

**Current Conditions Report #20160701**

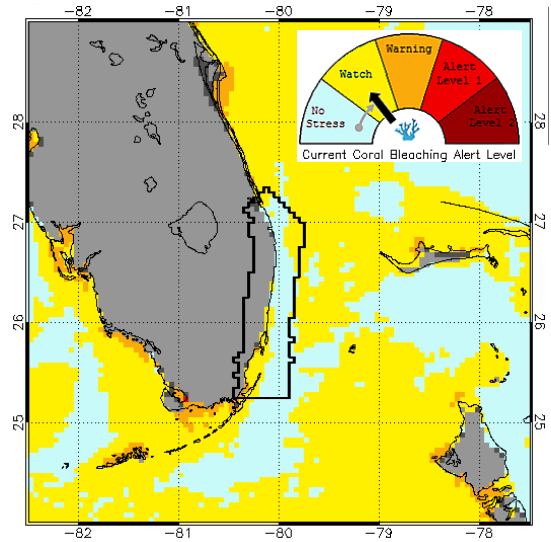
**July 1, 2016**

**Summary:** Based on climate predictions and field observations, the threat for mass coral bleaching in southeast Florida between Miami-Dade and Martin counties is **LOW** as of July 1, 2016.

**Environmental Monitoring**

Climate predictions for this current conditions report are based on NOAA’s Coral Reef Watch (CRW) satellite imagery products, which summarize sea surface temperature (SST) data and provide an indication as to when conditions are favorable for coral bleaching. The current CRW 5-kilometer (km) Coral Bleaching Alert Area indicates that the southeast Florida region is presently experiencing low thermal stress, although coral bleaching may occur if conditions continue to worsen (Figure 1):

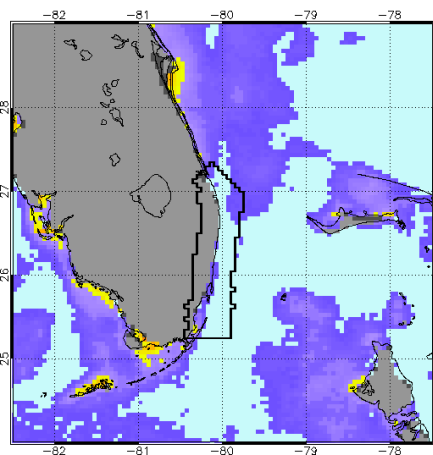
- NOAA’s experimental 5-km Bleaching Hotspot Map (Figure 2) compares current SST to the maximum monthly mean, which is the average temperature during the warmest month of the year. Corals start to become stressed when SST is 1°C greater than the highest monthly average. Currently, SST is slightly elevated and has surpassed the 1°C Hotspot bleaching threshold in Miami-Dade and Broward counties.
- Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA’s experimental 5-km Degree Heating Weeks (DHW) Map (Figure 3) shows the accumulation of temperature stress over the previous 12 weeks, with 1 DHW equal to one week at 1°C greater than the maximum monthly mean. Currently, this map indicates that there is no accumulated temperature stress in the southeast Florida region.
- Near real-time data from CRW’s new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region is currently above the monthly average, although is approaching the bleaching threshold (Figure 4).



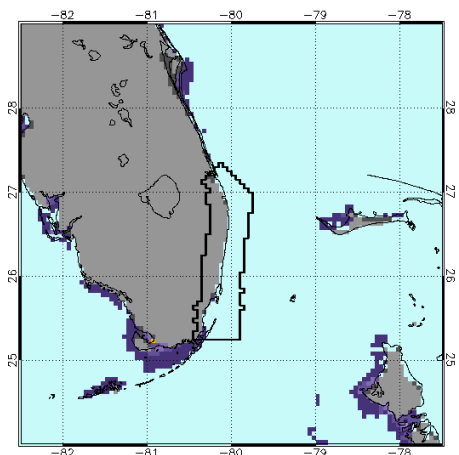
**Figure 1.** NOAA Coral Reef Watch Bleaching Alert Area for June 29, 2016.

<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

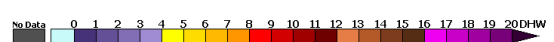
The Florida Department of Environmental Protection’s Coral Reef Conservation Program staff will continue to monitor NOAA’s Hotspot, DHW and Alert Area maps, as well as Virtual Station data for the remainder of the summer bleaching season.



**(Left) Figure 2.** NOAA CRW Hotspots for June 29, 2016.  
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>



**(Right) Figure 3.** NOAA CRW Degree Heating Weeks for June 29, 2016.  
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>



## Observer Network

A total of 9 BleachWatch Observer network reports were received during the month of June, including 6 from Miami-Dade County, 1 from Broward County, and 2 from Palm Beach County. While 2 of these reports (Broward and Palm Beach) were initially filed as coral bleaching, after careful inspection of the photographs, these were determined to be coral disease. Of the remaining 7 reports, 4 indicated observations of bleaching, while 3 reports indicated no bleaching. From the bleaching reports, the majority included observations of paling with one reported as partially bleached. Each report indicated 11-30% of the coral cover being affected. Four reports also noted signs of mortality, which were likely associated with coral disease.

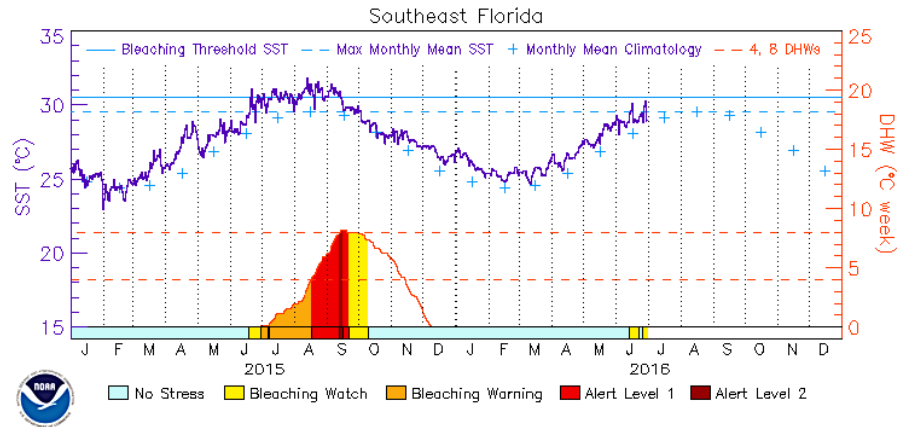


Figure 4. NOAA CRW Virtual Station Data; January 1, 2015 – July 1, 2016. [http://coralreefwatch.noaa.gov/vs/gauges/southeast\\_florida.php](http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php)

Corals exhibiting signs of thermal stress were observed in 25-33 feet in Miami-Dade, and between 50 and 65 feet in Palm Beach County. Water temperatures were recorded as 75°F at the deepest site and 79-80°F at the shallow sites. Bleaching reports indicated two main coral groups as being affected including Encrusting/Mound/Boulder corals and Leaf/Plate/Sheet corals (Figure 5). Additional observations of bleached *Palythoa* spp. were also noted.



Figure 5. A paling colony of *Undaria agaricitis* observed on 6/16/2016 in Palm Beach County. Photo credit: Marie Dugan.

These isolated reports from June combined with NOAA's CRW SST projections may indicate the onset of another coral bleaching event in southeast Florida. If conditions continue to worsen throughout the region, a widespread bleaching event could develop.

The BleachWatch Observer Network is encouraged to continue submitting observations on coral condition after every visit to the reef throughout the bleaching season. **Remember, reports of 'No Bleaching' are just as important as bleaching reports!** Please also note any coral diseases that you observe! To submit a report on coral condition in southeast Florida, or for more information on the SEAFAN BleachWatch program, please visit [www.SEAFAN.net](http://www.SEAFAN.net) and click "BleachWatch".

For more information about SEAFAN BleachWatch or to organize a training session for your group to become a part of the Observer Network, please contact the Program Coordinator below.

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### Program Partners

