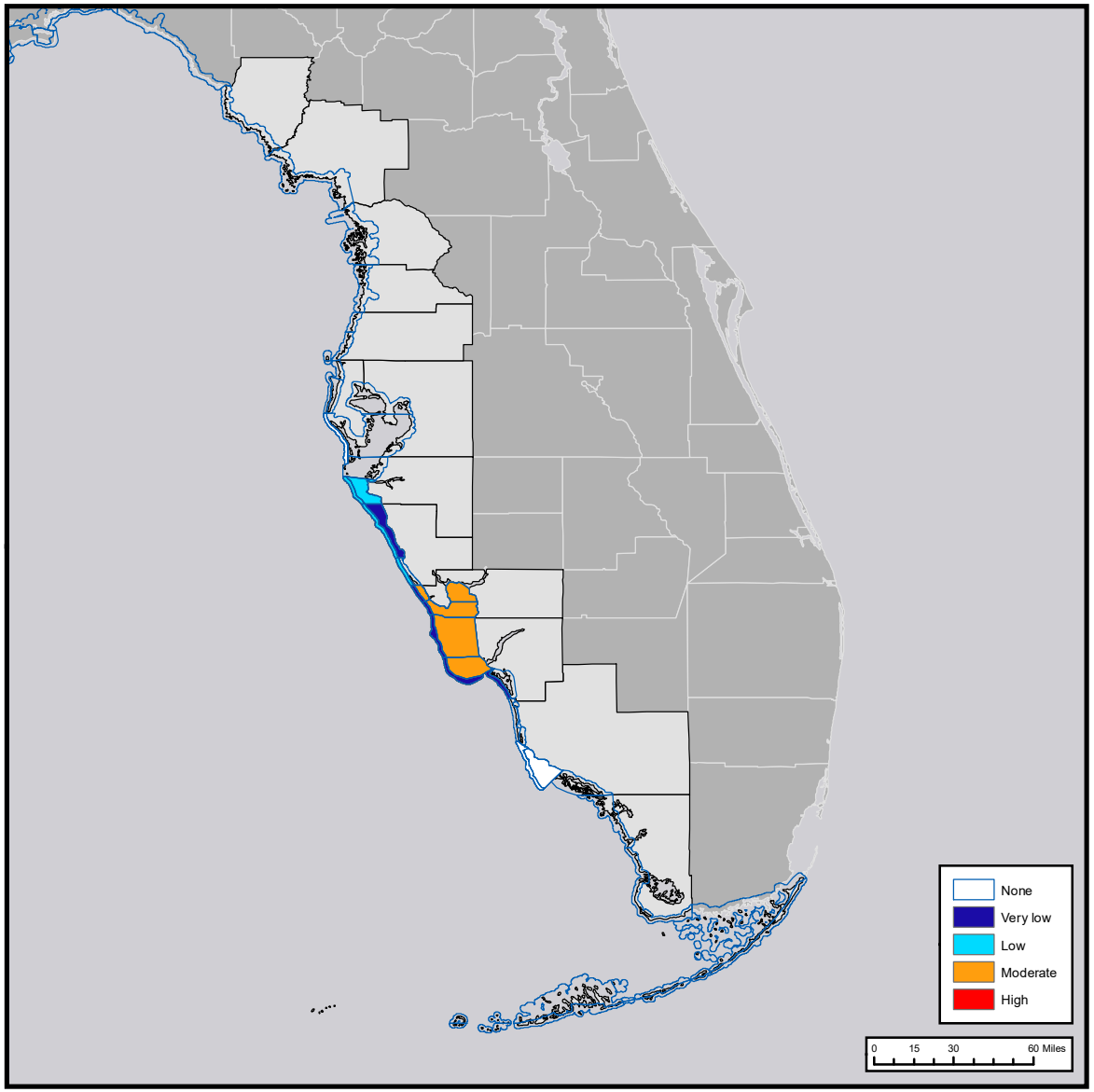
Gulf of Mexico Harmful Algal Bloom Bulletin

Thursday, December 28, 2017
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.



In the map above, the highest level of potential respiratory irritation forecast is displayed as a layer for each day from 12-28-17 to 1-2-18. See next page for a table of the respiratory irritation forecasts.

Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as Florida 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.

Health information, from the Florida Department of Health and other agencies, is available at https://tidesandcurrents.noaa.gov/hab/gomx_health.html. For recent, local observations and data check Mote Marine Laboratory Daily Beach Conditions (http://visitbeaches.org) and the Florida Fish and Wildlife Conservation Commission Red Tide Status (http://myfwc.com/redtidestatus).

Recently Reported Impacts (Listed by County):

Respiratory irritation: Sarasota, Lee
Dead fish: Sarasota, Charlotte, Lee
Discolored water: 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

State Name	County Region	Thu 12/28	Fri 12/29	Sat 12/30	Sun 12/31	Mon 1/1	Tue 1/2	
	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	none	none	none	none	none	none	
	Southern PINELLAS County-Bay Regions							
	PINELLAS and Northern MANATEE County-Bay Regions							
	South MANATEE County-Gulf Coast	low	low	low	low	low	low	
	South MANATEE County-Bay Regions	low	low	low	low	low	low	
	North SARASOTA County-Gulf Coast	low	low	low	low	low	low	
	North SARASOTA County-Bay Regions	very low	very low	very low	very low	very low	very low	
	Southern SARASOTA County-Gulf Coast	low	low	low	low	low	low	
	Southern SARASOTA County-Bay Regions							
	North CHARLOTTE County-Gulf Coast	very low	very low	very low	very low	very low	very low	
	North CHARLOTTE County-Bay Regions	moderate	moderate	moderate	moderate	moderate	moderate	
	Southern CHARLOTTE County-Gulf Coast	very low	very low	very low	very low	very low	very low	
	Southern CHARLOTTE County-Bay Regions	moderate	moderate	moderate	moderate	moderate	moderate	
	Upper CHARLOTTE Harbor-Bay Regions	moderate	moderate	moderate	moderate	moderate	moderate	
	Northern LEE County-Gulf Coast	very low	very low	very low	very low	very low	very low	
	Northern LEE County-Bay Regions	moderate	moderate	moderate	moderate	moderate	moderate	
	Central LEE County-Gulf Coast	very low	very low	very low	very low	very low	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.

State Name	County Region	Thu 12/28	Fri 12/29	Sat 12/30	Sun 12/31	Mon 1/1	Tue 1/2	
	Central LEE County-Bay Regions	moderate	moderate	moderate	moderate	moderate	moderate	
	Southern LEE County-Gulf Coast	very low	very low	very low	very low	very low	very low	
	Southern LEE County-Bay Regions							
	Northern COLLIER County-Gulf Coast							
	Northern COLLIER County-Bay Regions							
	Central COLLIER County-Gulf Coast	none	none	none	none	none	none	
	Central COLLIER County-Bay Regions	none	none	none	none	none	none	
	Southern COLLIER County-Gulf Coast							
	Northern MONROE County-Gulf Coast							
	Southern MONROE County-Gulf Coast							
	UPPER KEYS-Oceanside							
	UPPER KEYS and FLORIDA BAY-Gulfside							
	MIDDLE KEYS-Oceanside							
	MIDDLE KEYS-Gulfside							
	LOWER KEYS-Oceanside							
	LOWER KEYS-Gulfside							

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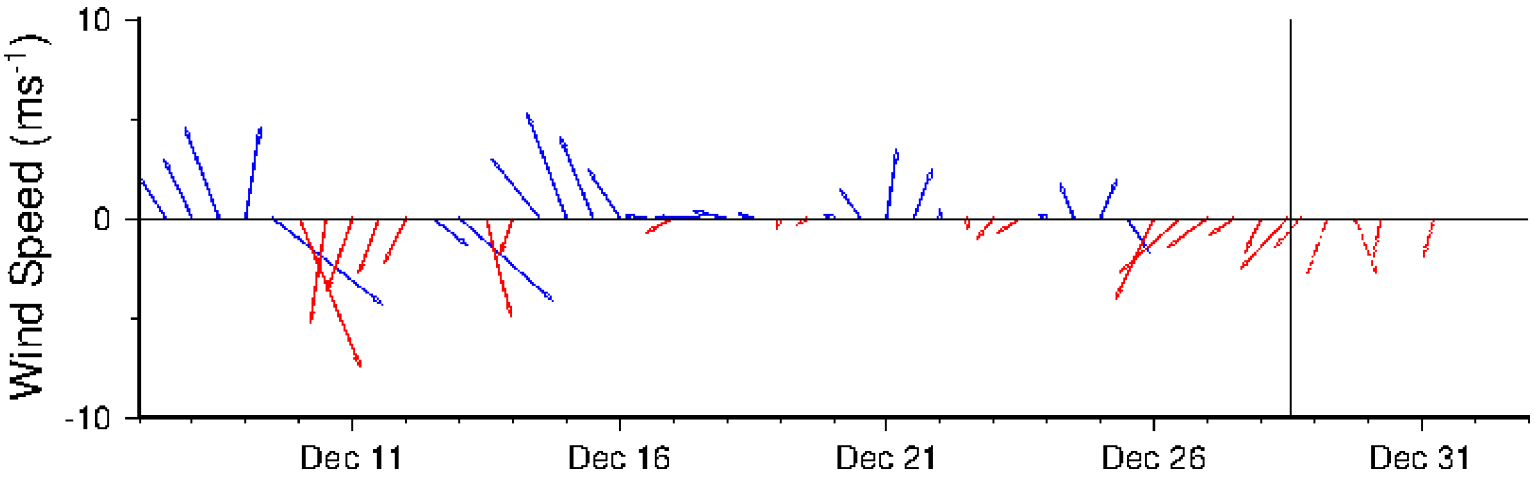
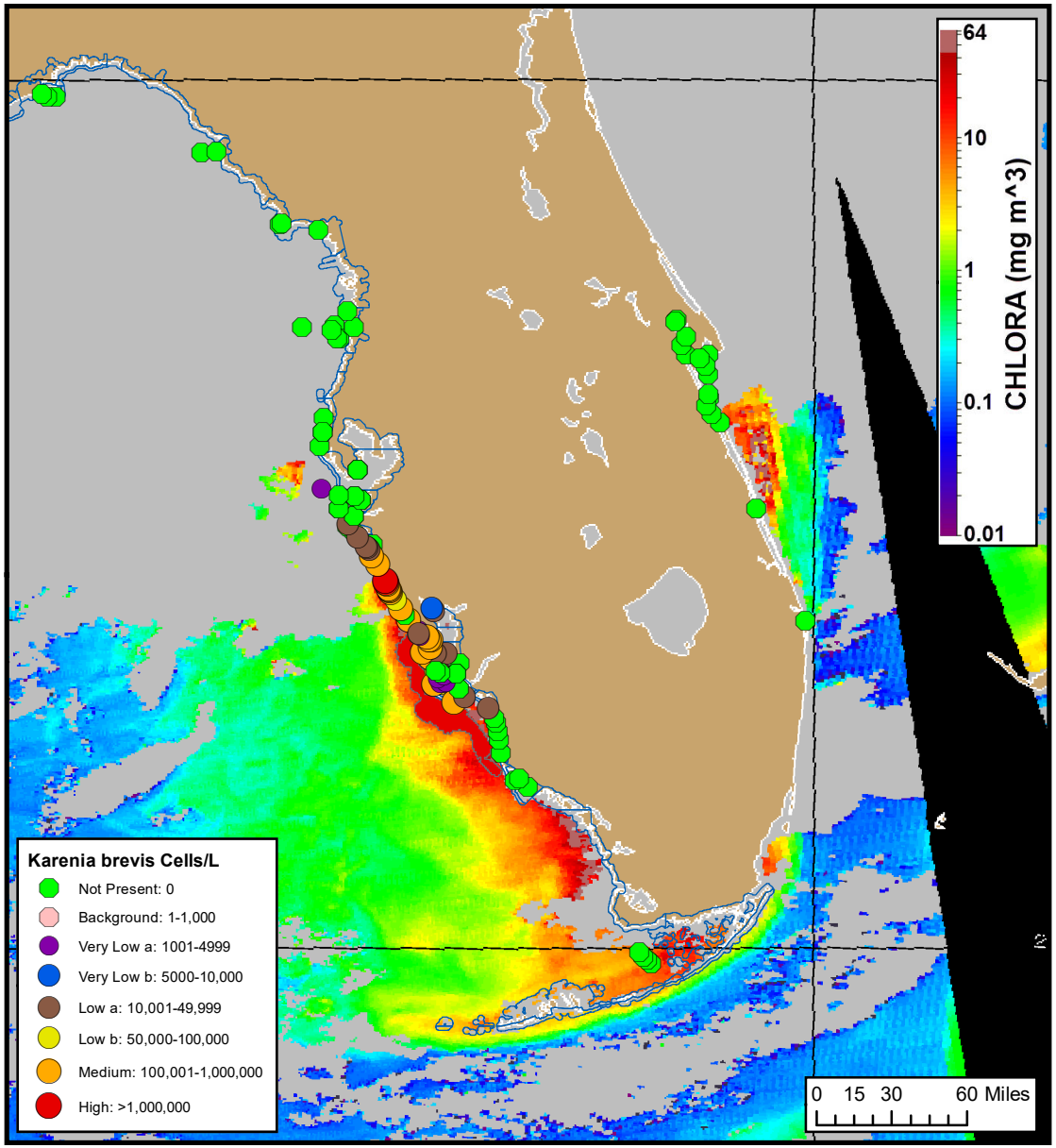
Wind conditions from Venice Pier, FL



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.



Karenia brevis cell concentration sampling data from: 12/18/17 through 12/26/17. 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 satellite chlorophyll image (12/27/17) 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, January 2, 2018.

Summary of Recent Water Samples:

***K. brevis* Cell Concentrations:**
Range: Not Present throught High
Date: 12/18-12/26
Source: FWRI, MML, SCHD, CCPCD

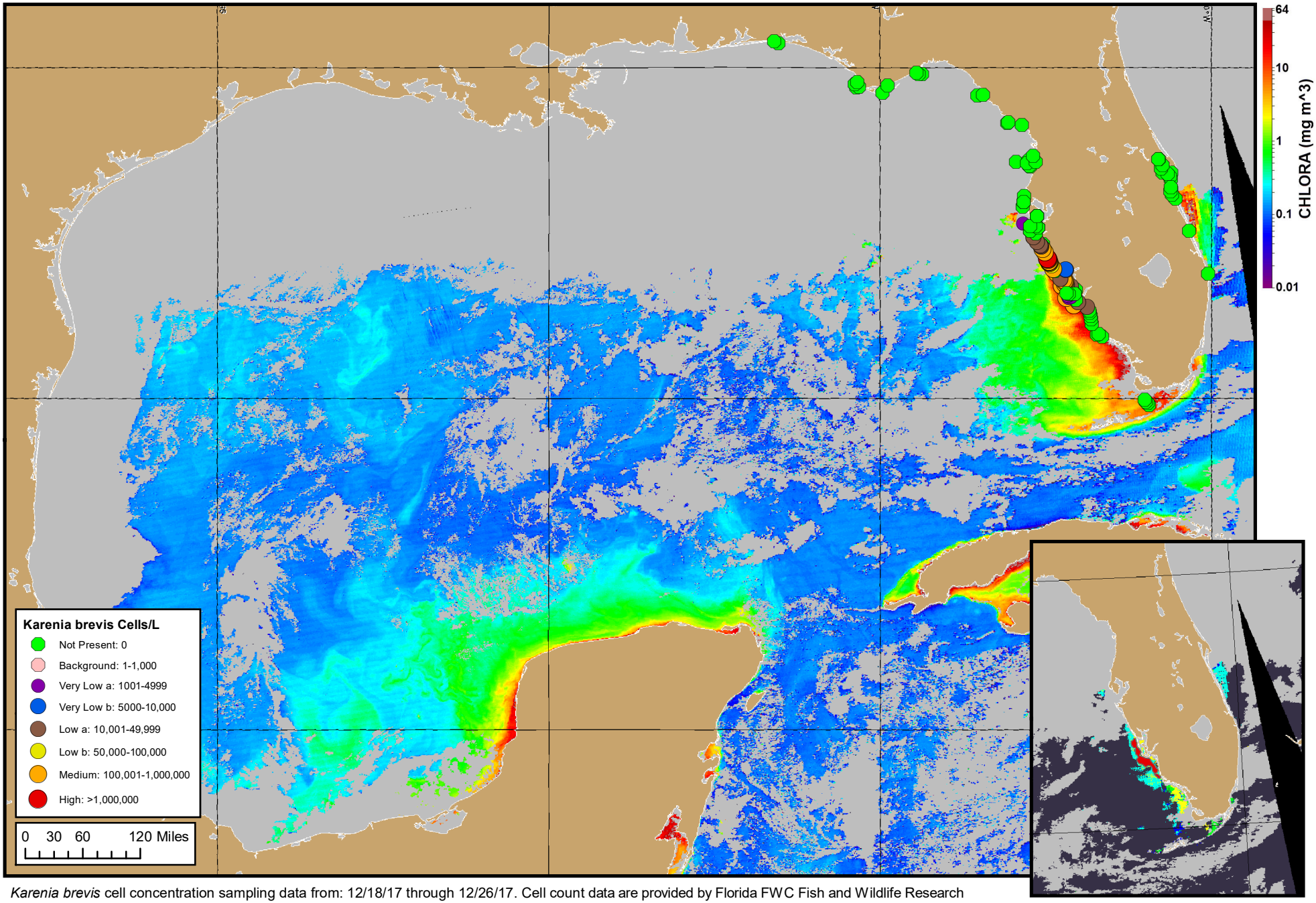
Imagery:

Recent ensemble imagery (MODIS Aqua, 12/27) indicates elevated to very high chlorophyll (2 to >20 µg/L) and patches with the optical characteristics of *K. brevis* along- and offshore southwest Florida from Sarasota to Collier counties.

Forecasts:

Forecasted winds may minimize the potential for alongshore transport of surface *K. brevis* concentrations today through Tuesday, January 2.

Yang, Urizar



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MODIS satellite chlorophyll image (12/27/17).

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