



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

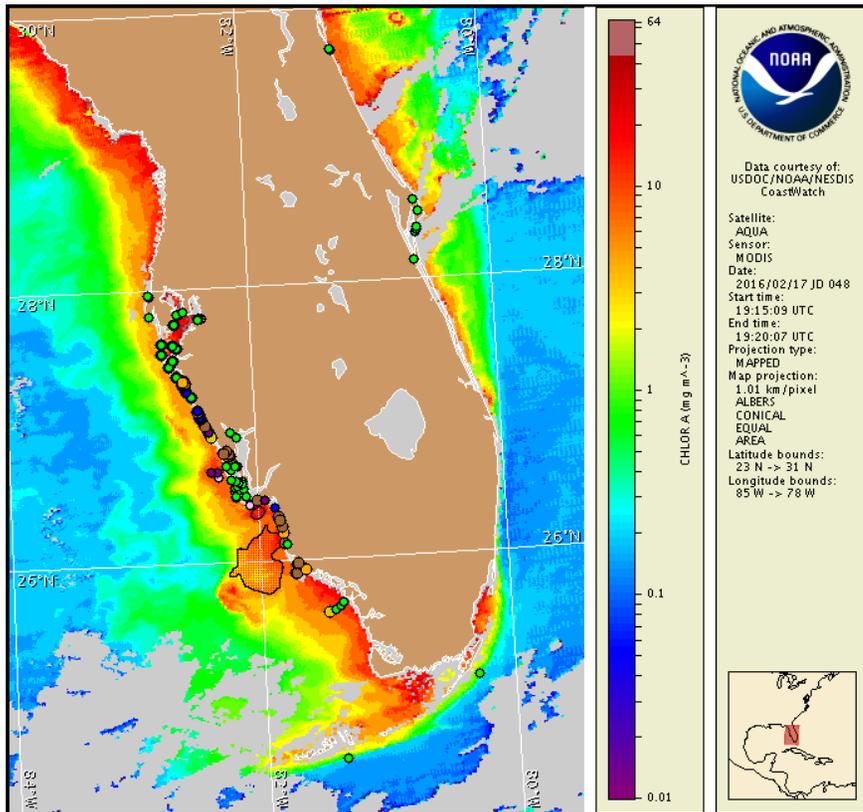
Thursday, 18 February 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, February 16, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from February 8 to 17: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Florida Fish and Wildlife Conservation Commission (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:

http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Florida red tide) ranges from not present to medium concentrations along the coast of southwest Florida, and up to background concentrations 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. The highest level of potential respiratory irritation forecast for Thursday, February 18 through Monday, February 22 is listed below:

County Region: Forecast (Duration)

Southern Pinellas: Very Low (Th-Su), Low (M)

Southern Pinellas, bay regions: Low (Th-M)

Northern Manatee, bay regions: Moderate (Th-Sa, M), Low (Su)

Southern Manatee: Low (Th-M)

Southern Manatee, bay regions: Moderate (Th-Sa, M), Low (Su)

Northern Sarasota: Low (Th-M)

Northern Sarasota, bay regions: Moderate (Th-M)

Southern Sarasota: Low (Th-M)

Northern Charlotte: Very Low (Th-M)

Southern Charlotte: Very Low (Th-M)

Southern Charlotte, bay regions: Low (Th-Sa, M), Very Low (Su)

Northern Lee: Low (Th-M)

Northern Lee, bay regions: Low (Th-Sa, M), Very Low (Su)

Central Lee: Low (Th-M)

Central Lee, bay regions: Low (Th-Sa, M), Very Low (Su)

Southern Lee: Very Low (Th-M)

Northern Collier: Very Low (Th-M)

Central Collier: Very Low (Th-M)

Central Collier, bay regions: Moderate (Th-M)

All Other SWFL County Regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Florida Department of Health and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. Respiratory irritation has been reported in Manatee, Sarasota, and Lee counties. Dead fish have been reported alongshore Manatee and Sarasota counties.

Analysis

Recent samples collected along-and offshore southwest Florida indicate background to 'medium' *Karenia brevis* concentrations from southern Pinellas to northern Monroe counties (FWRI, SCHD; 2/12-17). In Lee County, new sampling throughout the Pine Island Sound region indicated *K. brevis* concentrations have decrease to 'not present' and 'background' where previous sampling indicated up to 'low a' concentrations (FWRI; 2/16). In the bay regions of central Collier County, new sampling has indicated up to 'medium' *K. brevis* concentrations where sampling and reports of impacts had previously not been received (FWRI; 2/16). Over the last few days respiratory irritation has been reported at various locations in Manatee, Sarasota, and Lee counties (FWRI, MML; 2/16-18). Dead fish have been reported alongshore Manatee and Sarasota counties (FWRI, MML; 2/16-18). Detailed sample information and a summary of impacts can be

obtained through FWC Fish and Wildlife Research Institute at:
<http://myfwc.com/redtidestatus>.

In recent ensemble imagery (MODIS Aqua, 2/17), two distinct patches of elevated to very high chlorophyll (2 to >20 $\mu\text{g/L}$) with the characteristics of *K. brevis* are visible along- and offshore southwest Florida. The first patch is visible 3km south of Sanibel Island and 6km west of Estero Island in southern Lee County and extends up to 18km offshore. The second patch is visible 2km offshore northern and central Collier County from Naples to Marco Island, extending up to 50km offshore.

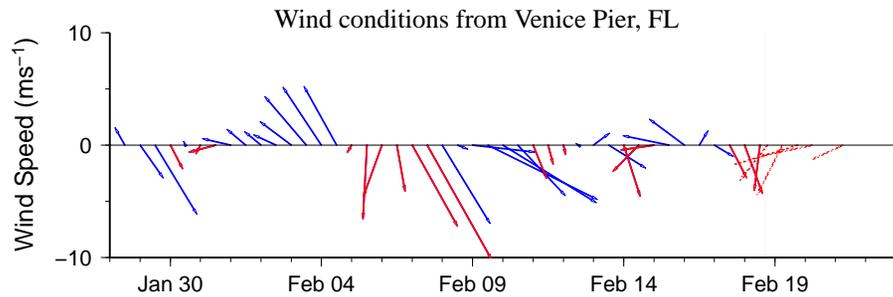
Northwest to northeast winds observed over the last several days may have promoted southerly transport of *K. brevis* concentrations alongshore southwest Florida. Offshore winds forecast today through Sunday may reduce the potential for respiratory irritation caused by *K. brevis* alongshore southwest Florida.

Davis, Yang

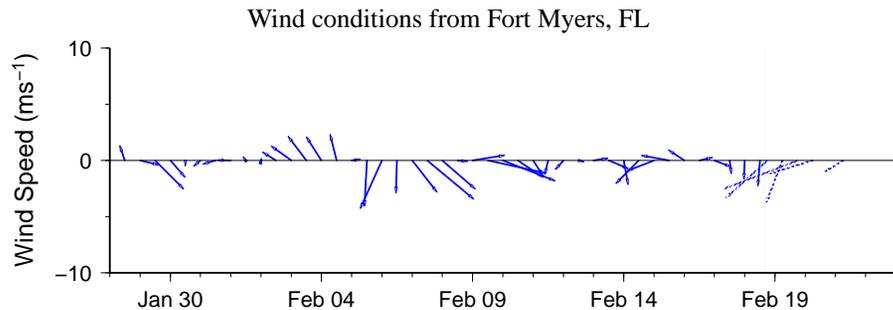
Wind Analysis

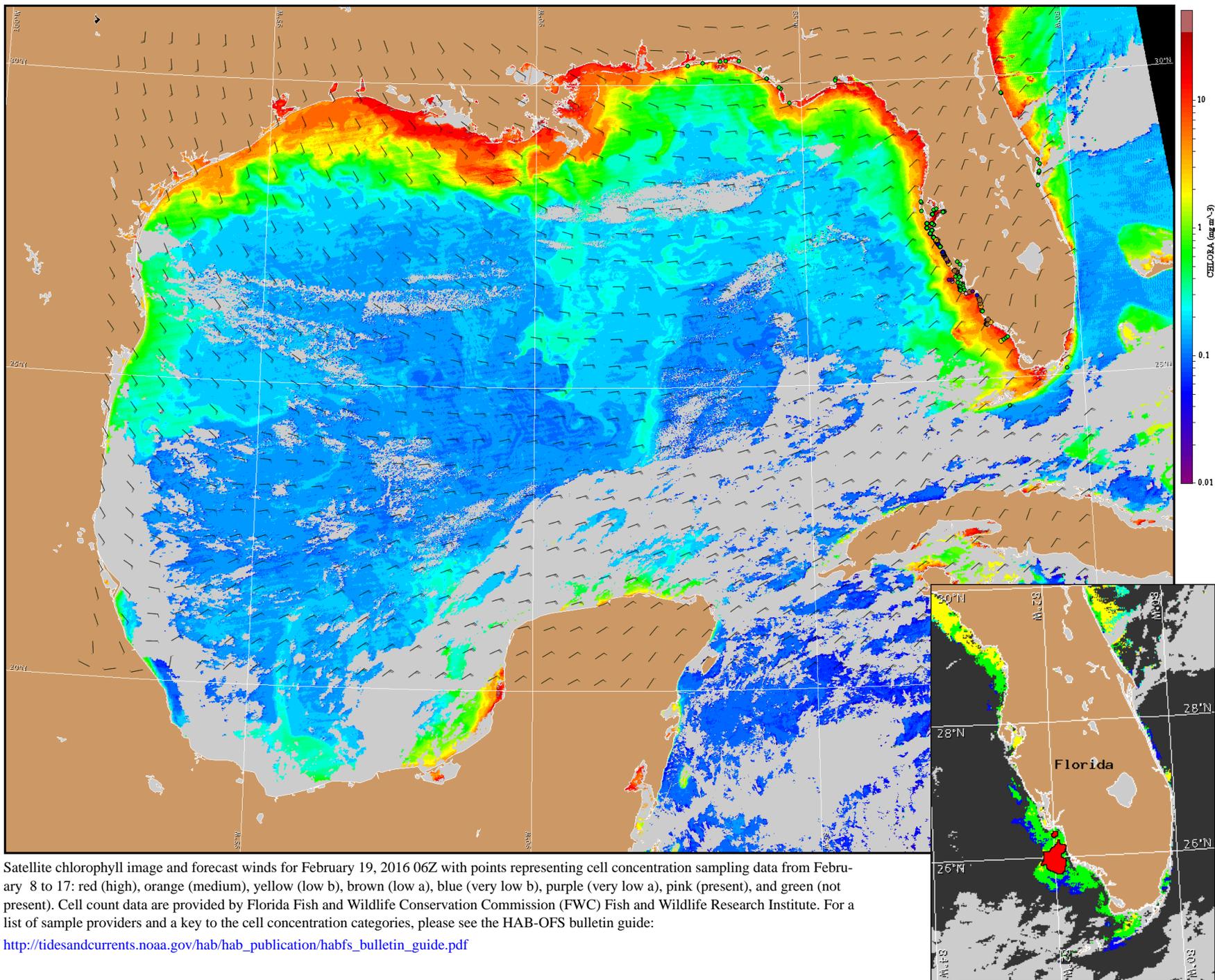
Englewood to Tarpon Springs (Venice): North to northeast winds (5-15kn, 3-8m/s) today through Friday. East winds (10kn, 5m/s) Friday night. North to northeast winds (5-15kn) Saturday and Sunday. Southeast to south winds (5kn, 3m/s) Monday.

Chokoloskee to Bonita Beach: Northeast to east winds (10-15kn, 5-8m/s) today through Sunday. Southeast winds (10kn) Monday.



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).





Satellite chlorophyll image and forecast winds for February 19, 2016 06Z with points representing cell concentration sampling data from February 8 to 17: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Florida Fish and Wildlife Conservation Commission (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:

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Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).