Gulf of Mexico Harmful Algal Bloom Bulletin
Region: Southwest Florida
Wednesday, 23 November 2016
NOAA National Ocean Service
NOAA Satellite and Information Service
NOAA National Weather Service
Last bulletin: Monday, November 21, 2016

Satellite chlorophyll image with possible *Karenia brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 13 to 22: 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: 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 Wednesday, November 23 through Monday, November 28 is listed below:

**County Region:** Forecast (Duration)

**Southern Pinellas:** Low (W), Very Low (Th-M)

**Southern Pinellas, bay regions:** Moderate (W-M)

**Northern Manatee, bay regions:** Moderate (W-M)

**Southern Manatee:** Moderate (W), Low (Th-M)

**Southern Manatee, bay regions:** Moderate (W-M)

**Northern Sarasota:** High (W, F), Moderate (Th, Sa-M)

**Northern Sarasota, bay regions:** High (W-M)

**Southern Sarasota:** Moderate (W, F), Low (Th, Sa-M)

**Southern Sarasota, bay regions:** High (W-M)

**Northern Charlotte:** Moderate (W, F), Low (Th, Sa-M)

**Southern Charlotte, bay regions:** Moderate (W-M)

**Southern Charlotte:** Low (W-M)

**Southern Charlotte, bay regions:** Moderate (W-M)

**Northern Lee:** Moderate (Th), Low (W, F-M)

**Northern Lee, bay regions:** Moderate (W-M)

**Central Lee:** Low (W-M)

**Central Lee, bay regions:** Low (W-M)

**Southern Lee:** Low (W-M)

**Southern Lee, bay regions:** Moderate (Th), Very Low (W, F-M)

**Northern Collier:** Low (W-M)

**Central Collier:** Very Low (W-M)

**Central Collier, bay regions:** Very Low (W-M)

**All Other SWFL County Regions:** None expected (W-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. Over the last few days, respiratory irritation has been reported from Sarasota, Charlotte, and Lee counties. Dead fish have been reported from Manatee, Sarasota, Charlotte, and Lee counties.

Analysis
New samples collected along- and offshore the coast of southwest Florida continue to indicate up to `high` concentrations of *Karenia brevis* are present from Pinellas to Monroe counties, with the highest concentrations located in the bay regions of Sarasota, Charlotte, and Lee counties (FWRI, MML, SCHD, CCENRD; 11/18-11/22). Samples from offshore central and southern Collier and Monroe counties, including the Florida Keys indicated *Karenia brevis* is not present (FWRI, MML, SCHD, CCENRD; 11/14-11/22). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at: http://myfwc.com/redtidestatus. Slight to
moderate respiratory irritation has been reported from several locations in Sarasota County. Slight and moderate respiratory irritation has been reported Sarasota, Charlotte, and Lee counties (MML; 11/21-11/23). Dead fish have been reported from Manatee to Lee counties (FWRI, MML; 11/21, 11/23).

Recent ensemble imagery (MODIS Aqua, 11/22) indicates the presence of elevated to very high (2 to >20 µg/L) chlorophyll with the optical characteristics of *K. brevis* is visible along- and offshore Pinellas to Monroe counties, extending up to 7 miles offshore from central Lee to northern Collier counties.

Forecasted winds today through Sunday (11/23-11/27) may promote southerly transport of surface *K. brevis* concentrations alongshore southwest Florida.

Yang, Keeney

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**Wind Analysis**

**Englewood to Tarpon Springs (Venice):** Southeast to northwest winds (5kn, 3 m/s) today. North to northeast winds (10kn, 5m/s) Tuesday evening through Monday.

**Chokoloskee to Bonita Beach:** East to northeast winds (5-15kn, 3-8m/s) today through Friday. North to northeast winds (5-15kn) Saturday and Sunday.
Satellite chlorophyll image and forecast winds for November 24, 2016 12Z with points representing cell concentration sampling data from November 13 to 22: 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).