

Current Conditions Report #20141016

October 16, 2014

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

Environmental Monitoring

The latest NOAA Coral Reef Watch (CRW) experimental 5 kilometer (km) Daily Coral Bleaching Alert Area (Figure 1) indicates that southeast Florida is currently experiencing a low level of thermal stress, with a No Stress status or a Bleaching Watch present throughout the region. Although previous thermal stress may still be impacting corals, an improvement in conditions over the last few weeks may continue to allow for recovery.

- 🌊 NOAA's Bleaching Hotspot Map compares current sea surface temperature (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 in southeast Florida does not appear elevated, and is below the 1°C Hotspot bleaching threshold (Figure 2).
- 🌊 Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA's experimental 5km Degree Heating Weeks (DHW) map shows the accumulation of temperature stress over the previous 12 weeks (3 months). The most recent DHW map (Figure 3) indicates that accumulated temperature stress still affects southeast Florida, although this will likely begin to subside as water temperatures cool and conditions continue to improve.
- 🌊 Near real-time data from CRW's Satellite Virtual Stations indicate that SST at Broward, Palm Beach and Martin monitoring stations has continued to decline, resulting in a bleaching alert status of 'No Stress' at these locations (Figure 4).

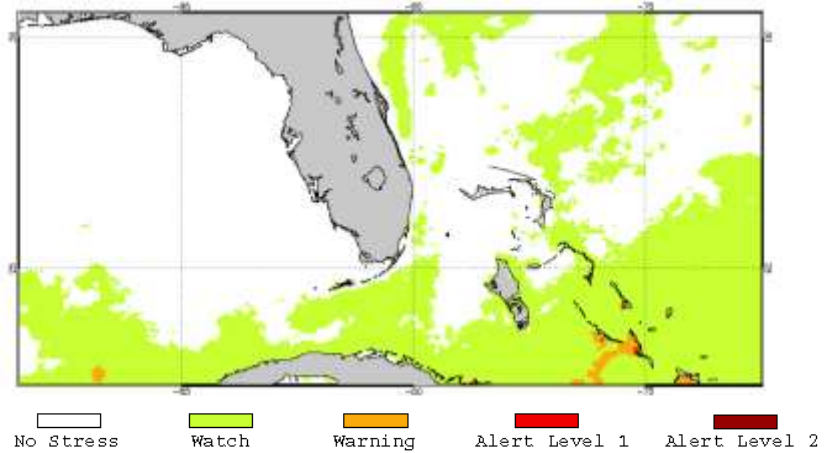


Figure 1. NOAA CRW Experimental Daily 5 km Blended Geo-Polar Nighttime Blended Bleaching Alert Area; October 13, 2014

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

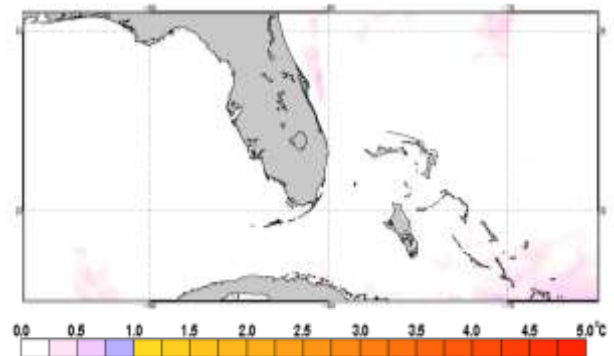


Figure 2. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime Hotspot; October 13, 2014

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

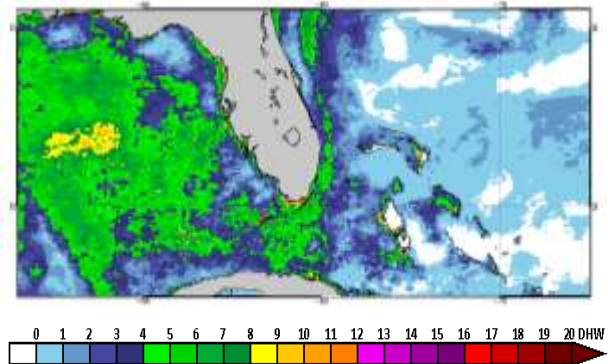


Figure 3. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime DHW; October 13, 2014

<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 bleaching season.

Observer Network

A total of 4 bleaching reports were received during the last two weeks, including one in Miami-Dade and three in Broward County. Observations ranged from paling to full bleaching on 10% to 50% of corals, although bleaching of 76 - 100% of corals was reported in Miami-Dade. One report also indicated signs of partial mortality. Corals exhibiting signs of thermal stress ranged from shallow areas between 10–30 feet off of Ft. Lauderdale and Miami, to deeper areas between 40 and 60 feet offshore of Pompano Beach. Where reported, water temperature ranged from 83°F - 84°F.

Bleaching observations were noted for a range of species, including Encrusting/Mound/Boulder corals, Brain corals, and Branching/Pillar corals. Additional observations included bleached *Palythoa spp.*, fire coral, gorgonians, and barrel sponges (*Xestospongia muta*) (Figure 5).

Although observations of bleaching continue in southeast Florida, decreasing water temperatures may help to alleviate the region from substantial continued bleaching at this time. Additional field observations from southeast Florida's reefs are needed to better assess the duration, extent, and severity of bleaching.

The BleachWatch Observer Network is encouraged to submit observations on coral condition after every visit to the reef for the remainder of the summer season. **Remember, reports of 'No Bleaching' are just as important as bleaching reports!** 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.

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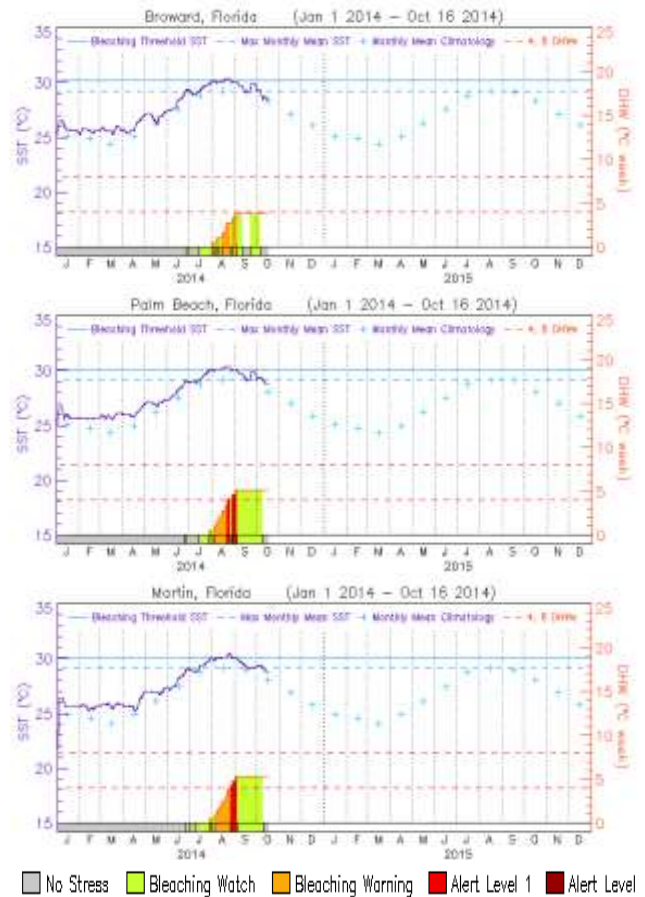


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 – October 16, 2014.
<http://coralreefwatch.noaa.gov/satellite/vs.php>

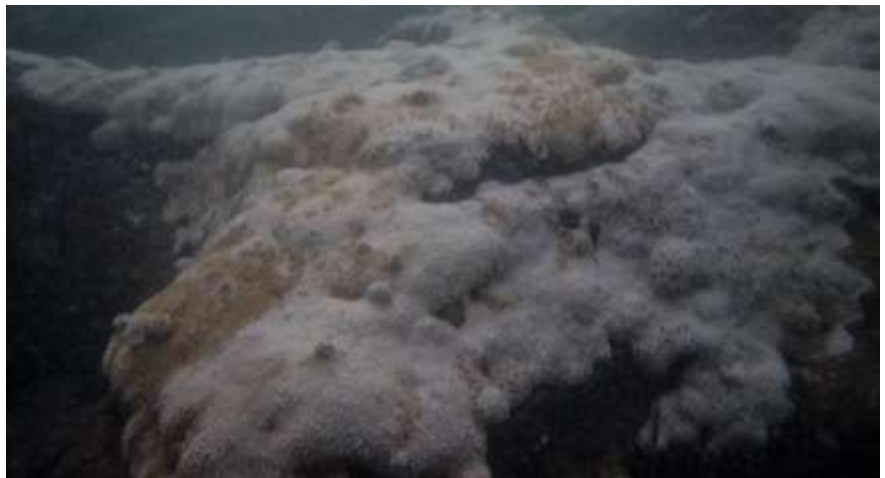


Figure 5. Partially bleached *Palythoa spp.* in Broward County. Photo: Kim Porter.

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