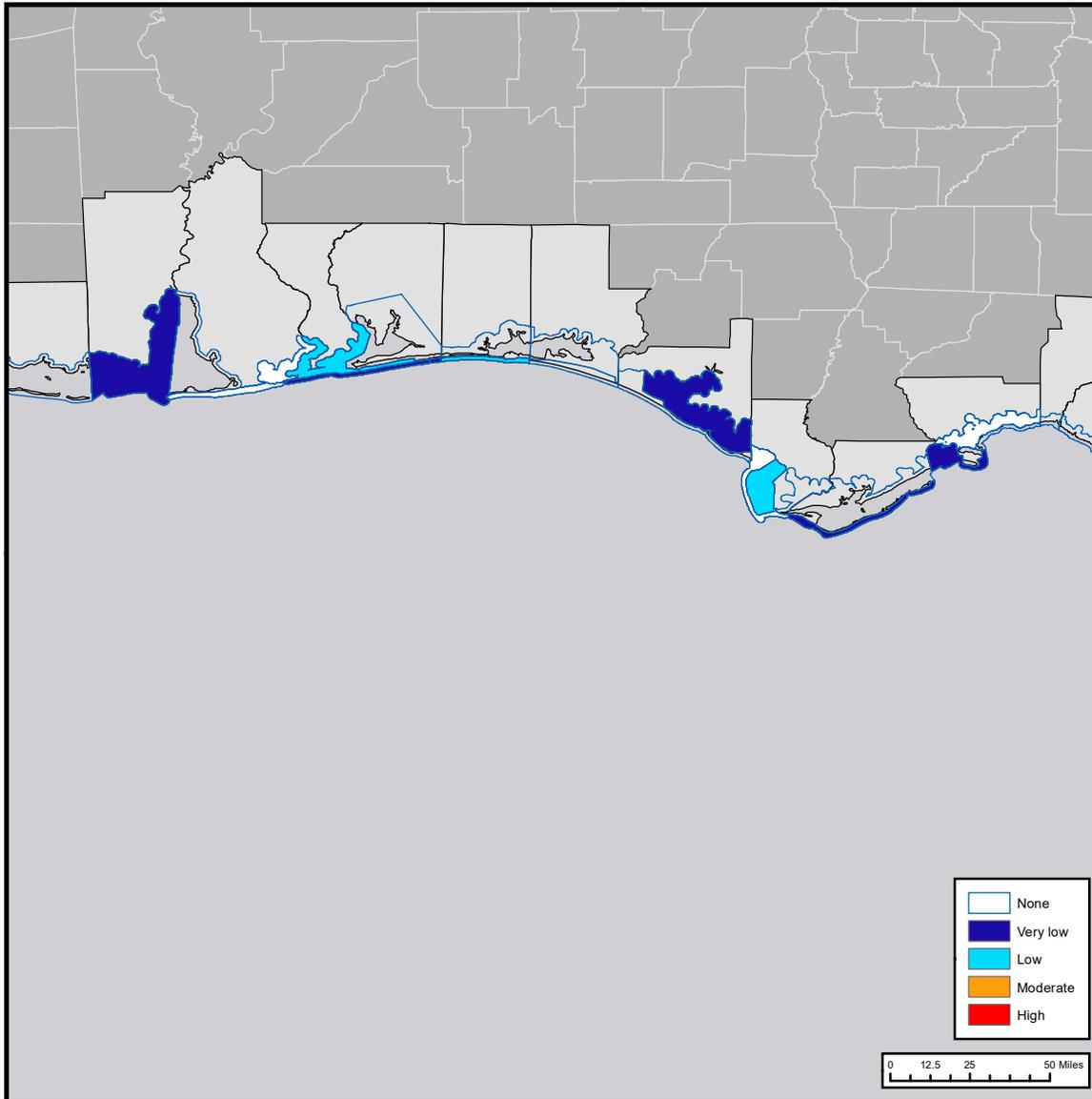
Gulf of Mexico Harmful Algal Bloom Bulletin

Thursday, December 6, 2018
 NOAA National Ocean Service
 NOAA Satellite and Information Service
 NOAA National Weather Service

Region: Northwest Florida to Louisiana



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 12-06-18 to 12-10-18 displaying the highest level of potential respiratory irritation forecasts in each region.

Conditions Report

Not present to low concentrations of *Karenia brevis* (commonly known as red tide) are present along- and offshore portions of Alabama and northwest Florida. *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 County):

Respiratory irritation: None
Dead fish: None

Definition of respiratory irritation levels.

RESPIRATORY IRRITATION LEVEL	AFFECTED POPULATION				
	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:

Florida Department of Health:
<http://www.floridahealth.gov/environmental-health/aquatic-toxins/red-tide.html>

Other resources: <https://go.usa.gov/xQNWp>

Recent, Local Observations and Data:

Mote Marine Laboratory Daily Beach Conditions:
<http://visitbeaches.org>

Florida Fish and Wildlife Conservation Commission:
<http://myfwc.com/redtidestatus>

State Name	County Region	Thu 12/06	Fri 12/07	Sat 12/08	Sun 12/09	Mon 12/10		
Louisiana								
	ST. TAMMANY Parish-Gulf Coast							
	ORLEANS Parish-Gulf Coast							
	ST. BERNARD Parish-Gulf Coast							
	PLAQUEMINES Parish-Gulf Coast							
Mississippi								
	HANCOCK County-Gulf Coast							
	HANCOCK County-Bay Regions							
	HARRISON County-Gulf Coast							
	East HARRISON County-Bay Regions							
	West HARRISON County-Bay Regions							
	JACKSON County-Gulf Coast							
Alabama								
	BALDWIN County-Gulf Coast	none	none	very low	very low	none		
	BALDWIN County-Bay Regions	none	none	none	none	none		
	MOBILE County-Gulf Coast	very low						

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.

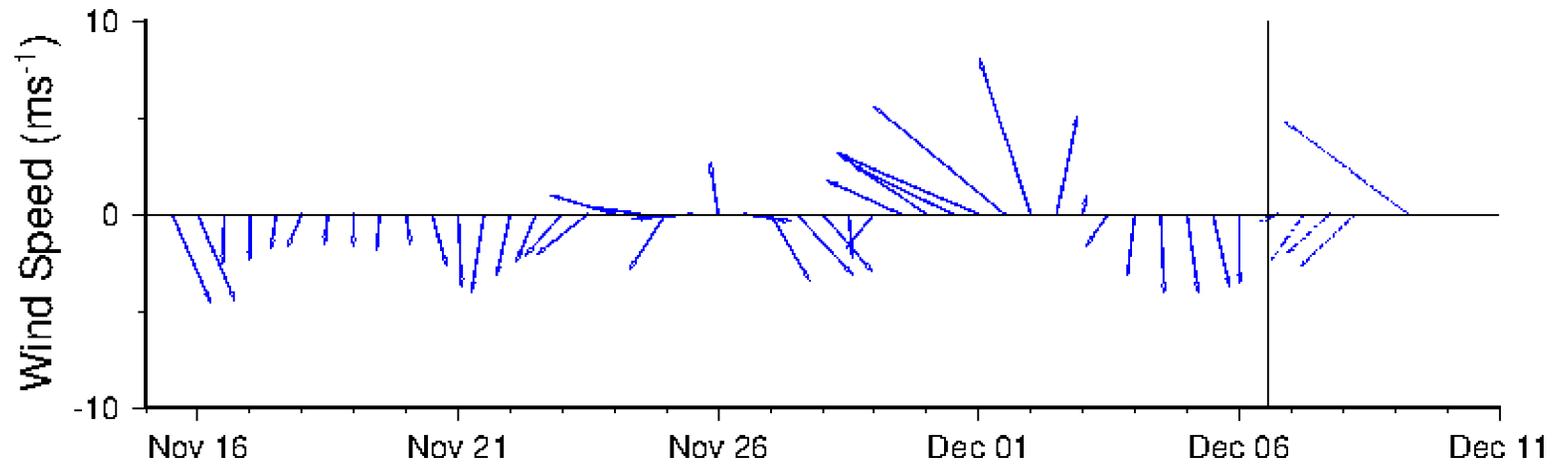
Cells are marked 'none' if *K. brevis* was detected, but no respiratory irritation is forecasted in the region. Cells are blank if no *K. brevis* has been detected in the region.

State Name	County Region	Thu 12/06	Fri 12/07	Sat 12/08	Sun 12/09	Mon 12/10		
Florida								
	ESCAMBIA County-Gulf Coast	very low	very low	low	low	very low		
	ESCAMBIA County-Bay Regions	low	low	low	low	low		
	SANTA ROSA County-Gulf Coast	very low	very low	low	low	very low		
	SANTA ROSA County-Bay Regions							
	OKALOOSA County-Gulf Coast	low	very low	moderate	moderate	very low		
	OKALOOSA County-Bay Regions							
	WALTON County-Gulf Coast							
	WALTON County-Bay Regions							
	BAY County-Gulf Coast							
	BAY County-Bay Regions	very low						
	GULF County-Gulf Coast	none	none	none	very low	none		
	GULF County-Bay Regions	low	low	low	low	low		
	FRANKLIN County-Gulf Coast	very low	very low	low	low	very low		
	FRANKLIN County-Bay Regions							
	WAKULLA County-Gulf Coast							
	WAKULLA County-Bay Regions	none	none	none	none	none		
	JEFFERSON County-Gulf Coast							
	TAYLOR County-Gulf Coast							

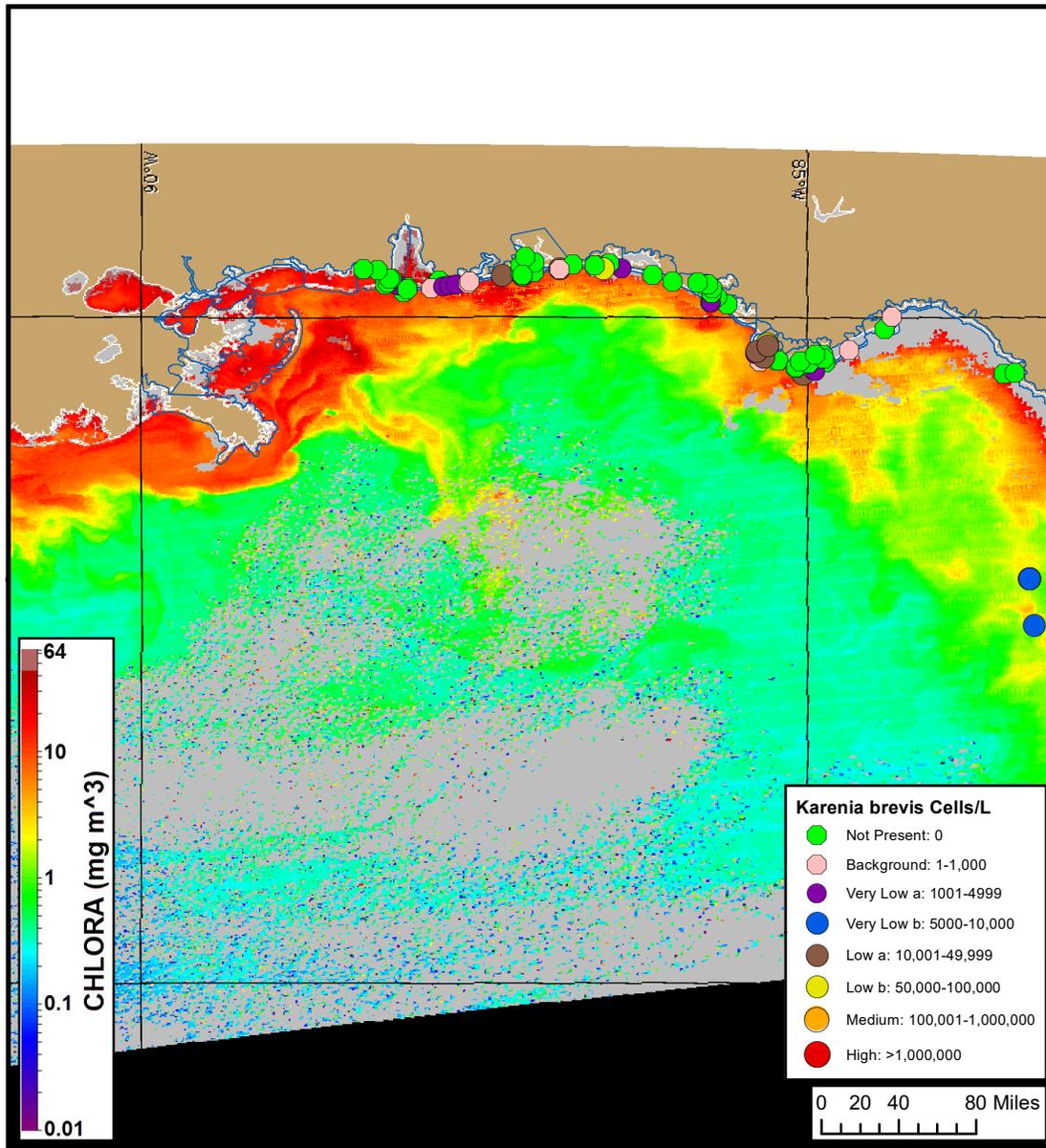
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Wind conditions from Panama City Beach, FL



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 <https://go.usa.gov/xnx4X>.



Karenia brevis cell concentration sampling data from: 11/26/18 through 12/04/18. Cell count data are provided by Florida FWC Fish and Wildlife Research Institute. 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 Florida FWC Fish and Wildlife Research Institute: <http://myfwc.com/REDTIDESTATUS>.

MODIS Aqua satellite chlorophyll image (12/05/18) with possible *K. brevis* HAB areas shown by red polygon(s).

Analysis

Summary of Recent Water Samples:

***K. brevis* Cell Concentrations:**
Range: Not Present through Low b
Date: 11/26-12/04
Source: FWRI, MML, ADPH

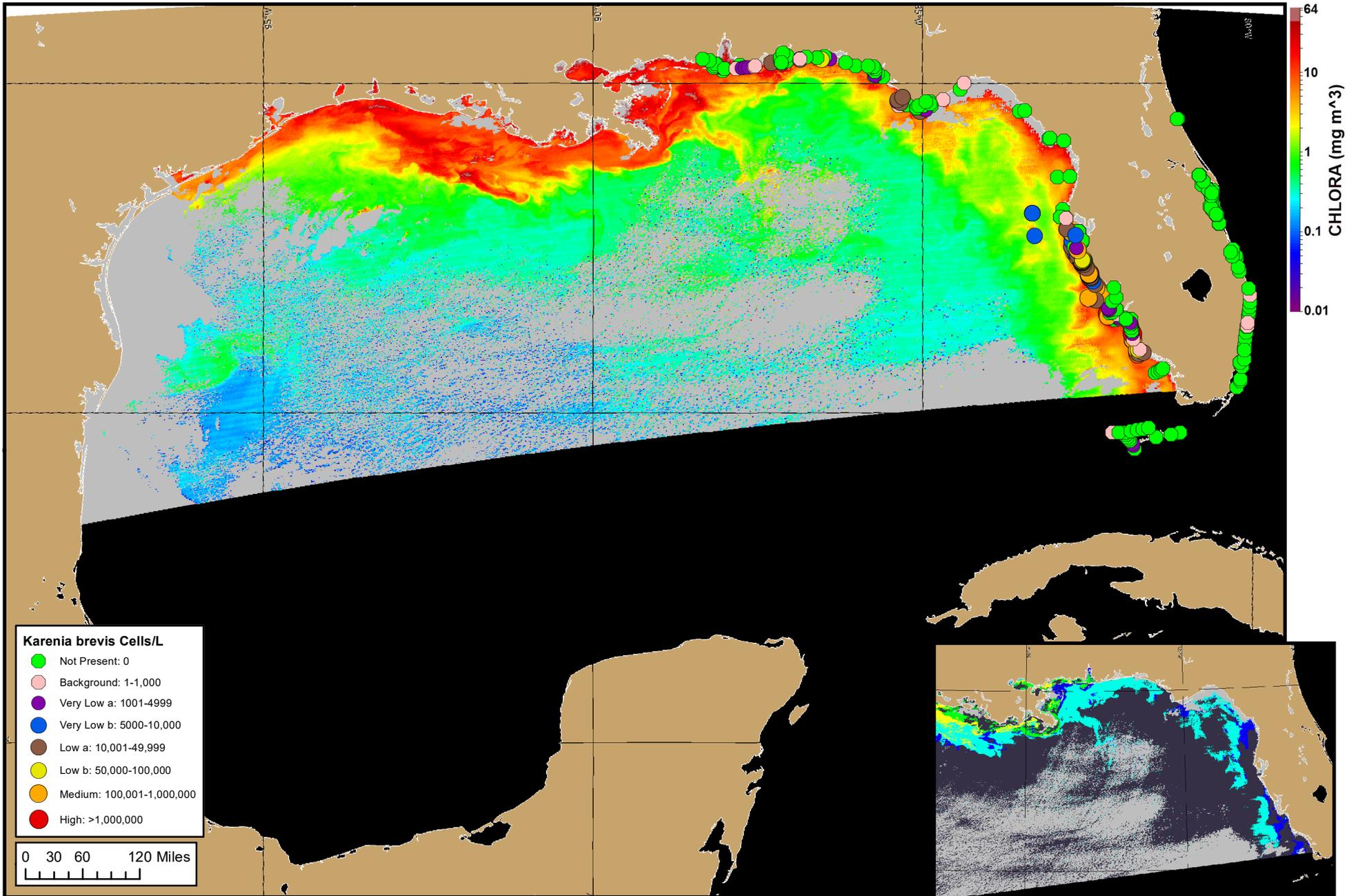
Imagery:

In recent ensemble imagery (MODIS Aqua, 12/5), patches of elevated to very high chlorophyll (2 to >20 $\mu\text{g/L}$) with some of the optical characteristics of *K. brevis* are visible along- and offshore the Alabama and Florida coasts from Mobile Bay to Bay County, Florida.

Forecasts:

Variable winds forecast today through Monday (12/6-10) will minimize the potential for respiratory irritation and transport of surface *K. brevis* concentrations at the Florida coast.

Davis, Yang



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MODIS Aqua satellite chlorophyll image (12/05/18).

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