



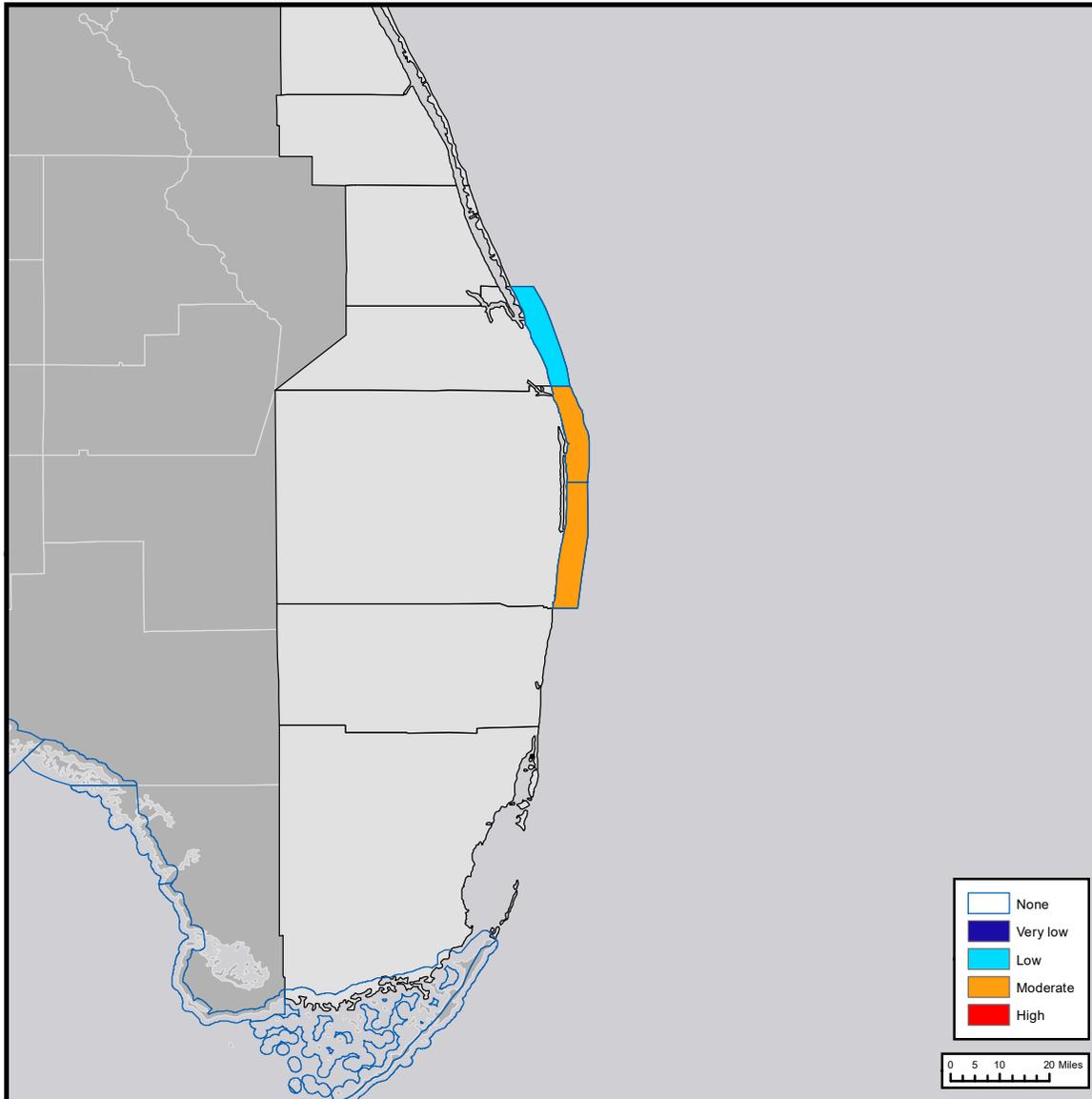
Gulf of Mexico Harmful Algal Bloom Bulletin

Tuesday, October 02, 2018
 NOAA National Ocean Service
 NOAA Satellite and Information Service
 NOAA National Weather Service

Region: East 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 10-02-18 to 10-05-18. See next page for a table of the respiratory irritation forecasts.

Conditions Report

Very low to medium concentrations of *Karenia brevis* (commonly known as red tide) are present along- and offshore portions of east 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: Palm Beach
Dead fish: Palm Beach

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>

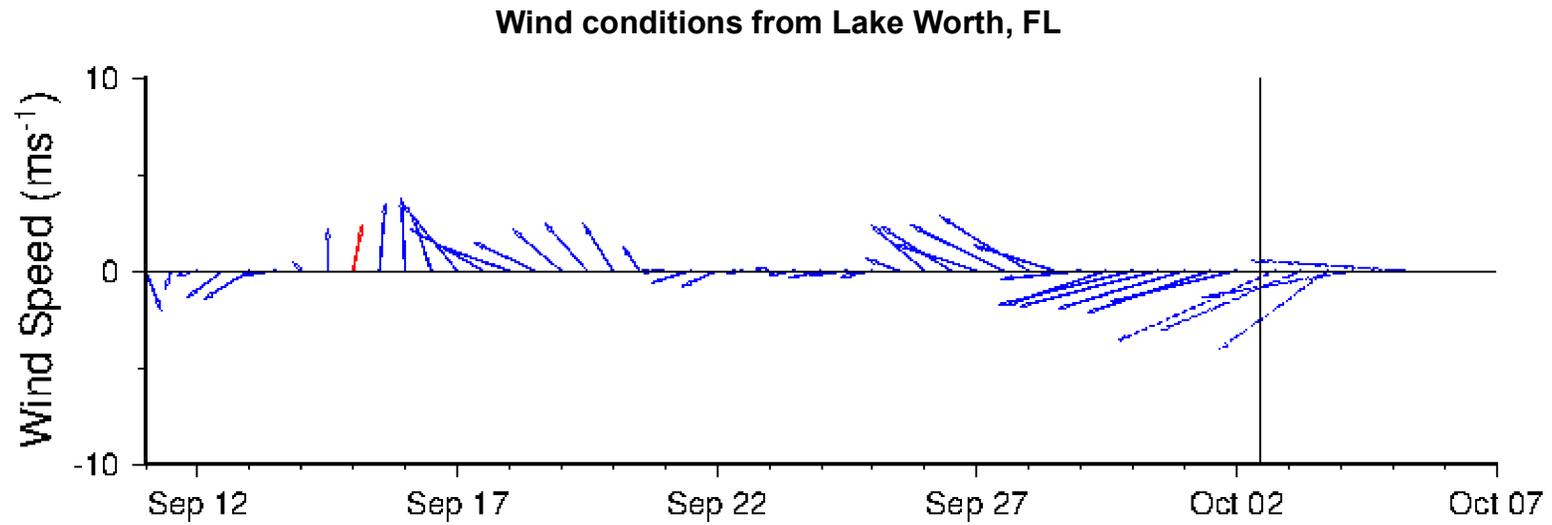
Recent, Local Observations and Data:

Mote Marine Laboratory Daily Beach Conditions:
<http://visitbeaches.org>
Florida Fish and Wildlife Conservation Commission:
<http://myfwc.com/redtidestatus>

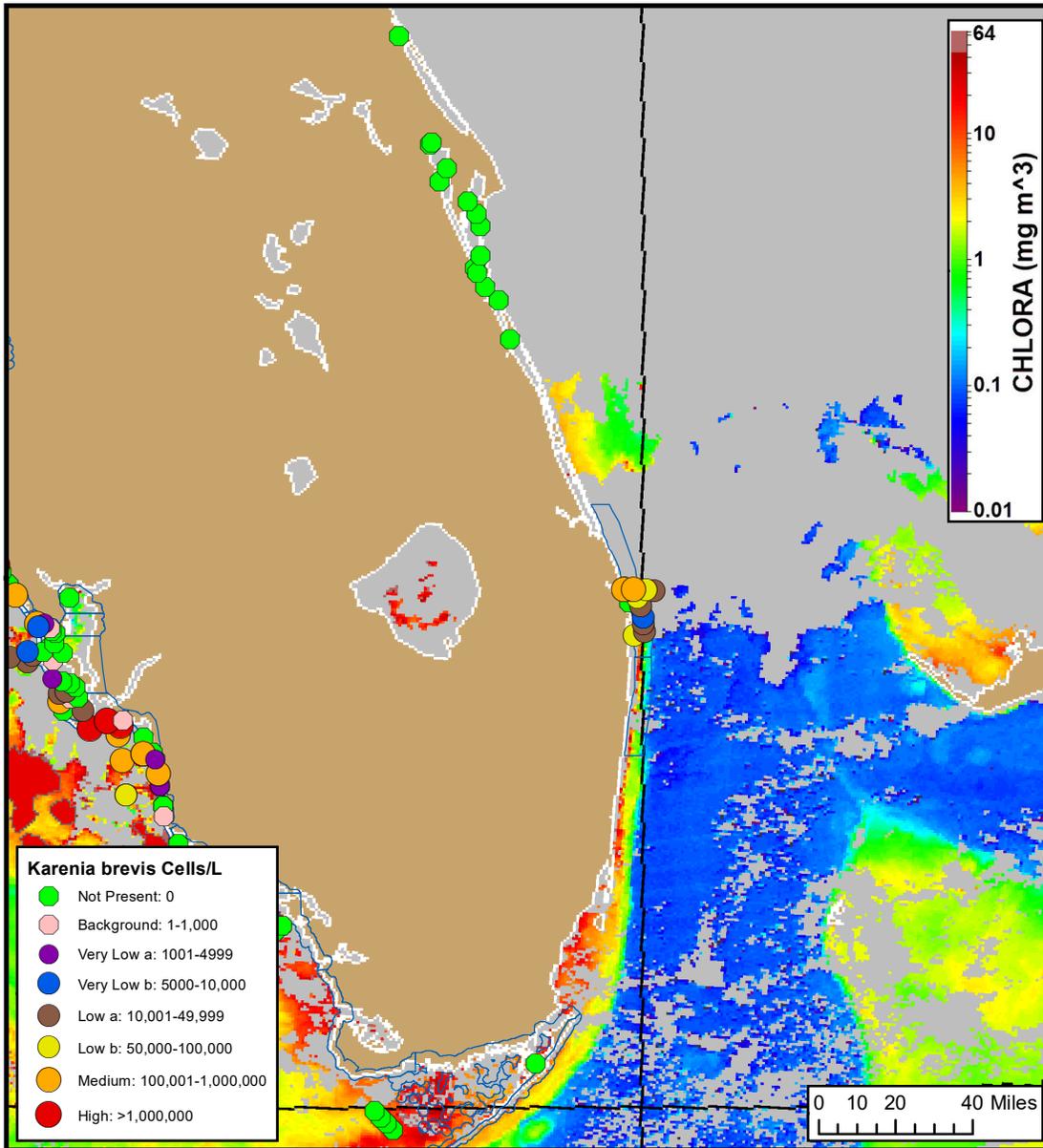
State Name	County Region	Tue 10/02	Wed 10/03	Thu 10/04	Fri 10/05			
Florida								
	Martin	Low	Low	Low	Low			
	Northern Palm Beach	Moderate	Moderate	Moderate	Moderate			
	Southern Palm Beach	Moderate	Moderate	Moderate	Moderate			

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 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/xnx4B>.



Analysis

Summary of Recent Water Samples:

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

Range: Not Present to Medium

Date: 09/22-10/01

Source: FWRI

Imagery:

In recent ensemble imagery (MODIS Aqua, 10/1) small patches of elevated to very high chlorophyll (2 to >20 µg/L) with the optical characteristics of *K. brevis* is visible alongshore and up to 4 miles offshore east Florida from northern Palm Beach to northern Miami-Dade counties. Additional sampling of Martin, Broward, and Miami-Dade counties is recommended.

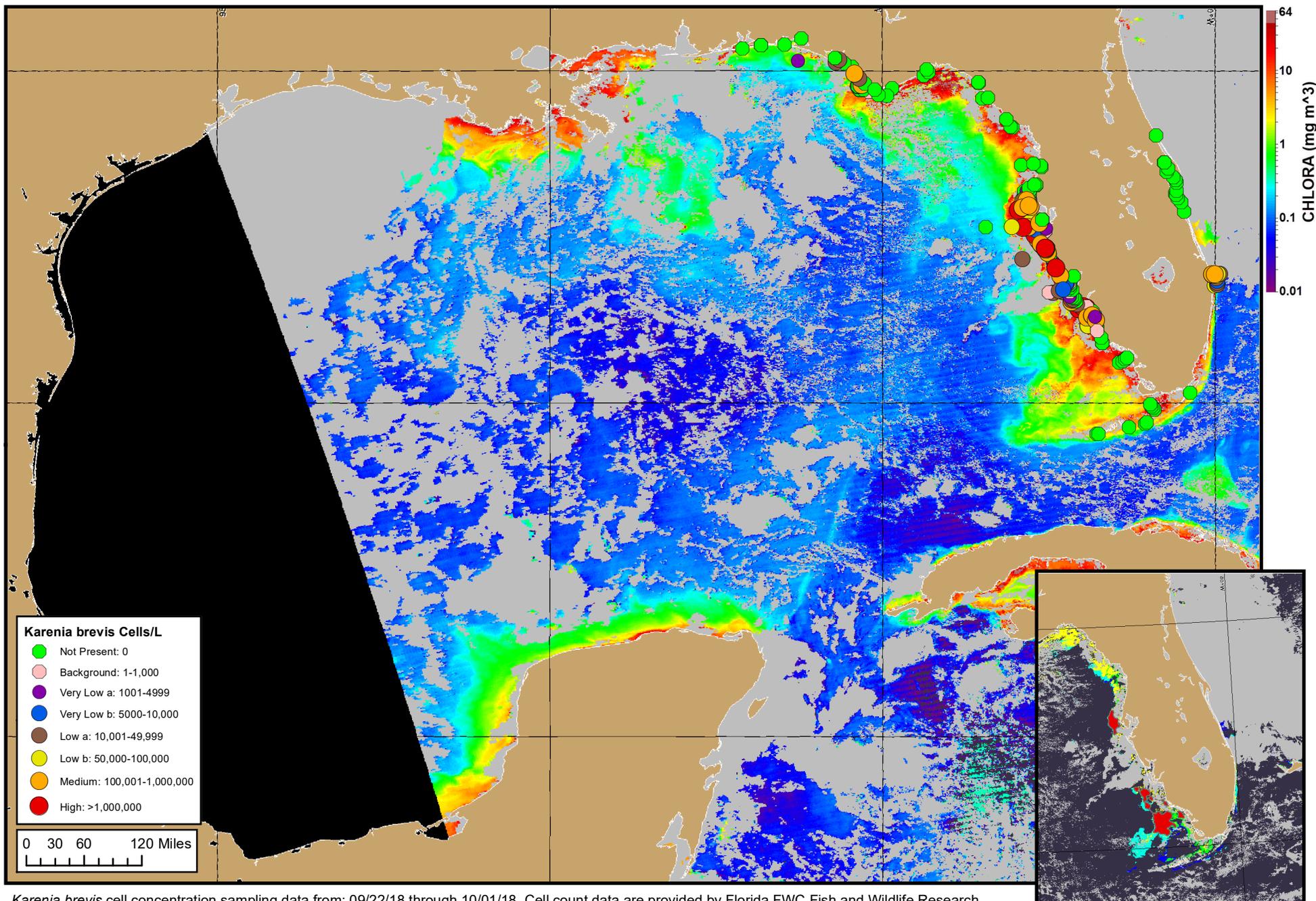
Forecasts:

Forecast winds and currents today through Friday (10/2-10/5) will promote the potential for northerly transport of surface *K. brevis*. Onshore winds may increase the potential for respiratory irritation alongshore east Florida through Friday.

Davis, Yang

Karenia brevis cell concentration sampling data from: 09/22/18 through 10/01/18. 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 (10/01/18) 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).