



Florida Department of Environmental Protection

Coral Reef Conservation Program

SEAFAN BleachWatch Program



Current Conditions Report #20141114

November 14, 2014

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

Environmental Monitoring

The latest NOAA Coral Reef Watch (CRW) satellite imagery analysis indicates that water temperatures in southeast Florida have continued to decline over the past month. The NOAA CRW experimental 5 kilometer (km) Daily Coral Bleaching Alert Area (Figure 1) shows a 'No Stress' status throughout the region. Although water temperatures indicate that the region is no longer experiencing thermal stress, corals may still be exhibiting signs of stress from previous conditions. An improvement in conditions will continue to allow for recovery.

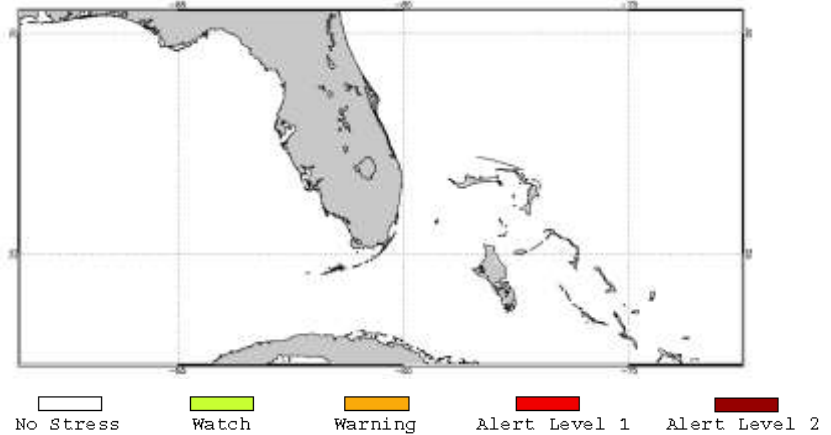


Figure 1. NOAA CRW Experimental Daily 5 km Blended Geo-Polar Nighttime Blended Bleaching Alert Area; November 12, 2014
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

- 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 is not elevated and is well 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 some accumulated temperature stress still affects southeast Florida, although this has decreased considerably over the past month as water temperatures have cooled.
- 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, and at ~27°C is now well below the bleaching threshold. Thus, NOAA CRW has issued a bleaching alert status of 'No Stress' at these locations (Figure 4).

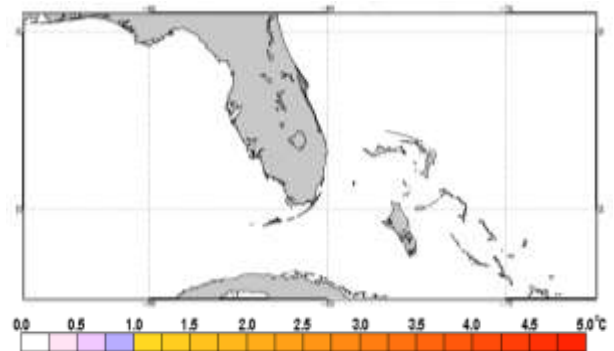


Figure 2. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime Hotspot; November 12, 2014
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

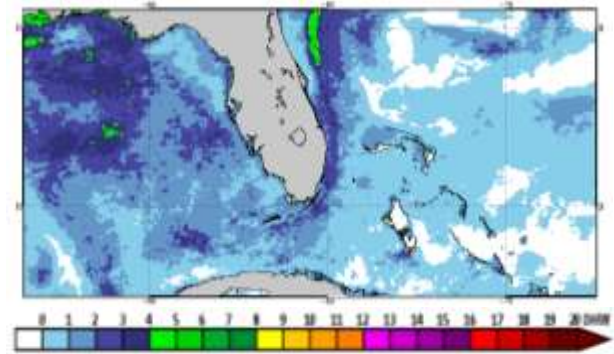


Figure 3. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime DHW; November 12, 2014
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

Finally, according to NOAA CRW's experimental Coral Bleaching Thermal Stress Outlook (Figure 5), the southeast Florida region is unlikely to experience an increase in thermal stress during the next few months, thus indicating that significant coral bleaching is not likely to occur during the rest of 2014. As a result, this is the final current conditions report for the 2014 SEAFAN BleachWatch season.

Observer Network

Only 2 bleaching reports were received during the last four weeks in southeast Florida, both in Broward County. Both reports indicated an overall improvement in coral condition compared to previous reports from the region, with partial bleaching or bleaching only on the upper surface observed on 1-10% of corals. Bleaching observations were noted for Mound/Boulder corals and Brain corals, we well as *Palythoa spp.*

This Current Conditions Report marks the end of the 2014 SEAFAN BleachWatch season. Overall, environmental conditions and observer network reports indicated that coral bleaching was widespread throughout the region, especially in Miami-Dade and Broward counties in August – September. Although observations of bleaching continue in southeast Florida, decreasing water temperatures and a continued coral bleaching alert status of “No Stress” indicate that the threat for mass coral bleaching in the region is unlikely at this time.

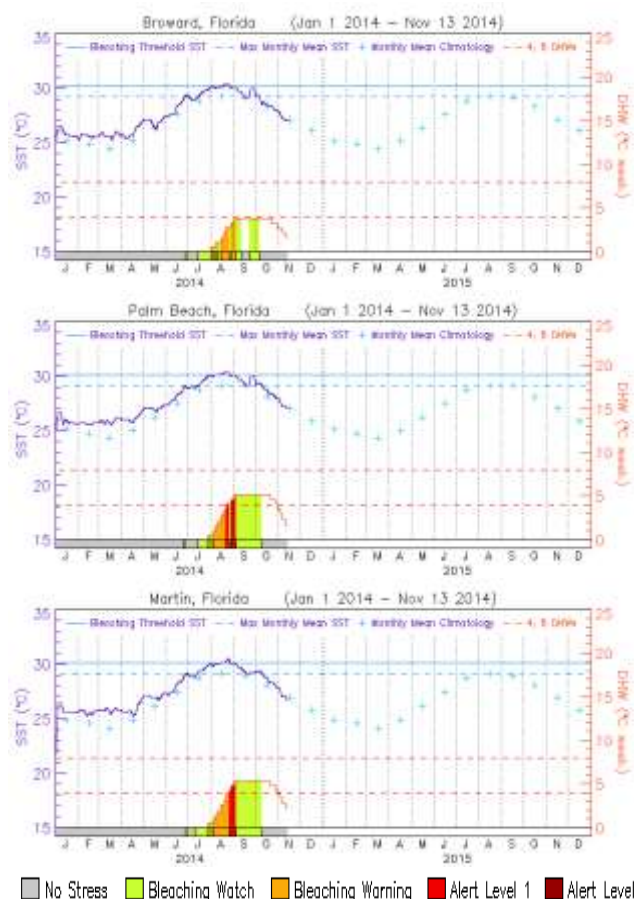


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 – November 13, 2014.
<http://coralreefwatch.noaa.gov/satellite/vs.php>

Many thanks to all of the BleachWatch observers and partners – see you in 2015!

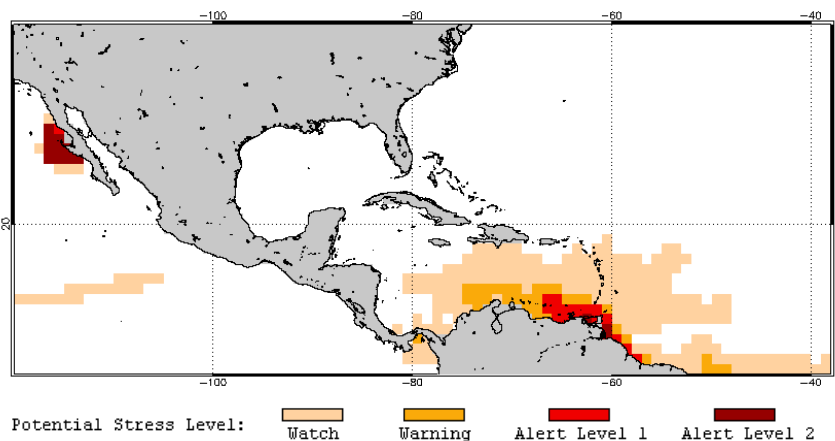


Figure 5. NOAA CRW Experimental 60% Probability Coral Bleaching Thermal Stress Outlook; Nov – February 2015.

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

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Program Partners:

