Gulf of Mexico Harmful Algal Bloom Bulletin

Monday, November 18, 2019
NOAA National Ocean Service
NOAA Satellite and Information Service
NOAA National Weather Service

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

Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as red tide) are present along- and offshore portions of southwest Florida and are 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.

Recently Reported Impacts (Listed by County):

**Respiratory irritation:** Sarasota, Lee, Collier  
**Dead fish:** Sarasota, Lee, Collier

Definition of respiratory irritation levels.

<table>
<thead>
<tr>
<th>RESPIRATORY IRRITATION LEVEL</th>
<th>NONE</th>
<th>CHRONIC RESPIRATORY CONDITION</th>
<th>SENSITIVE TO RED TIDE</th>
<th>GENERAL PUBLIC (MILD SYMPTOMS)</th>
<th>GENERAL PUBLIC (INTENSE SYMPTOMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very low</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Additional Resources

Health Information:

**Florida Department of Health:**  
**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
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.
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 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://www.weather.gov/marine/stheastmz.
Analysis

Summary of Recent Water Samples:

*K. brevis* Cell Concentrations:

**Range:** Not Present through High  
**Date:** 11/08-11/14  
**Source:** FWRI, MML, SCHD, CCPCD

Imagery:

Recent satellite imagery (MODIS Aqua, 11/17) is completely obscured by clouds alongshore southwest Florida, preventing analysis. The last unclouded image (MODIS Aqua, 11/12) was also partially obscured, but showed patches of elevated to very high chlorophyll (2 to >20 µg/L) present alongshore the southwest Florida coast from Pinellas to Manatee counties; and a patch with the optical characteristics of *K. brevis* along- and up to 34 miles offshore central Collier to Monroe counties.

Forecasts:

Onshore winds (5-15 kn) forecast today and tomorrow (11/18-19) will increase the potential for respiratory irritation at the coast. Winds (5-15 kn) forecast today through Thursday (11/18-21) will support southern transport of surface *K. brevis* along the coast.

Keeney, Jima

*Karenia brevis* cell concentration sampling data from: 11/08/19 through 11/14/19. 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 (11/17/19) with possible *K. brevis* HAB areas shown by red polygon(s).
Karenia brevis cell concentration sampling data from: 11/08/19 through 11/14/19. 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.

Verified and suspected HAB areas shown in red. Other areas with K. brevis optical characteristics shown in yellow (see p. 4 analysis for interpretation).

MODIS Aqua satellite chlorophyll image (11/17/19).