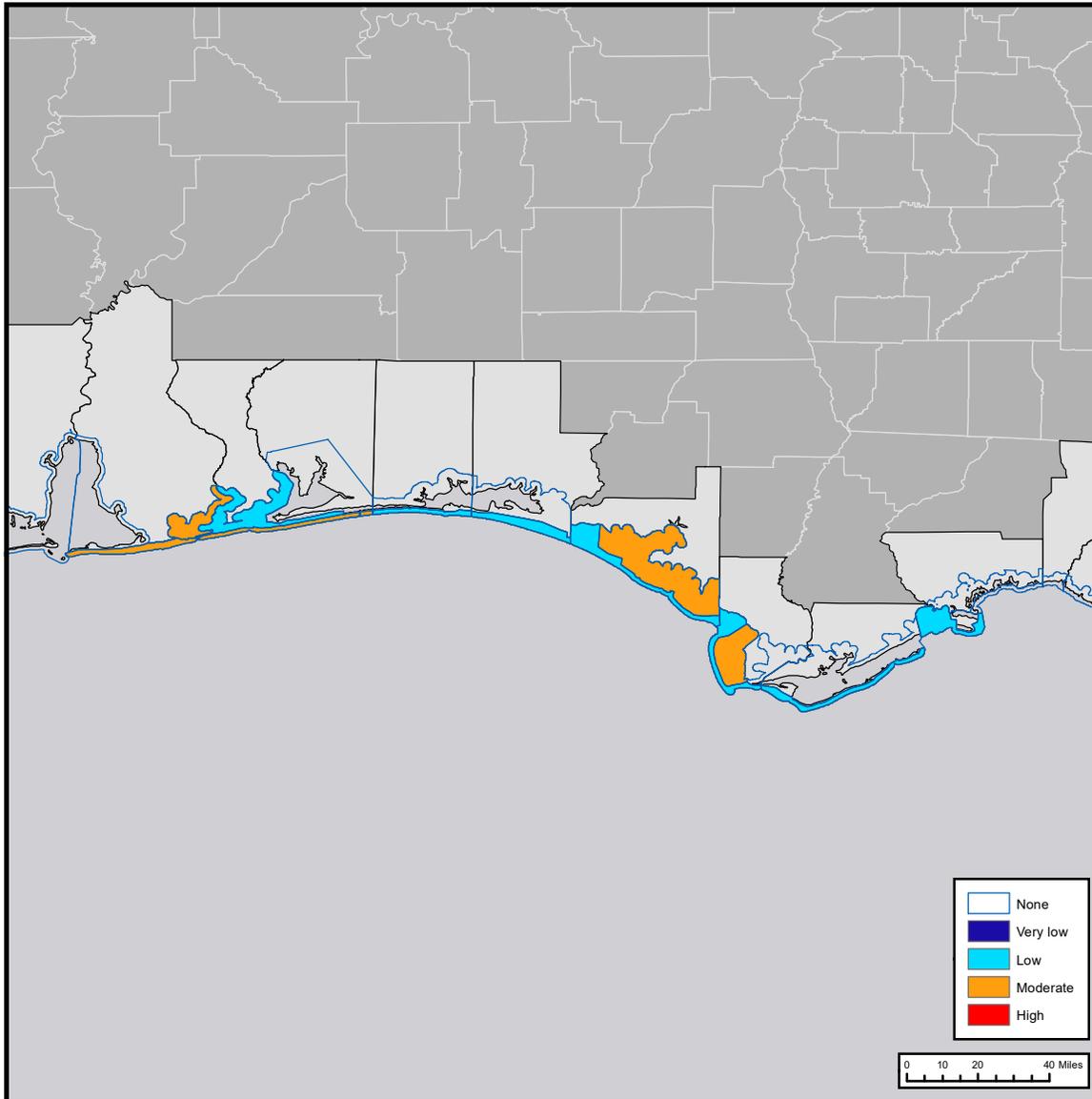




# Gulf of Mexico Harmful Algal Bloom Bulletin

Thursday, November 29, 2018  
 NOAA National Ocean Service  
 NOAA Satellite and Information Service  
 NOAA National Weather Service

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 11-29-18 to 12-03-18 displaying the highest level of potential respiratory irritation forecasts in each region.

## Region: Northwest Florida to Louisiana



### Conditions Report

Not present to high 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:** Okaloosa  
**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 11/29	Fri 11/30	Sat 12/01	Sun 12/02	Mon 12/03		
<b>Louisiana</b>								
	<b>ST. TAMMANY Parish-Gulf Coast</b>							
	<b>ORLEANS Parish-Gulf Coast</b>							
	<b>ST. BERNARD Parish-Gulf Coast</b>							
	<b>PLAQUEMINES Parish-Gulf Coast</b>							
<b>Mississippi</b>								
	<b>HANCOCK County-Gulf Coast</b>							
	<b>HANCOCK County-Bay Regions</b>							
	<b>HARRISON County-Gulf Coast</b>							
	<b>East HARRISON County-Bay Regions</b>							
	<b>West HARRISON County-Bay Regions</b>							
	<b>JACKSON County-Gulf Coast</b>							
<b>Alabama</b>								
	<b>BALDWIN County-Gulf Coast</b>	moderate	moderate	moderate	moderate	moderate		
	<b>BALDWIN County-Bay Regions</b>	moderate	moderate	moderate	moderate	moderate		
	<b>MOBILE County-Gulf Coast</b>							

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.

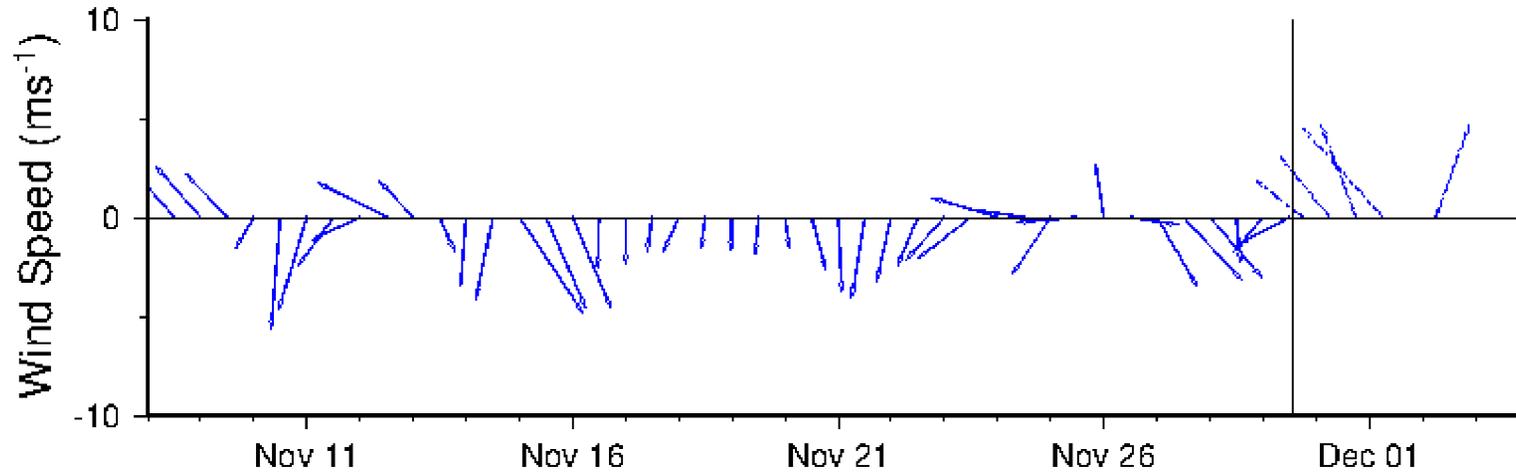
Cells are marked 'none' if *K. brevis* was detected, but no respiratory irritation is forecasted in the region. Cells are blank if no *K. brevis* has been detected in the region.

State Name	County Region	Thu 11/29	Fri 11/30	Sat 12/01	Sun 12/02	Mon 12/03		
Florida								
	ESCAMBIA County-Gulf Coast	moderate	moderate	moderate	moderate	moderate		
	ESCAMBIA County-Bay Regions	low	low	low	low	low		
	SANTA ROSA County-Gulf Coast	moderate	moderate	moderate	moderate	moderate		
	SANTA ROSA County-Bay Regions							
	OKALOOSA County-Gulf Coast	low	low	low	low	low		
	OKALOOSA County-Bay Regions							
	WALTON County-Gulf Coast	low	low	low	low	low		
	WALTON County-Bay Regions							
	BAY County-Gulf Coast	low	low	low	low	low		
	BAY County-Bay Regions	moderate	moderate	moderate	moderate	moderate		
	GULF County-Gulf Coast	low	low	low	low	low		
	GULF County-Bay Regions	moderate	moderate	moderate	moderate	moderate		
	FRANKLIN County-Gulf Coast	low	low	low	low	low		
	FRANKLIN County-Bay Regions							
	WAKULLA County-Gulf Coast							
	WAKULLA County-Bay Regions							
	JEFFERSON County-Gulf Coast							
	TAYLOR County-Gulf Coast							

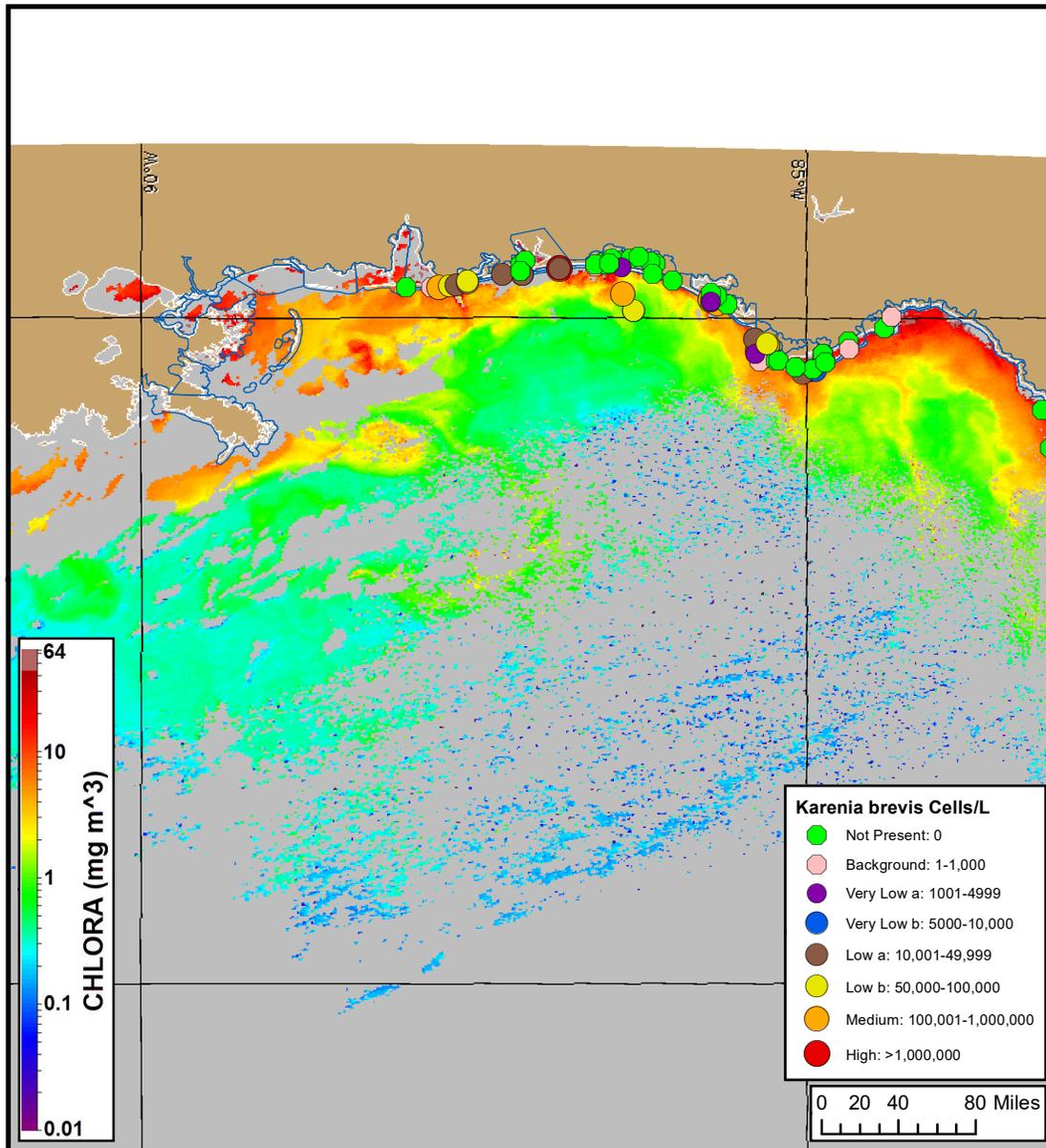
The table lists the highest level of potential respiratory irritation forecast. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction.

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 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: 11/19/18 through 11/27/18. 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](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 (11/27/18) 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 High

**Date:** 11/19-11/27

**Source:** FWRI, MML, ADPH

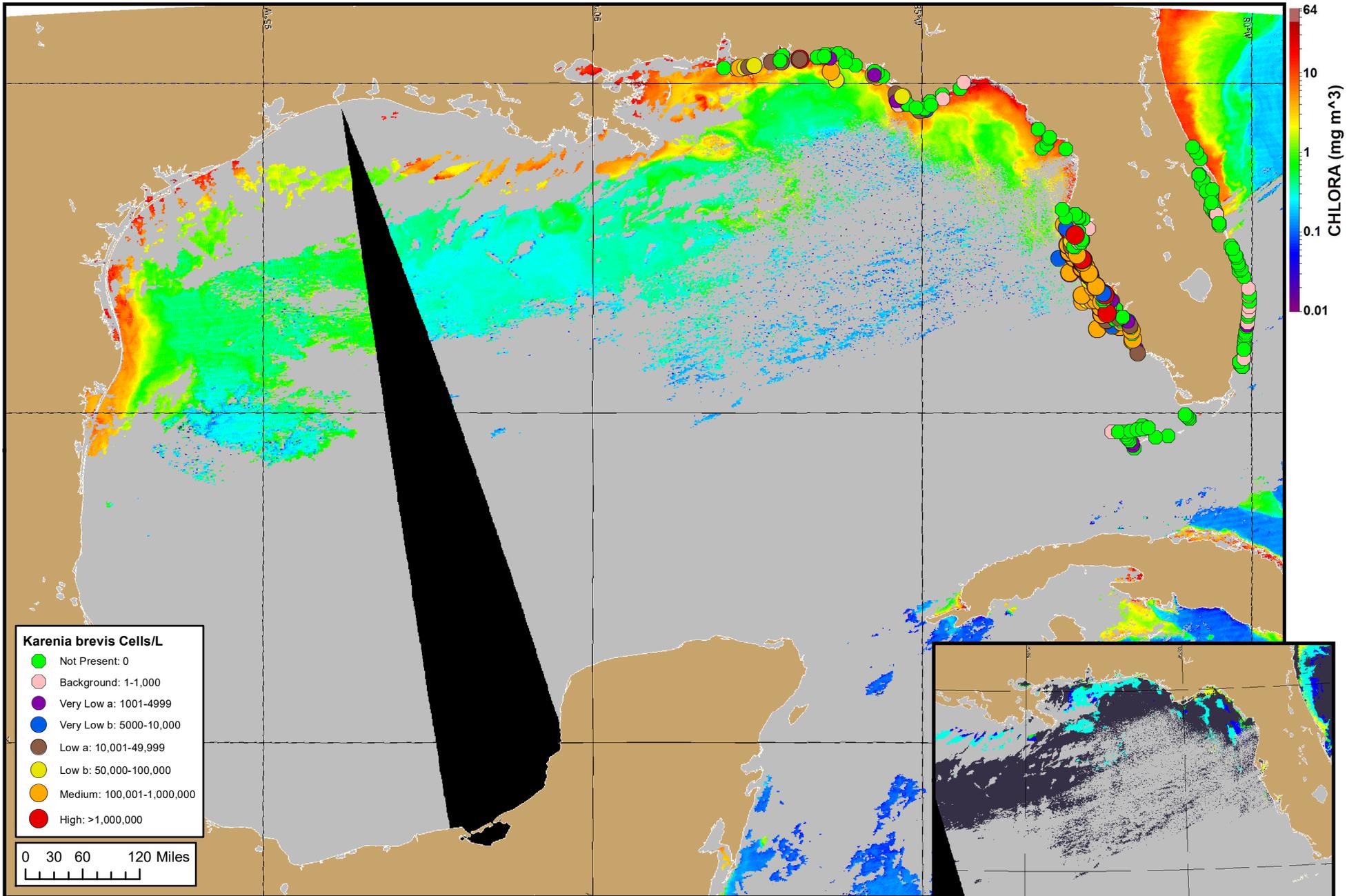
### Imagery:

In recent ensemble imagery (MODIS Aqua, 11/27), patches of elevated to very high chlorophyll (2 to >20  $\mu\text{g/L}$ ) with some optical characteristics of *K. brevis* are visible along- and offshore from Baldwin County, Alabama to Franklin County in northwest Florida.

### Forecasts:

Onshore winds forecast Thursday through Monday (11/29-12/03) will increase the potential for respiratory irritation at the coast of northwest Florida and promote the eastward transport of surface *K. brevis* concentrations.

Yang, Ludema



*Karenia brevis* cell concentration sampling data from: 11/19/18 through 11/28/18. 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](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 (11/27/18).

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