Gulf of Mexico Harmful Algal Bloom Bulletin

Thursday, September 6, 2018
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 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:** Manatee, Sarasota, Lee
**Dead fish:** Pinellas, Manatee, Sarasota, Lee, Collier

Definition of respiratory irritation levels.

<table>
<thead>
<tr>
<th>RESPIRATORY IRRITATION LEVEL</th>
<th>AFFECTED POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>X</td>
</tr>
<tr>
<td>Very low</td>
<td>X</td>
</tr>
<tr>
<td>Low</td>
<td>X       X</td>
</tr>
<tr>
<td>Moderate</td>
<td>X       X</td>
</tr>
<tr>
<td>High</td>
<td>X       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.

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Wind conditions from Naples, FL

Wind conditions from Venice Pier, FL

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/xnx4y.
Analysis

Summary of Recent Water Samples:

*K. brevis* Cell Concentrations:

Range: Not Present through High
Date: 08/27-09/05
Source: FWRI, MML, SCHD, CCPCD

Imagery:

Recent ensemble imagery (MODIS Aqua, 9/4) is partially obscured by clouds along the coast, limiting analysis. A large patch of elevated to very high chlorophyll (2 to >20 µg/L) with the optical characteristics of *K. brevis* is visible 1 to 34 miles offshore southwest Florida from northern Sarasota to northern Monroe County. Additional patches with the optical characteristics of *K. brevis* are visible 30 miles north northwest of the Lower Keys.

Forecasts:

Offshore winds forecast today through Friday (9/6-7) will promote northerly transport of surface *K. brevis* concentrations and reduce the potential for respiratory irritation at the coast. Winds forecasts Saturday night through Monday (9/8-10) will promote onshore transport of surface *K. brevis* concentrations and increase the potential for respiratory irritation at the coast.

Ludema, Davis
Karenia brevis cell concentration sampling data from: 08/27/18 through 09/05/18. 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 (09/04/18).