



Gulf of Mexico Harmful Algal Bloom Bulletin

Friday, October 05, 2018

NOAA National Ocean Service

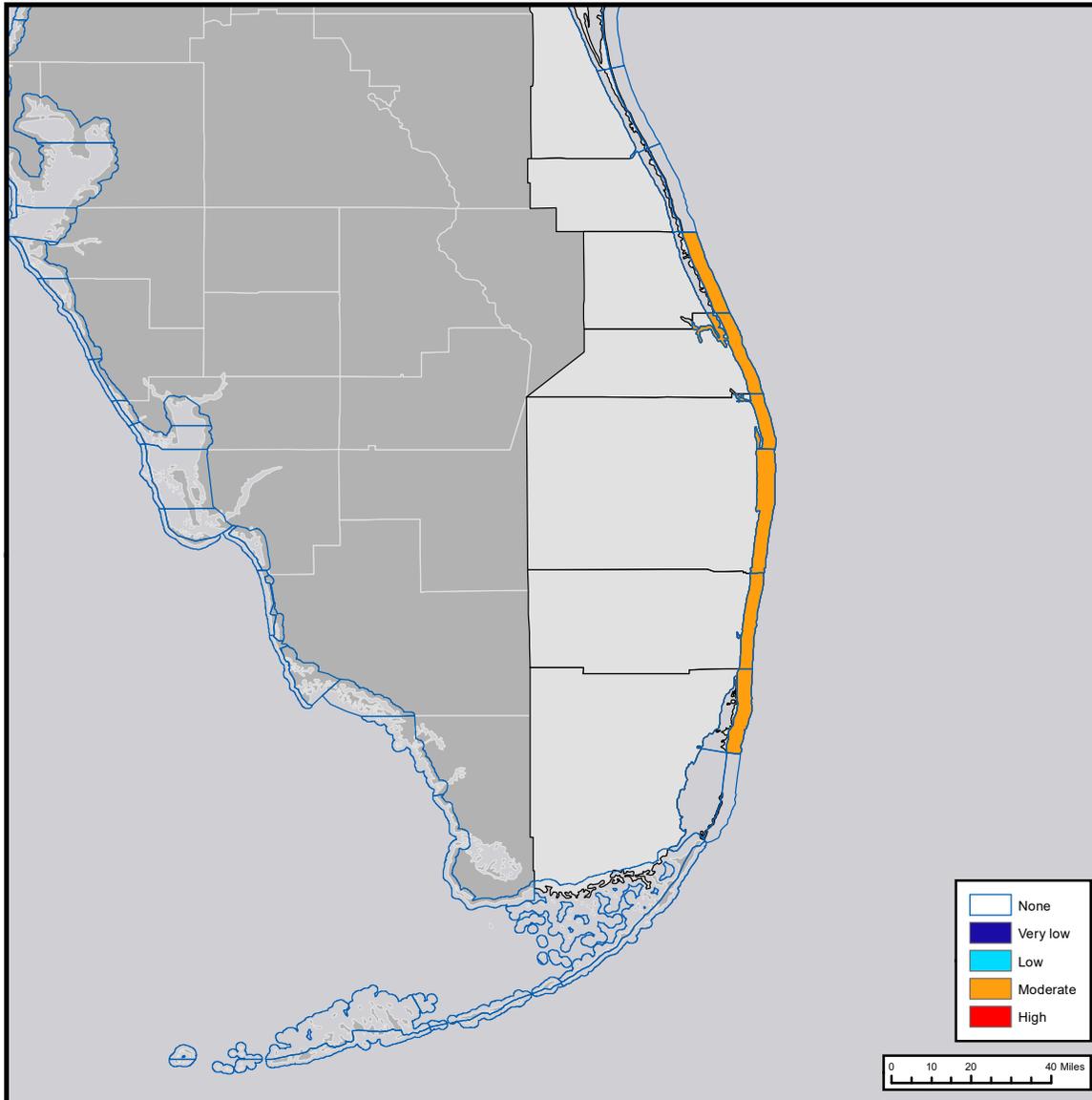
NOAA Satellite and Information Service

NOAA National Weather Service

Region: East Florida



Instructions for viewing this geospatial pdf are available at: <https://go.usa.gov/xn9g2>.



The image above is the top layer in a series of maps for 10-05-18 to 10-09-18 displaying the highest level of potential respiratory irritation forecasts in each region.

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: St. Lucie, Martin, Palm Beach, Broward

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>

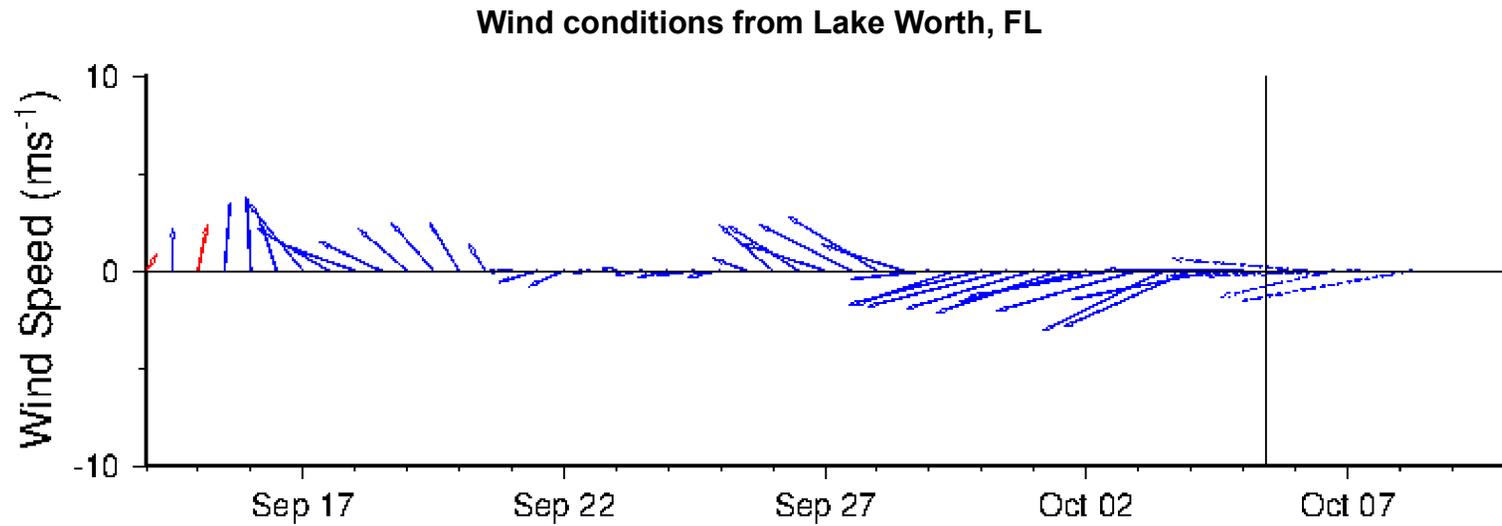
Florida Fish and Wildlife Conservation Commission:

<http://myfwc.com/redtidestatus>

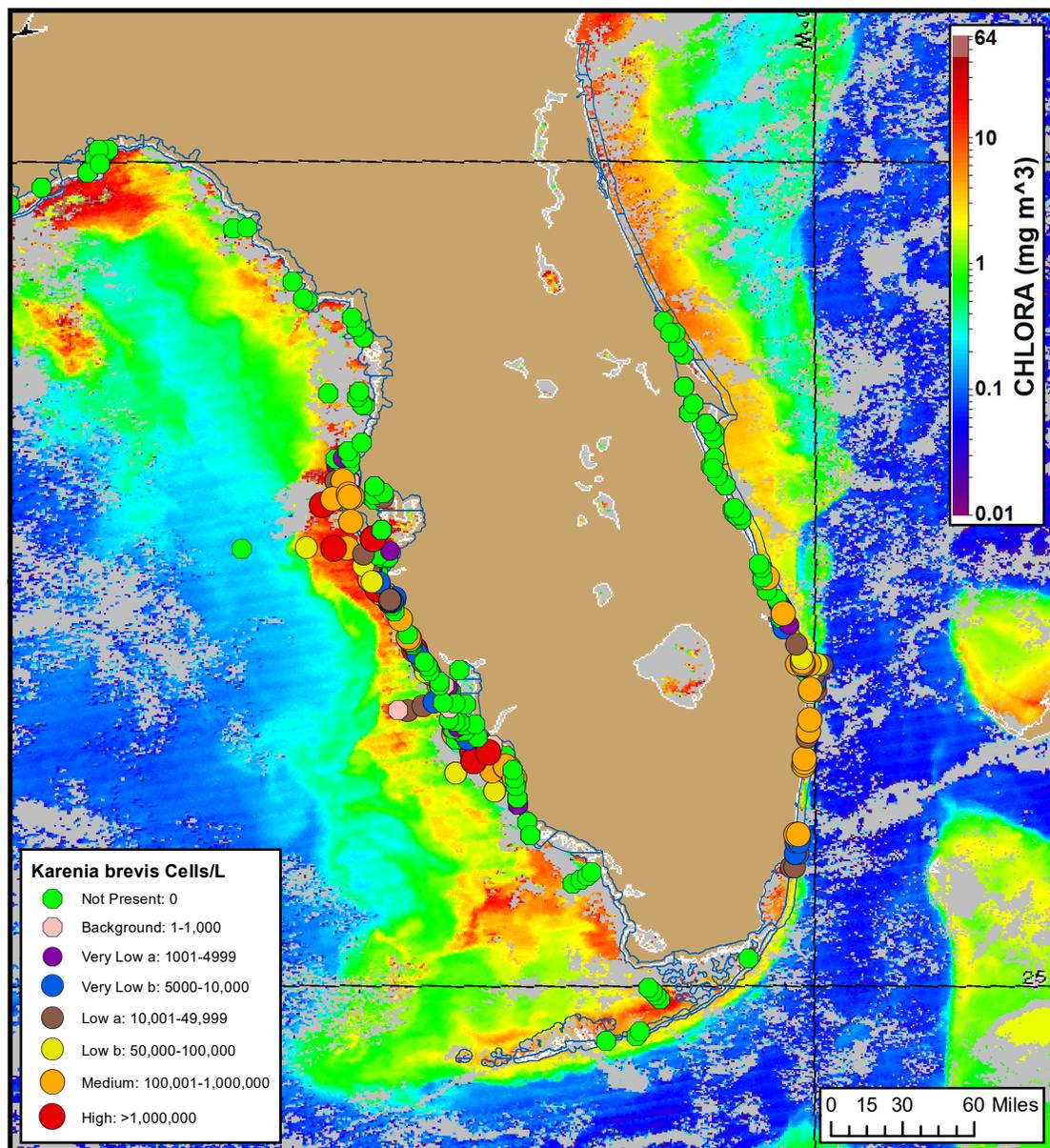
| State Name | County Region | Fri 10/05 | Sat 10/06 | Sun 10/07 | Mon 10/08 | Tue 10/09 | | |
|------------|--|-----------|-----------|-----------|-----------|-----------|--|--|
| Florida | | | | | | | | |
| | NASSAU County-Coast | | | | | | | |
| | DUVAL County-Coast | | | | | | | |
| | SAINT JOHNS County-Coast | | | | | | | |
| | FLAGLER County-Coast | | | | | | | |
| | Northern VOLUSIA County-Coast | | | | | | | |
| | Northern VOLUSIA County-Bay Regions | | | | | | | |
| | Southern VOLUSIA County-Coast | | | | | | | |
| | Southern VOLUSIA County-Bay Regions | | | | | | | |
| | Northern BREVARD County-Coast | | | | | | | |
| | Northern BREVARD County-Bay Regions | | | | | | | |
| | Central BREVARD County-Coast | | | | | | | |
| | Central BREVARD County-Bay Regions | | | | | | | |
| | Southern BREVARD County-Coast | | | | | | | |
| | Southern BREVARD County-Bay Regions | | | | | | | |
| | INDIAN RIVER County-Coast | | | | | | | |
| | INDIAN RIVER County-Bay Regions | | | | | | | |
| | SAINT LUCIE County-Coast | moderate | moderate | moderate | moderate | moderate | | |
| | SAINT LUCIE County-Bay Regions | | | | | | | |
| | MARTIN County-Coast | moderate | moderate | moderate | moderate | moderate | | |
| | Northern PALM BEACH County-Coast | moderate | moderate | moderate | moderate | moderate | | |
| | Southern PALM BEACH County-Coast | moderate | moderate | moderate | moderate | moderate | | |
| | BROWARD County-Coast | moderate | moderate | moderate | moderate | moderate | | |
| | Northern MIAMI-DADE County-Coast | moderate | moderate | moderate | moderate | moderate | | |
| | Northern MIAMI-DADE County-Bay Regions | | | | | | | |
| | Southern MIAMI-DADE County-Coast | | | | | | | |
| | Southern MIAMI-DADE County-Bay Regions | | | | | | | |

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>.



Karenia brevis cell concentration sampling data from: 09/25/18 through 10/04/18. 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 (10/03/18) with possible *K. brevis* HAB areas shown by red polygon(s).

Analysis

Summary of Recent Water Samples:

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

Range: Not Present to Medium

Date: 09/25-10/04

Source: FWRI

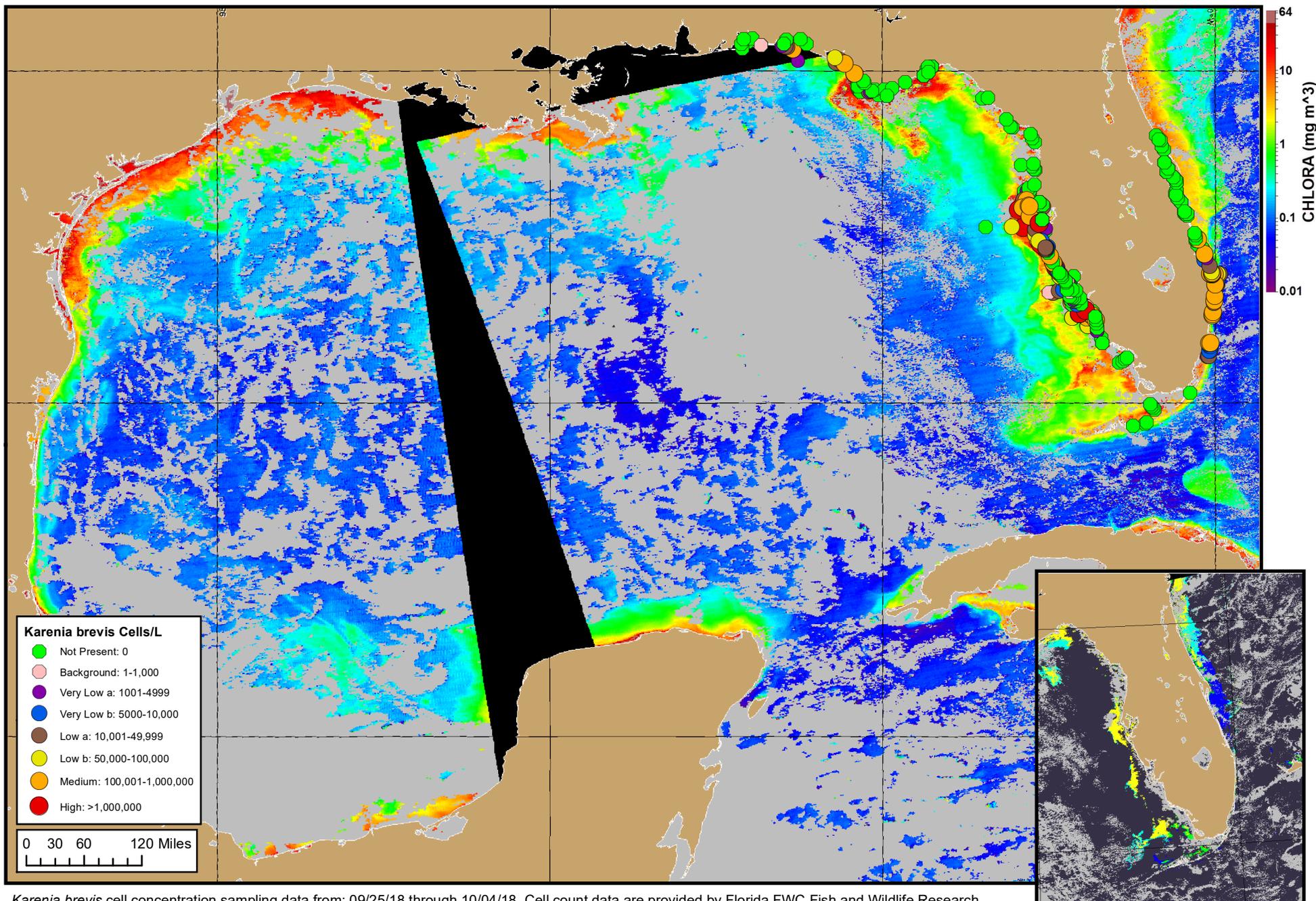
Imagery:

Recent ensemble imagery (MODIS Aqua, 10/3) has been partially obscured by clouds along the coast from Miami-Dade to Palm Beach counties, where recent sampling indicated up to 'medium' *K. brevis* concentrations. Patches of elevated to high chlorophyll (2 to 10 $\mu\text{g/L}$) with some of the optical characteristics of *K. brevis* are visible extending from offshore Martin County to Brevard County.

Forecasts:

Forecast winds and currents today through Tuesday (10/5-10/9) will promote the potential for northerly transport of surface *K. brevis* and may increase the potential for respiratory irritation at the coast.

Davis, Yang



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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).