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**: Pinellas, Manatee, Sarasota, Lee, and Collier
- **Dead fish**: Pinellas, Manatee, Sarasota, Charlotte, Lee, and Collier
- **Discolored water**: Manatee, Sarasota, Charlotte, Lee, and Collier

Definition of respiratory irritation levels.

<table>
<thead>
<tr>
<th>RESPIRATORY IRITATION LEVEL</th>
<th>AFFECTED POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Very low</td>
<td>Chronic respiratory condition</td>
</tr>
<tr>
<td>Low</td>
<td>Sensitive to red tide</td>
</tr>
<tr>
<td>Moderate</td>
<td>General public (mild symptoms)</td>
</tr>
<tr>
<td>High</td>
<td>General public (intense symptoms)</td>
</tr>
</tbody>
</table>

Additional Resources

Health Information:
- **Florida Department of Health**: http://www.floridahealth.gov/environmental-health/aquatic-toxins/red-tide.html
- **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.
Cell concentration sampling data from 08/13/18 through 08/21/18. Cell count data are provided by *K. brevis* concentrations and

Very Low a: 1001-4999

Low a: 10,001-49,999

Medium: 10,000-100,000

High: >1,000,000

FWRI, MML, SCHD, CCPCD

### K. brevis Cell Concentrations:

**Range:** Not Present through High  
**Date:** 08/13-08/21  
**Source:** FWRI, MML, SCHD, CCPCD

### Imagery:

In recent ensemble imagery (MODIS Aqua, 8/21), a large patch of elevated to very high chlorophyll (2 to >20 µg/L) with the optical characteristics of *K. brevis* is visible along-and 5-37 miles offshore southwest Florida from northern Pinellas County to southern Monroe County.

A bloom of *Trichodesmium* has been observed 5-10 miles offshore northern Pinellas County, corresponding with a patch of very high chlorophyll visible in recent satellite imagery (8/21).

### Forecasts:

Variable winds forecast today through Monday (8/23-27) will minimize transport of surface *K. brevis* concentrations and reduce the potential for respiratory irritation at the coast Sunday and Monday (8/26-27).

Keeney, Davis

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**K. brevis** cell concentration sampling data from: 08/13/18 through 08/21/18. 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 (08/21/18) with possible *K. brevis* HAB areas shown by red polygon(s).
Karenia brevis cell concentration sampling data from: 08/13/18 through 08/21/18. 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_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 (08/21/18).

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