

August 16, 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 **MODERATE** as of August 16, 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 moderate thermal stress, the entire region remains under a bleaching watch (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. As of August 15, SST is still slightly elevated and has reached the 1°C Hotspot bleaching threshold across all four 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 temperature stress continues to accumulate in Miami-Dade and Broward Counties.
- 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, and is continuing to hover around the bleaching threshold (Figure 4).

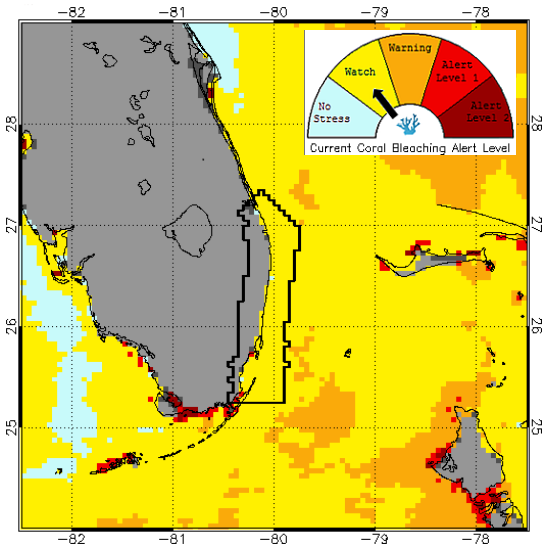


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for August 14, 2016.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

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.

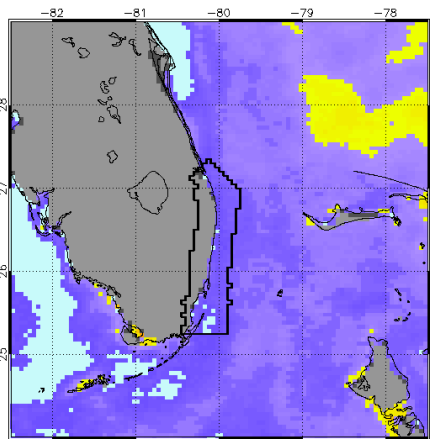


Figure 2 (left). NOAA CRW Hotspots for August 14, 2016.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

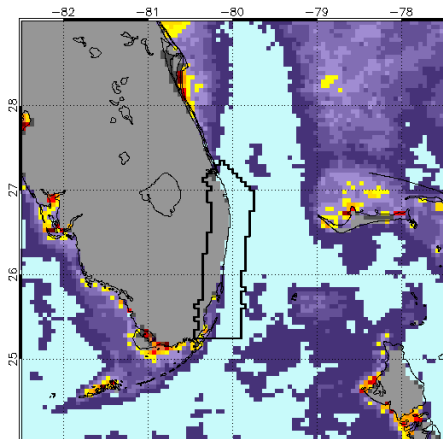
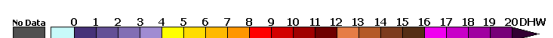


Figure 3 (right). NOAA CRW Degree Heating Weeks for August 14, 2016.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>



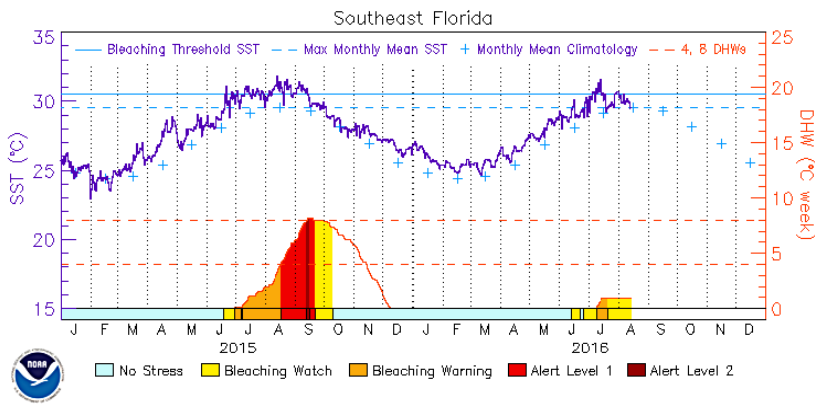


Figure 4. NOAA CRW Virtual Station Data; January 1, 2015 – August 14, 2016.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

A total of 8 BleachWatch Observer network reports were received over the last 15 days, including 3 from Miami-Dade, 3 from Broward, and 2 from Palm Beach. Of these reports, 7 reported partially bleaching with 1 report from Miami-Dade reporting paling. Half of the reports indicated 11-30% of coral cover being affected with two as high as 31-50% of coral cover affected. Four reports also noted signs of mortality, which may have been in association with coral disease.

Bleaching observations were made for two primary types of coral including Encrusting/Mound/Boulder (*Solenastrea bournoni*, *Porites astreoides*, *Siderastrea siderea*, and *Stephanocoenia intersepta*) and Brain (*Pseudodiploria clivosa*, *Meandrina meandrites*) with one report indicating a Branching/Pillar coral (*Acropora cervicornis*) affected by bleaching. Several reports also noted bleached Fire Coral, and *Palythoa spp.*

While these isolated reports do not necessarily indicate the onset of a mass bleaching event, more field observations from southeast Florida’s reef are needed. The Southeast Florida Coral Bleaching Outlook (Figure 5) indicates that the region is likely to experience increased warming in the coming weeks, with the potential to have an Alert Level 1 by the end of August. The BleachWatch Observer Network is encouraged to continue submitting observations on coral condition after every visit. **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 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.

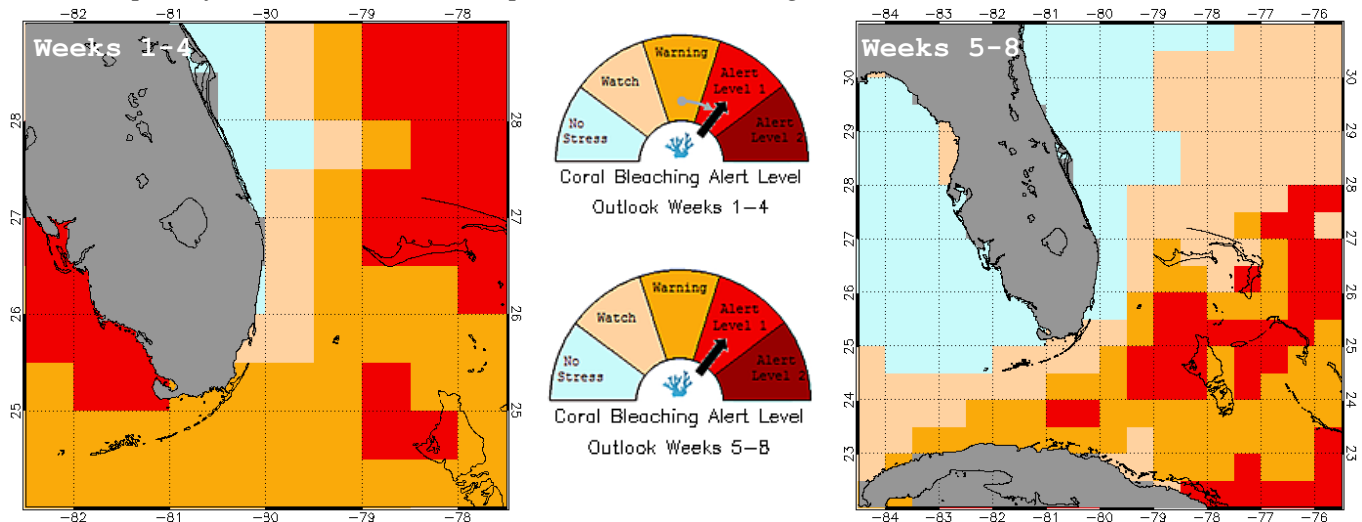


Figure 5. Southeast Florida Coral Bleaching Outlook for weeks 1-4 and 5-8; issued August 14, 2016.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

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Program Partners

