



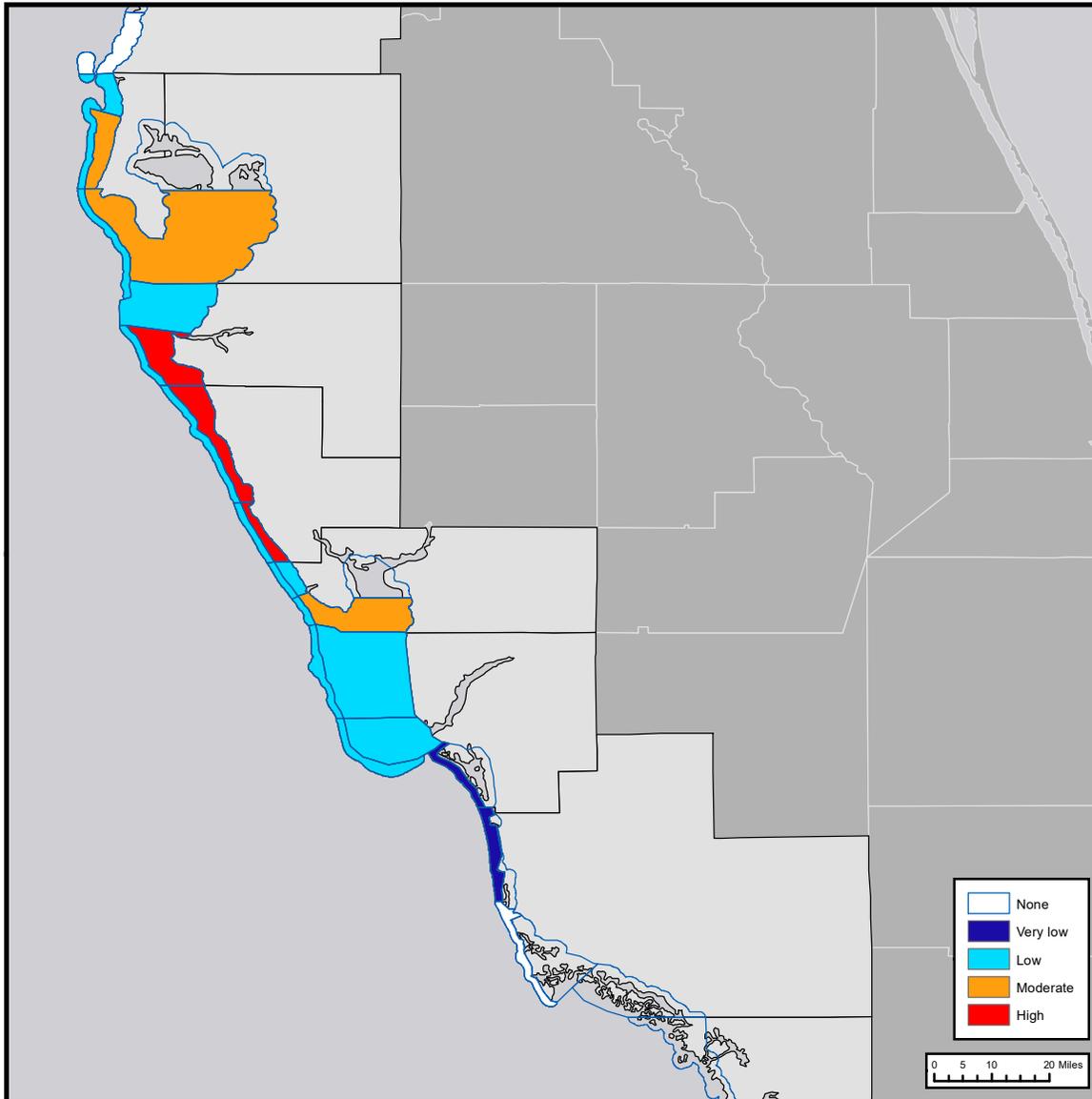
# Gulf of Mexico Harmful Algal Bloom Bulletin

Thursday, October 4, 2018  
 NOAA National Ocean Service  
 NOAA Satellite and Information Service  
 NOAA National Weather Service

## Region: Southwest Florida



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 10-04-18 to 10-09-18 displaying the highest level of potential respiratory irritation forecasts in each region.

## Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as red tide) are present along- and offshore portions of southwest Florida, and not present in the Florida Keys. *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:** Pinellas, Manatee, Sarasota, Lee.  
**Dead fish:** Pinellas, Manatee, Sarasota, Charlotte, Lee, Collier

### 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 10/04	Fri 10/05	Sat 10/06	Sun 10/07	Mon 10/08	Tue 10/09	
<b>Florida</b>								
	<b>DIXIE County-Gulf Coast</b>							
	<b>LEVY County-Gulf Coast</b>							
	<b>CITRUS County-Gulf Coast</b>							
	<b>HERNANDO County-Gulf Coast</b>							
	<b>Northern PASCO County-Gulf Coast</b>							
	<b>Southern PASCO County-Gulf Coast</b>	none	none	none	none	none	none	
	<b>Northern PINELLAS County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>Northern PINELLAS County-Bay Regions</b>	moderate	moderate	moderate	moderate	moderate	moderate	
	<b>Northern PINELLAS County, Upper Bay Area-Bay Regions</b>							
	<b>Southern PINELLAS County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>Southern PINELLAS County-Bay Regions</b>	moderate	moderate	moderate	moderate	moderate	moderate	
	<b>PINELLAS and Northern MANATEE County-Bay Regions</b>	low	low	low	low	low	low	
	<b>South MANATEE County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>South MANATEE County-Bay Regions</b>	high	high	high	high	high	high	
	<b>North SARASOTA County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>North SARASOTA County-Bay Regions</b>	high	high	high	high	high	high	
	<b>Southern SARASOTA County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>Southern SARASOTA County-Bay Regions</b>	high	high	high	high	high	high	
	<b>North CHARLOTTE County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>North CHARLOTTE County-Bay Regions</b>	low	low	low	low	low	low	
	<b>Southern CHARLOTTE County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>Southern CHARLOTTE County-Bay Regions</b>	moderate	moderate	moderate	moderate	moderate	moderate	
	<b>Upper CHARLOTTE Harbor-Bay Regions</b>							
	<b>Northern LEE County-Gulf Coast</b>	low	low	low	low	low	low	
	<b>Northern LEE County-Bay Regions</b>	low	low	low	low	low	low	
	<b>Central LEE County-Gulf Coast</b>	low	low	low	low	low	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.

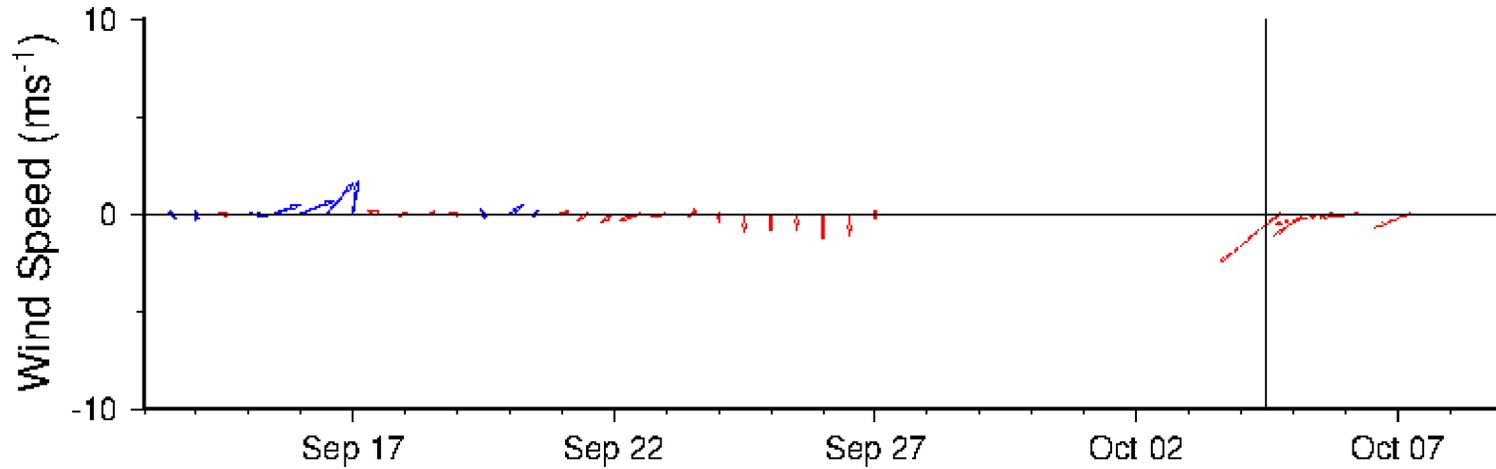
Cells are marked 'none' if *K. brevis* was detected, but no respiratory irritation is forecasted in the region. Cells are blank if no *K. brevis* has been detected in the region.

State Name	County Region	Thu 10/04	Fri 10/05	Sat 10/06	Sun 10/07	Mon 10/08	Tue 10/09	
<b>Florida</b>								
	<b>Central LEE County-Bay Regions</b>	low	low	low	low	low	low	
	<b>Southern LEE County-Gulf Coast</b>	very low						
	<b>Southern LEE County-Bay Regions</b>							
	<b>Northern COLLIER County-Gulf Coast</b>	very low						
	<b>Northern COLLIER County-Bay Regions</b>							
	<b>Central COLLIER County-Gulf Coast</b>	none	none	none	none	none	none	
	<b>Central COLLIER County-Bay Regions</b>							
	<b>Southern COLLIER County-Gulf Coast</b>							
	<b>Northern MONROE County-Gulf Coast</b>							
	<b>Southern MONROE County-Gulf Coast</b>							
	<b>UPPER KEYS-Oceanside</b>							
	<b>UPPER KEYS and FLORIDA BAY-Gulfside</b>							
	<b>MIDDLE KEYS-Oceanside</b>							
	<b>MIDDLE KEYS-Gulfside</b>							
	<b>LOWER KEYS-Oceanside</b>							
	<b>LOWER KEYS-Gulfside</b>							

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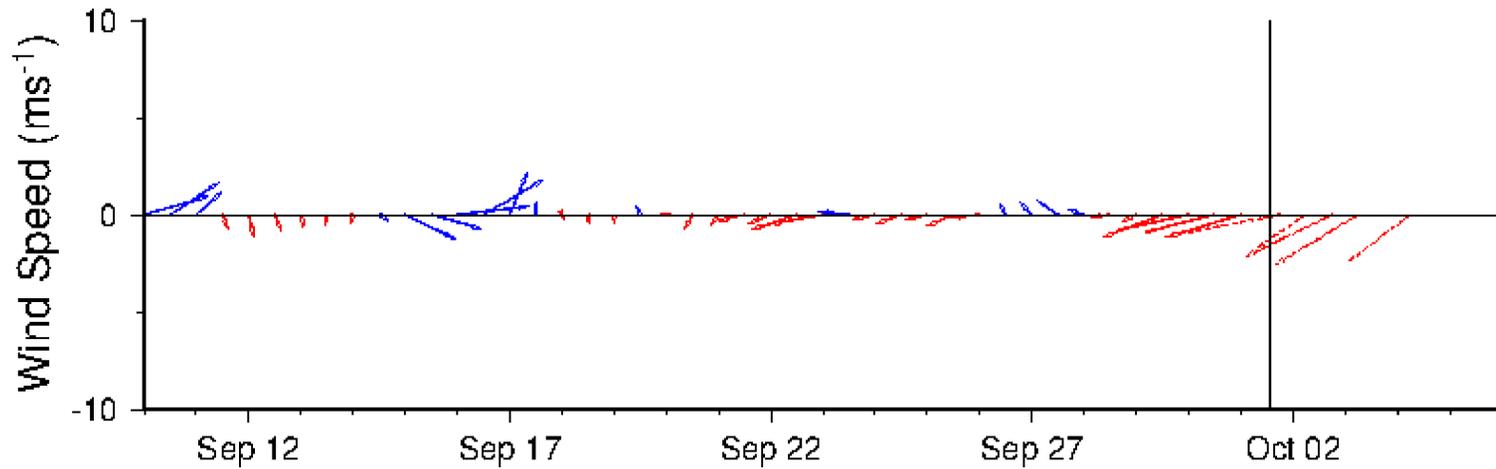
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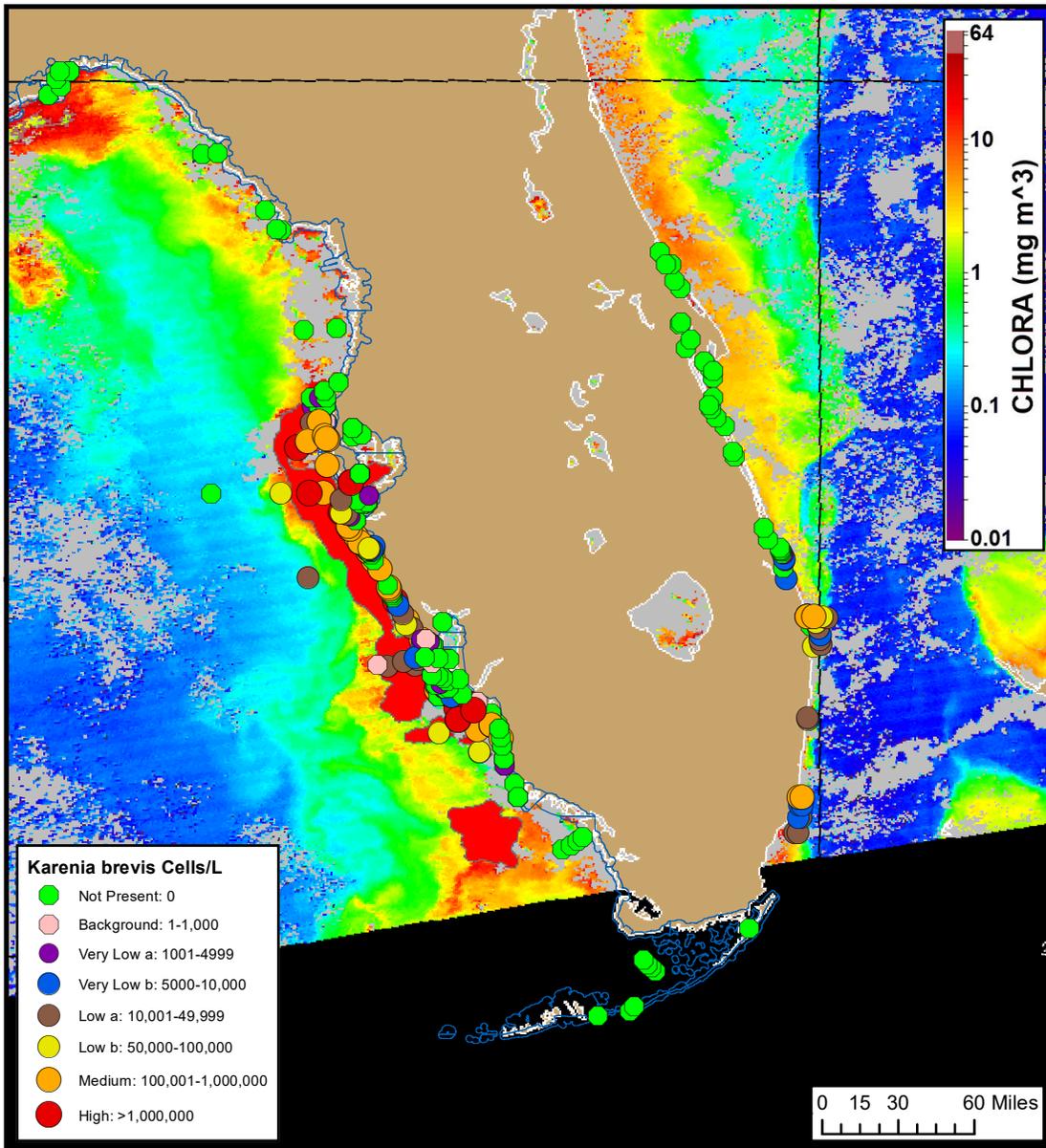
### Wind conditions from Naples, FL



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/xnx4y>.

### Wind conditions from Venice Pier, FL





*Karenia brevis* cell concentration sampling data from: 09/24/18 through 10/03/18. 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 (10/03/18) with possible *K. brevis* HAB areas shown by red polygon(s).

## Analysis

**\*\*Due to the upcoming federal holiday, the next bulletin will be issued on Tuesday, October 9.**

### Summary of Recent Water Samples:

#### ***K. brevis* Cell Concentrations:**

**Range:** Not Present through High

**Date:** 09/24-10/03

**Source:** FWRI, MML, SCHD, CCPCD

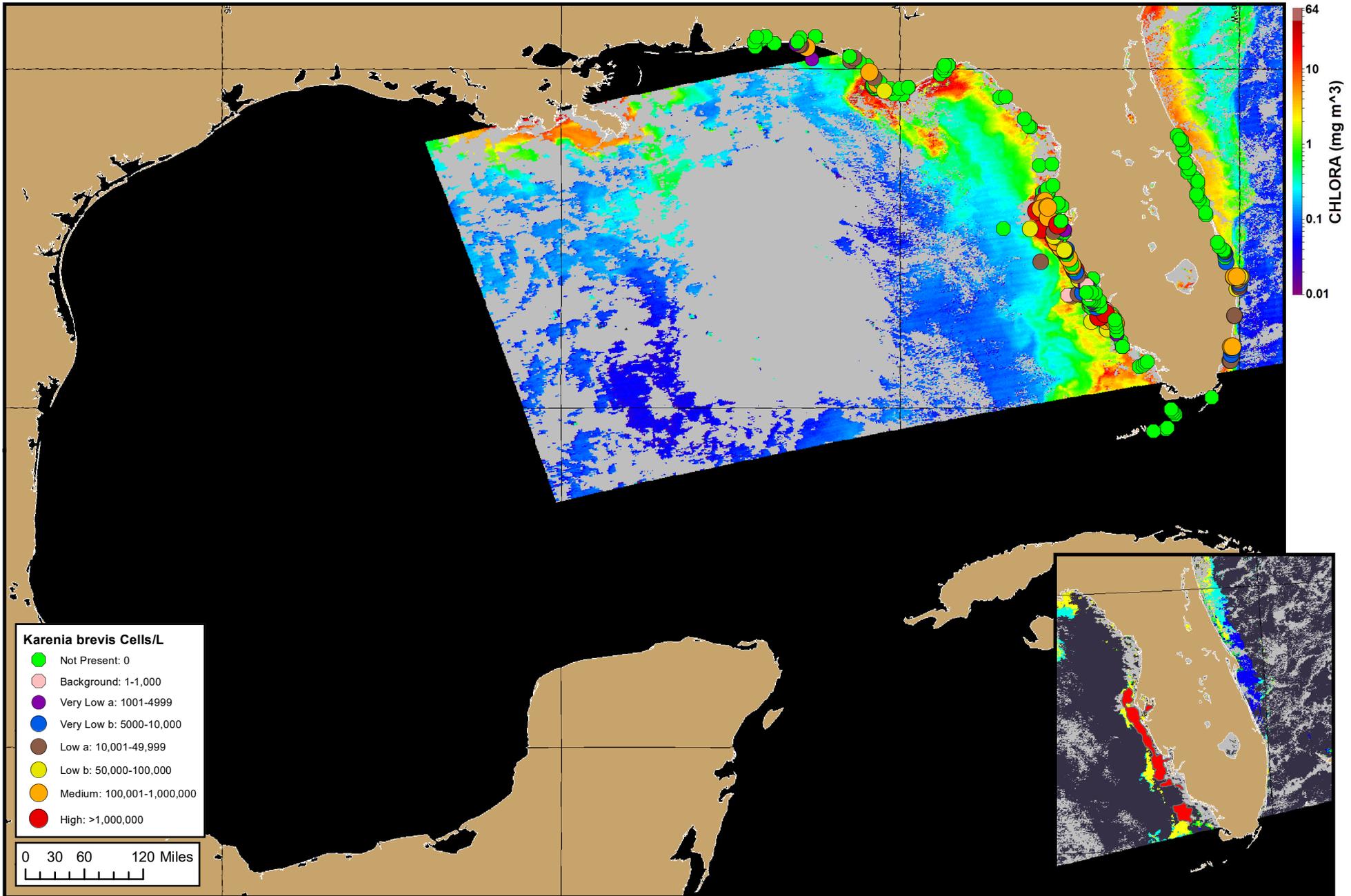
### Imagery:

In recent ensemble imagery (MODIS Aqua, 10/03) patches of elevated to very high chlorophyll (2 to >20  $\mu\text{g/L}$ ) with the optical characteristics of *K. brevis* is visible along- and off-shore from Pinellas to Sarasota counties and offshore from Charlotte to Monroe counties.

### Forecasts:

Forecast winds today through Tuesday (10/04-10/09) will promote the potential for northerly transport of surface *K. brevis*. Offshore winds will minimize the potential for respiratory irritation alongshore southwest Florida through Monday.

Yang, Davis



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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).