



# Gulf of Mexico Harmful Algal Bloom Bulletin

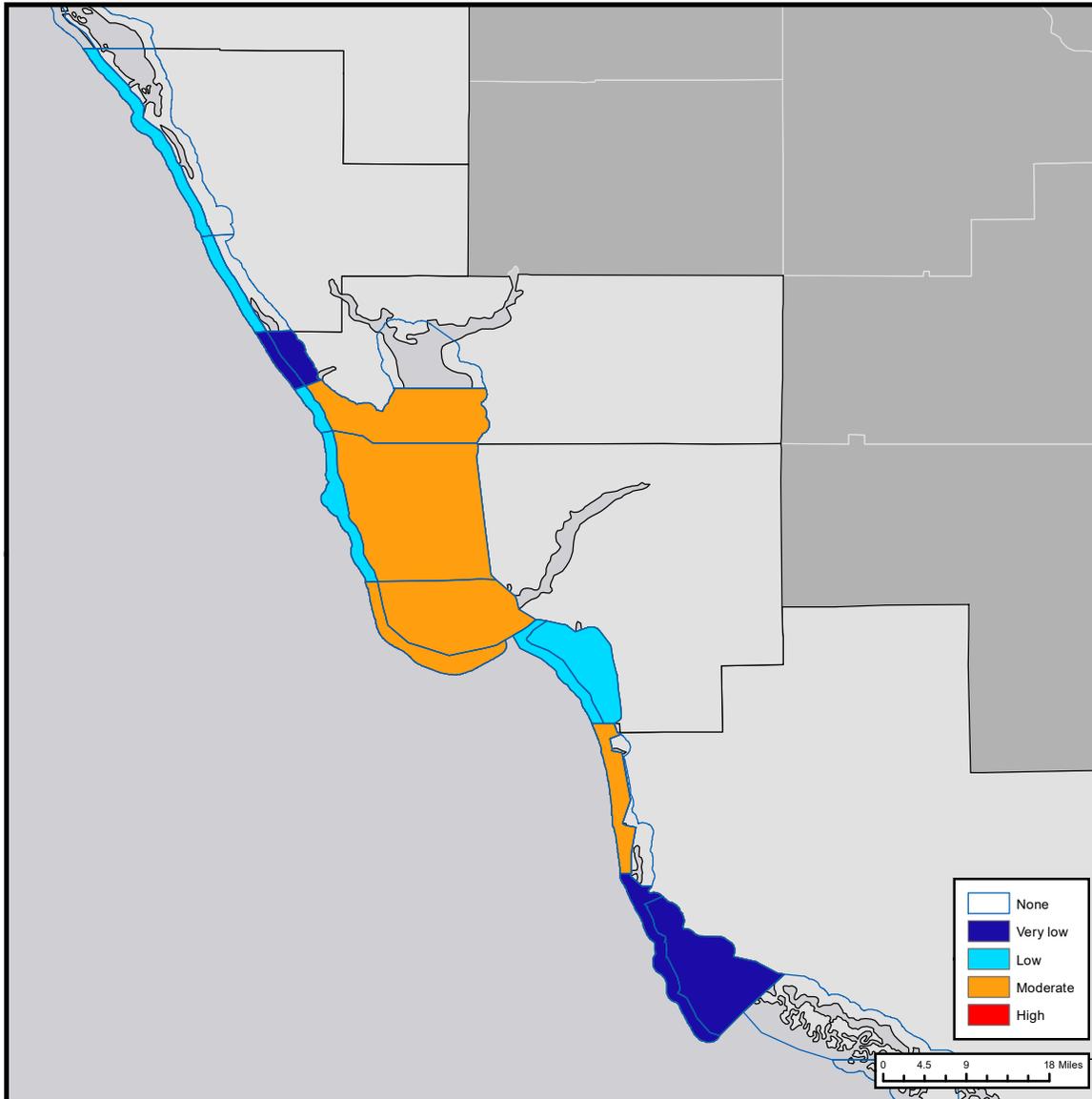
Thursday, March 4, 2021

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 03-04-21 to 03-08-21 displaying the highest level of potential respiratory irritation forecasts in each region.

## Region: Southwest Florida



### Conditions Report

Not present to medium concentrations of *Karenia brevis* (commonly known as red tide) are present along- and offshore portions of southwest Florida. Not present to background concentrations of *K. brevis* are present offshore 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:** Sarasota, Charlotte, Lee, Collier  
**Dead fish:** Charlotte

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/harmful-algae-blooms/index.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 03/04	Fri 03/05	Sat 03/06	Sun 03/07	Mon 03/08		
Florida								
	DIXIE County-Gulf Coast							
	LEVY County-Gulf Coast							
	CITRUS County-Gulf Coast							
	HERNANDO County-Gulf Coast							
	Northern PASCO County-Gulf Coast							
	Southern PASCO County-Gulf Coast							
	Northern PINELLAS County-Gulf Coast							
	Northern PINELLAS County-Bay Regions							
	Northern PINELLAS County, Upper Bay Area-Bay Regions							
	Southern PINELLAS County-Gulf Coast							
	Southern PINELLAS County-Bay Regions							
	PINELLAS and Northern MANATEE County-Bay Regions							
	South MANATEE County-Gulf Coast							
	South MANATEE County-Bay Regions							
	North SARASOTA County-Gulf Coast	low	low	low	low	low		
	North SARASOTA County-Bay Regions							
	Southern SARASOTA County-Gulf Coast	low	low	low	low	low		
	Southern SARASOTA County-Bay Regions							
	North CHARLOTTE County-Gulf Coast	very low						
	North CHARLOTTE County-Bay Regions	very low						
	Southern CHARLOTTE County-Gulf Coast	low	very low	very low	very low	very low		
	Southern CHARLOTTE County-Bay Regions	moderate	moderate	moderate	moderate	moderate		
	Upper CHARLOTTE Harbor-Bay Regions							
	Northern LEE County-Gulf Coast	low	very low	low	low	low		
	Northern LEE County-Bay Regions	moderate	moderate	moderate	moderate	moderate		
	Central LEE County-Gulf Coast	moderate	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.

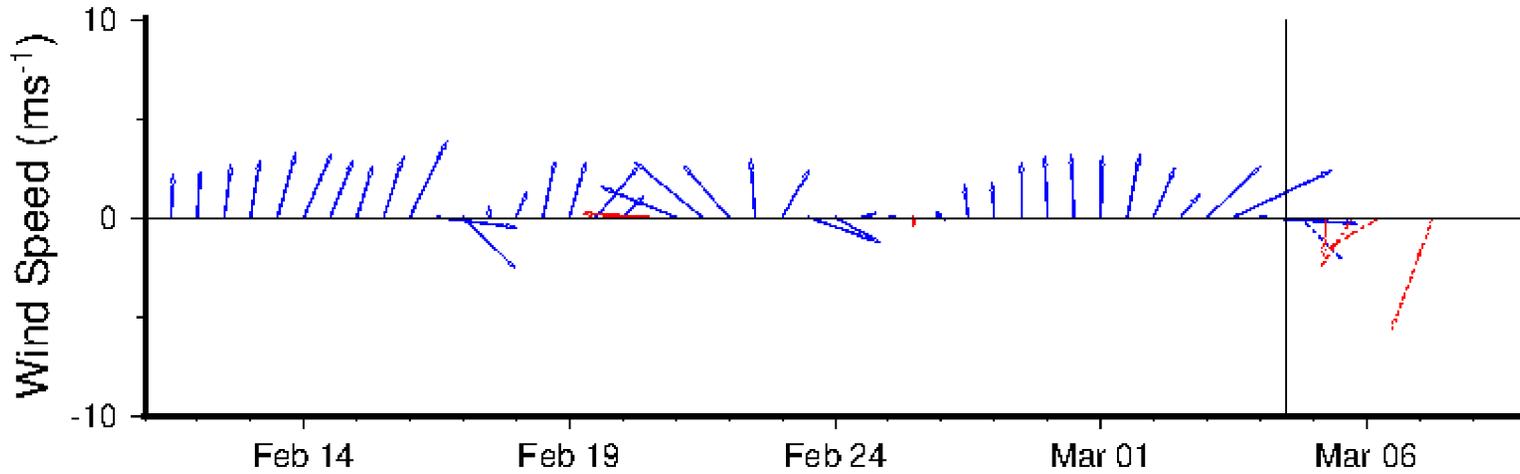
Cells are marked 'none' if *K. brevis* was detected, but no respiratory irritation is forecasted in the region. Cells are blank if no *K. brevis* has been detected in the region.

State Name	County Region	Thu 03/04	Fri 03/05	Sat 03/06	Sun 03/07	Mon 03/08		
<b>Florida</b>								
	<b>Central LEE County-Bay Regions</b>	moderate	moderate	moderate	very low	moderate		
	<b>Southern LEE County-Gulf Coast</b>	low	low	low	low	low		
	<b>Southern LEE County-Bay Regions</b>	low	low	low	low	low		
	<b>Northern COLLIER County-Gulf Coast</b>	moderate	low	moderate	low	low		
	<b>Northern COLLIER County-Bay Regions</b>							
	<b>Central COLLIER County-Gulf Coast</b>	very low	none	very low	none	none		
	<b>Central COLLIER County-Bay Regions</b>	very low						
	<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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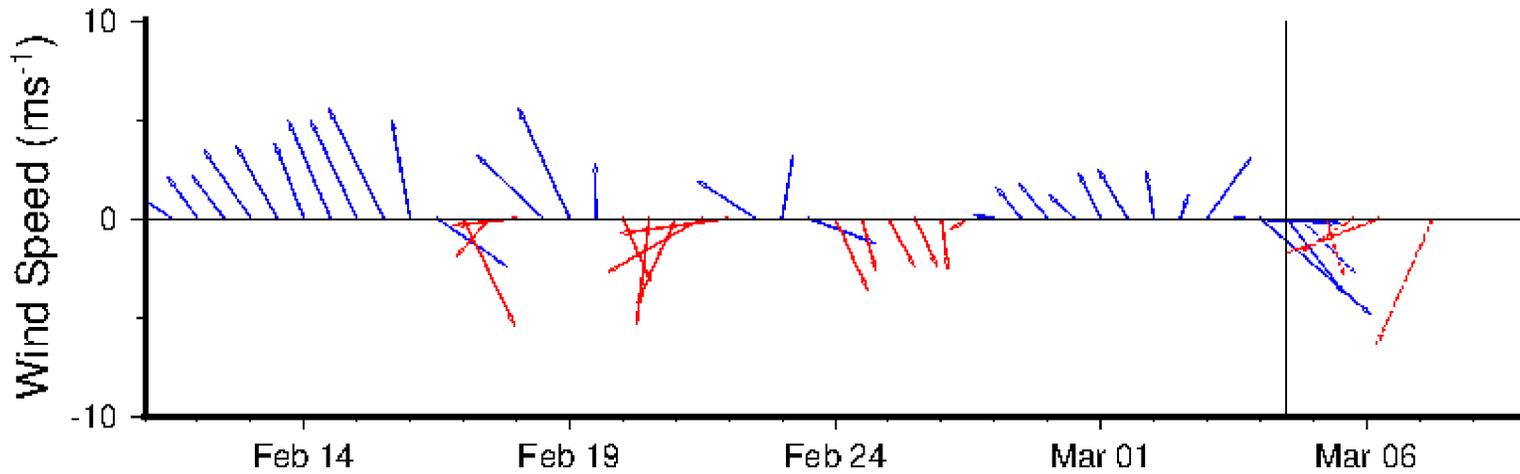
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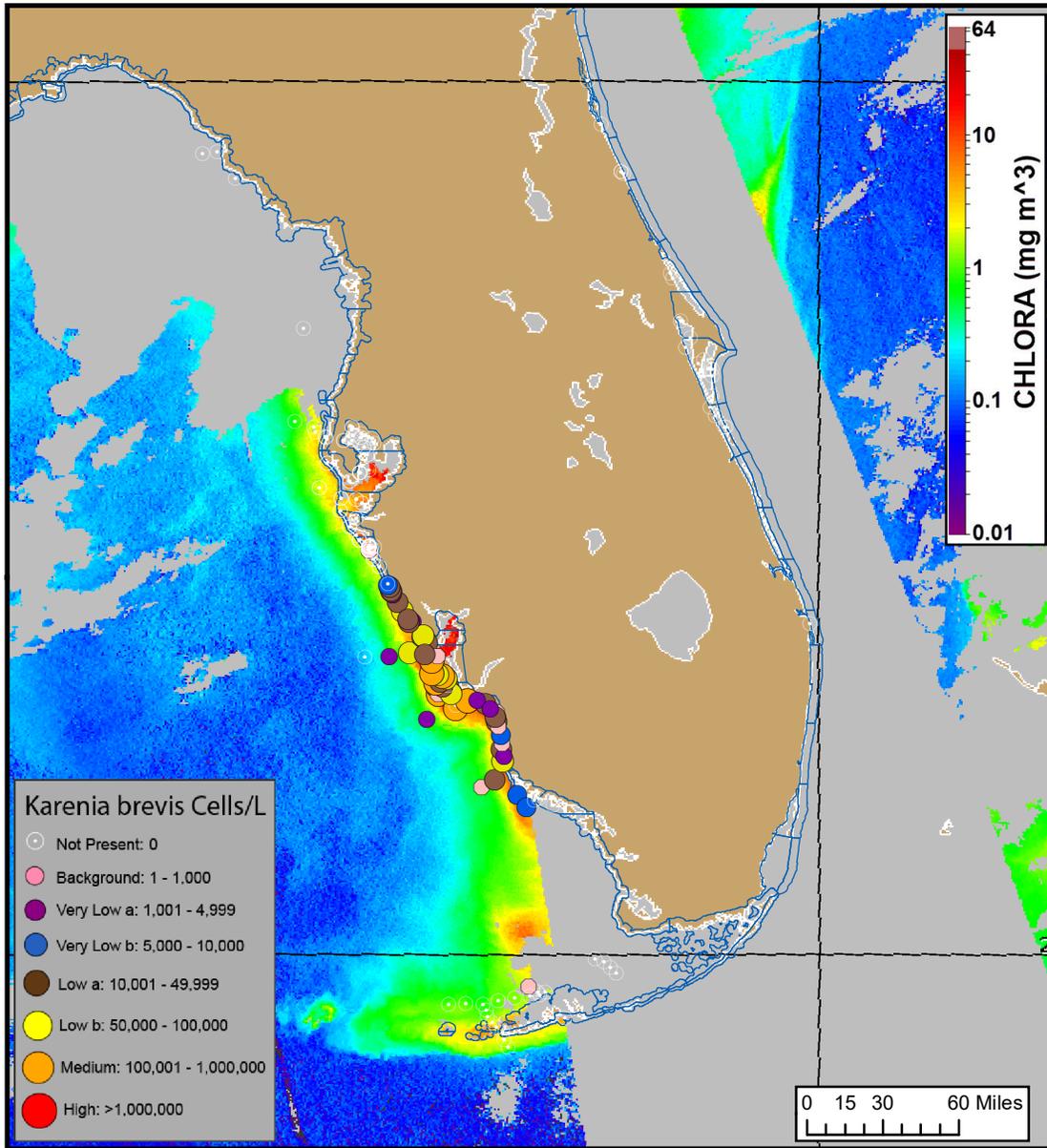
**Wind conditions from Naples, FL**



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 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://www.weather.gov/marine/stheastmz>.

**Wind conditions from Venice Pier, FL**





## Analysis

### Summary of Recent Water Samples:

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

**Range:** Not Present through Medium

**Date:** 02/22-03/02

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

### Imagery:

Recent satellite imagery (VIIRS, 3/1) shows elevated to high chlorophyll (2 to 19  $\mu\text{g/L}$ ) present at the coast of southwest Florida. A newly-formed patch of high chlorophyll (11-17  $\mu\text{g/L}$ ) with some of the optical characteristics of *K. brevis* is present alongshore from southern Sarasota County to central Lee County; in line with recent beach reports, increased sample concentrations, and overall bloom extent. The patch of elevated chlorophyll (3-4  $\mu\text{g/L}$ ) with some of the optical characteristics of *K. brevis* remains offshore Monroe County, 27 miles northwest of Big Pine Key in the lower Florida Keys.

### Forecasts:

On- and alongshore winds forecast today and tomorrow (3/4-5) will increase the potential for respiratory irritation at the coast. Winds forecast today through Monday (3/4-8) will support the net southern transport of surface *K. brevis* concentrations.

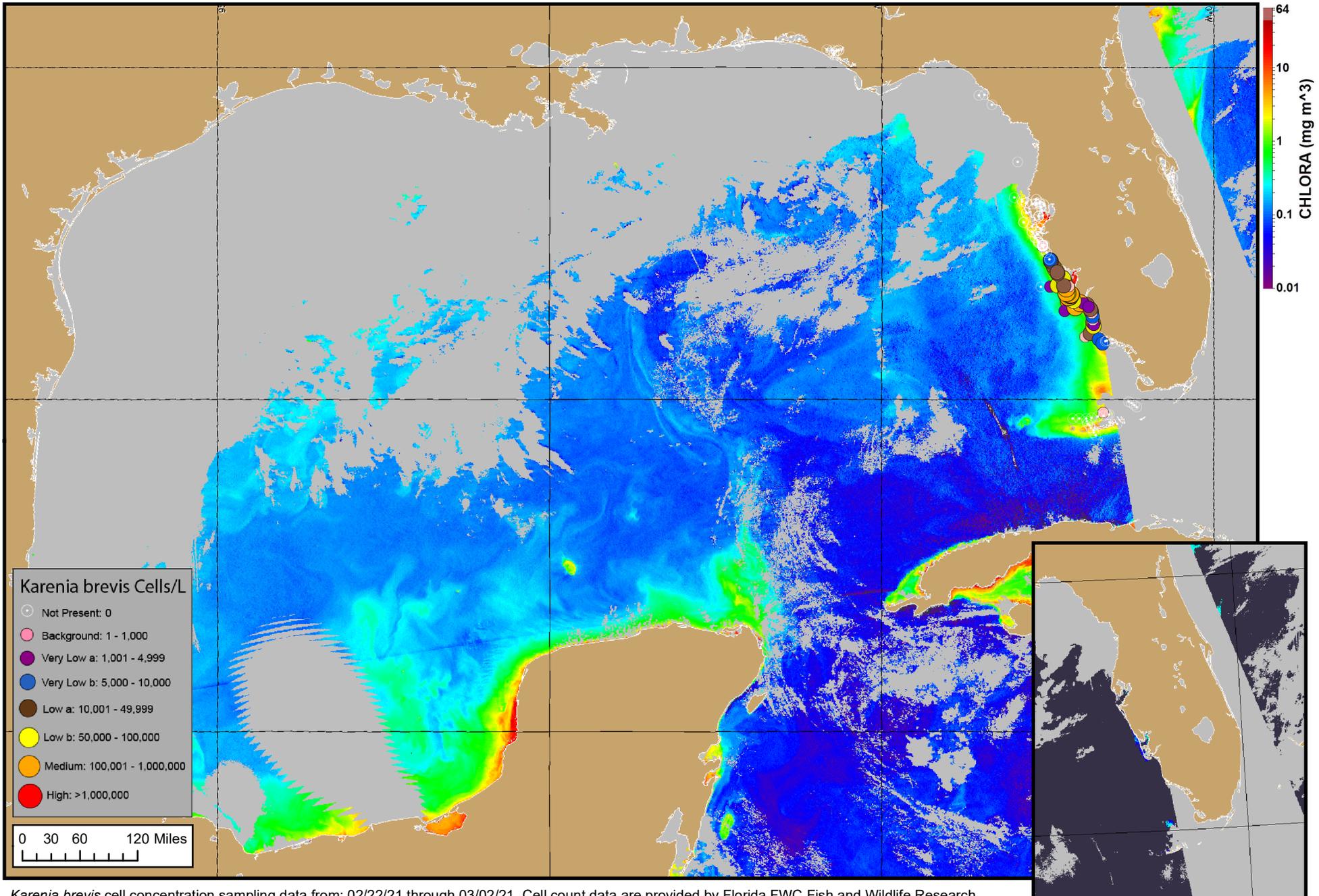
Additional satellite imagery available here:

<https://tidesandcurrents.noaa.gov/hab/gomx/data/Imagery-EasternGOMX/>

-Keeney, Davis

*Karenia brevis* cell concentration sampling data from: 02/22/21 through 03/02/21. 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>.

VIIRS satellite chlorophyll image (03/01/21) with possible *K. brevis* HAB areas shown by red polygon(s).



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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).