



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

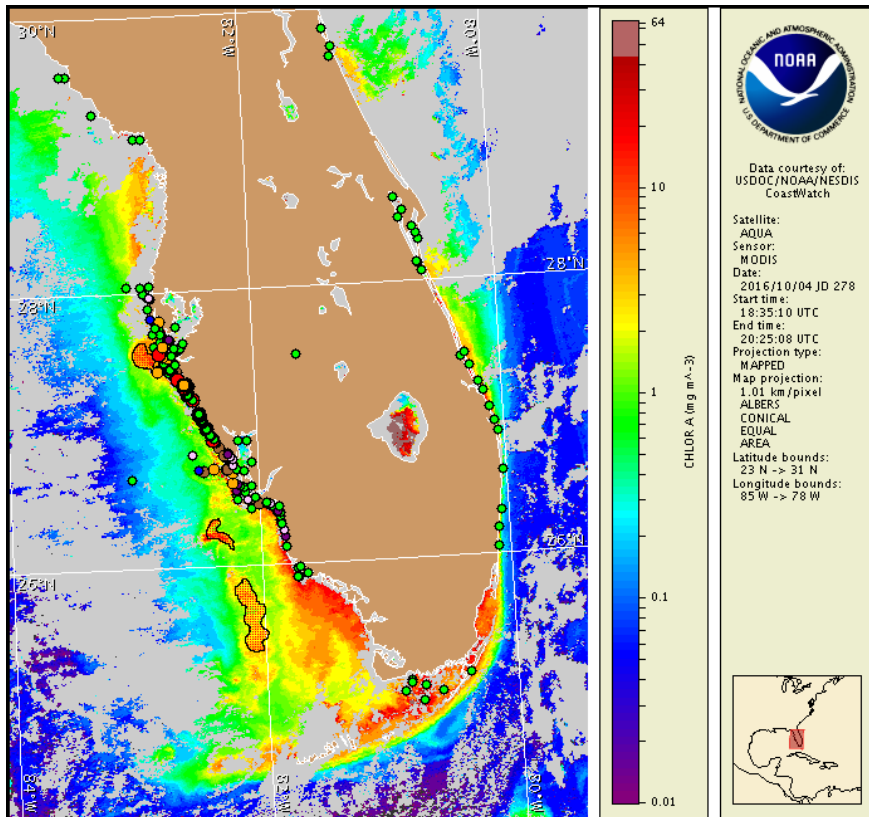
Thursday, 06 October 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 3, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 26 to October 5: 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

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. The highest level of potential respiratory irritation forecast for Thursday, October 6 through Tuesday, October 11 is listed below:

County Region: Forecast (Duration)

Southern Pinellas: Very Low (Th, Su-Tu), Moderate (F-Sa)

Southern Pinellas, bay regions: Moderate (Th-Tu)

Northern Manatee; bay regions: High (Th-Tu)

Southern Manatee: Low (Th, Su-Tu), High (F-Sa)

Southern Manatee, bay regions: High (Th-Tu)

Northern Sarasota: Low (Th, Su-Tu), High (F-Sa)

Northern Sarasota, bay regions: High (Th-Tu)

Southern Sarasota: Low (Th, Su-Tu), High (F-Sa)

Southern Sarasota, bay regions: Very Low (Th-Tu)

Northern Charlotte: Low (Th, Su-Tu), High (F-Sa)

Northern Charlotte, bay regions: High (Th-F, M-Tu), Moderate (Sa-Su)

Southern Charlotte: Low (Th, Su-Tu), High (F-Sa)

Southern Charlotte, bay regions: High (Th-F, M-Tu), Moderate (Sa-Su)

Northern Lee: Low (Th, Su-Tu), Moderate (F-Sa)

Northern Lee, bay regions: Moderate (Th-Tu)

Central Lee: Very Low (Th, Su-Tu), Low (F-Sa)

Southern Lee, bay regions: Very Low (Th-Tu)

Northern Collier: None (Th, Su-Tu), Very Low (F-Sa)

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

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. Reports of fish kills and respiratory irritation have been received from Manatee, Sarasota, and Charlotte. Reports of dead fish have been received from Pinellas and Lee counties.

Analysis

****Due to the upcoming federal holiday, the next bulletin will be issued on Tuesday, October 11.****

A bloom of *Karenia brevis* is present along- and offshore southwest Florida from Pinellas to northern Collier County, with the highest concentrations identified alongshore northern Sarasota County (FWRI, MML, SCHD, CCENRD; 9/27-10/5). Recent sampling identified up to 'very low a' *K. brevis* concentrations in the Estero Bay region of southern Lee County, where previous sampling indicated *K. brevis* was not present (FWRI; 10/3). Sampling alongshore northern Collier County has identified up to 'very low a' *K. brevis* concentrations at Seagate Beach where reports of respiratory irritation and fish kills were received last week (FWRI, CCENRD; 10/3-5). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>. Reports of slight to intense respiratory irritation have been reported throughout southwest Florida from Manatee to Charlotte counties and fish kills have been reported from Pinellas to Lee counties (FWRI, MML; 10/3-10/6).

Recent ensemble imagery (MODIS Aqua, 10/4) indicates the presence of elevated to very high (2 to >20 $\mu\text{g/L}$) patches of chlorophyll with the optical characteristics of *K. brevis* along- and offshore from Pinellas to Collier counties. Two patches of anomalously high chlorophyll, with the optical characteristics of *K. brevis* are visible 18-30 miles offshore southwest Florida from southern Lee to northern Monroe County.

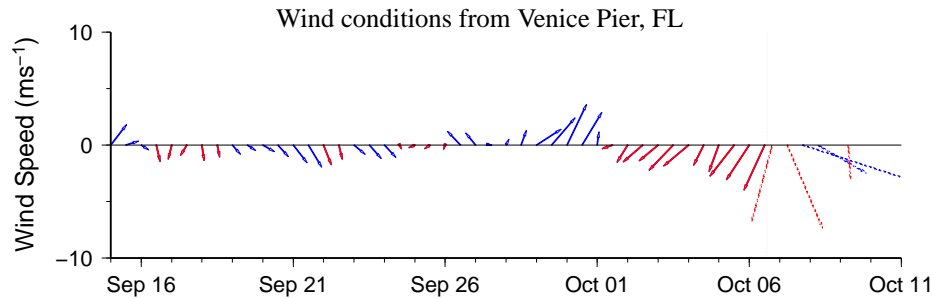
Observed winds over the last several days (10/3-10/6) may have promoted the potential for southerly transport. Forecast winds today through Tuesday (10/6-10/11) will continue to promote the potential for southerly transport.

Davis, Keeney

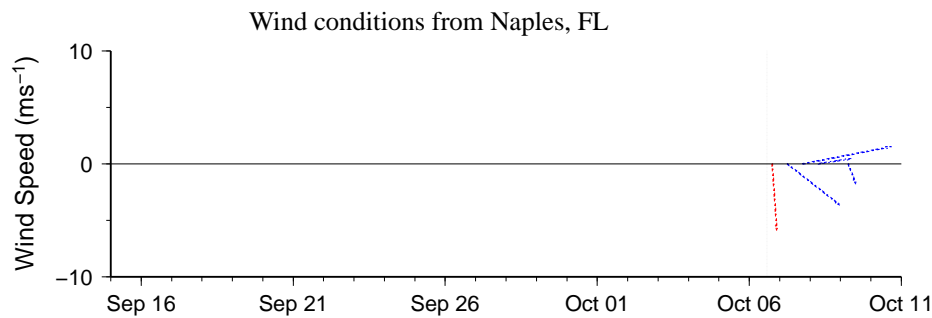
Wind Analysis

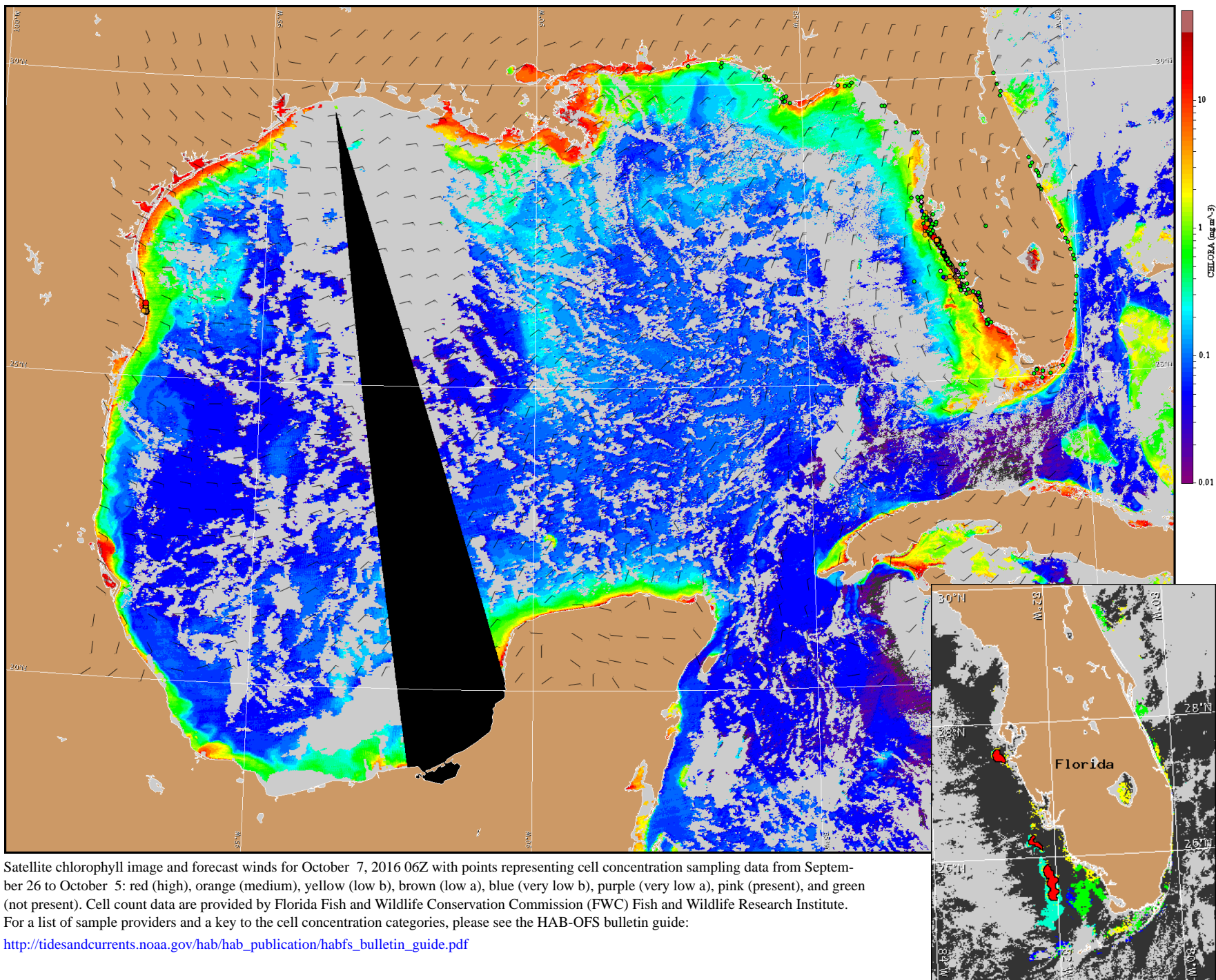
Englewood to Tarpon Springs (Venice): Northeast winds (20-30kn, 10-15m/s) today. Tropical storm conditions Thursday evening through Friday night. Northwest to north winds (10-20kn, 5-10m/s) Saturday. North to northeast winds (10-20kn) Sunday through Monday.

Chokoloskee to Bonita Beach: Northeast winds (15-30kn, 8-15m/s) today becoming tropical storm conditions tonight with north winds (20-25kn, 10-13m/s). West to west southwest winds (10-30kn, 5-15m/s) Friday. West to north northwest winds (5-15kn, 3-8m/s) Saturday and Sunday becoming north northeast winds (10-25kn, 5-13m/s) Sunday night. North winds (10-25kn) 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 October 7, 2016 06Z with points representing cell concentration sampling data from September 26 to October 5: 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).