

Current Conditions Report #20140902

September 2, 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 **HIGH**.

Environmental Monitoring

The latest CRW experimental 5 kilometer (km) Daily Coral Bleaching Alert Area (Figure 1) indicates that southeast Florida is presently experiencing a moderate to high level of thermal stress, with an Alert Level 1 or Bleaching Warning present throughout the region. This indicates that bleaching is likely in southeast Florida and additional alerts are possible if current conditions continue or worsen.

- NOAA's Bleaching Hotspot Map 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 elevated, and has surpassed the 1°C Hotspot bleaching threshold in the majority of southeast Florida (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), with 1 DHW equal to one week at the 1°C bleaching threshold. The most recent DHW map (Figure 3) indicates that temperature stress continues to accumulate offshore of the majority of southeast Florida, with some areas reaching 4 – 6 degree C-weeks. In those areas where thermal stress has reached 4 degree C-weeks or above, significant coral bleaching may be likely
- Near real-time data from CRW's Satellite Virtual Stations indicate that SST at Broward, Palm Beach and Martin reef sites is currently above the maximum monthly mean and has surpassed the bleaching threshold, thus triggering a Bleaching Warning or Alert Level 1 at those locations (Figure 4).

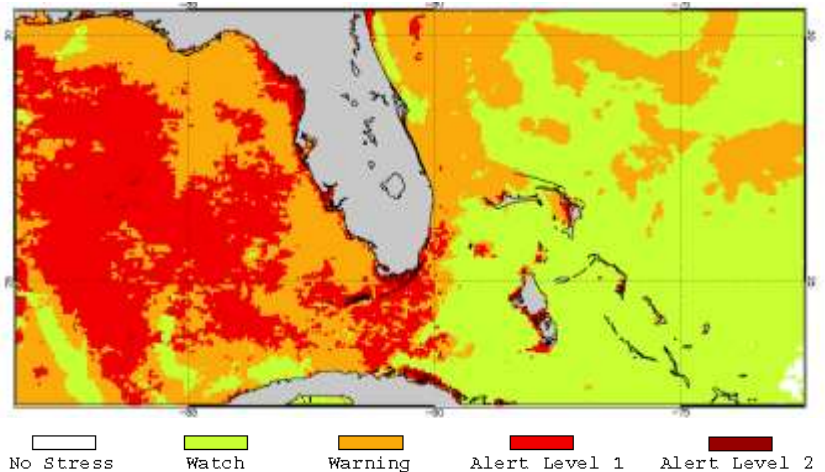


Figure 1. NOAA CRW Experimental Daily 5 km Blended Geo-Polar Nighttime Blended Bleaching Alert Area; August 31, 2014

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

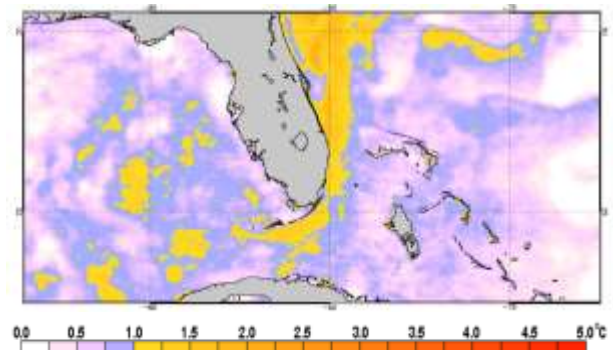


Figure 2. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime Hotspot; August 31, 2014

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

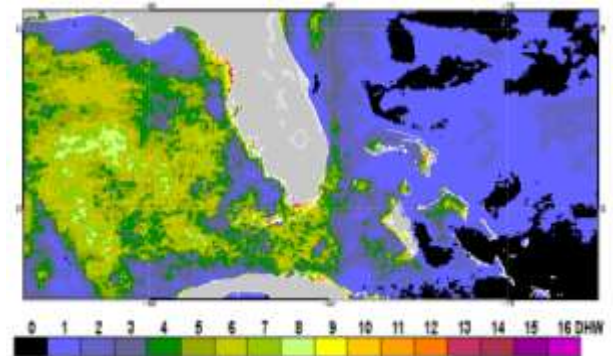


Figure 3. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime DHW; August 31, 2014

<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 summer bleaching season.

Observer Network

No BleachWatch Observer Network reports from southeast Florida were received during the last two weeks of August.

More field observations from southeast Florida’s reefs are needed to better assess the likelihood of a mass bleaching event in the region. NOAA Coral Reef Watch’s projected alert level for the upcoming 5 – 8 weeks (Figure 5) shows that some portions of southeast Florida may experience a continued increase in thermal stress over the coming months, with some areas potentially reaching an Alert Level 2.

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.

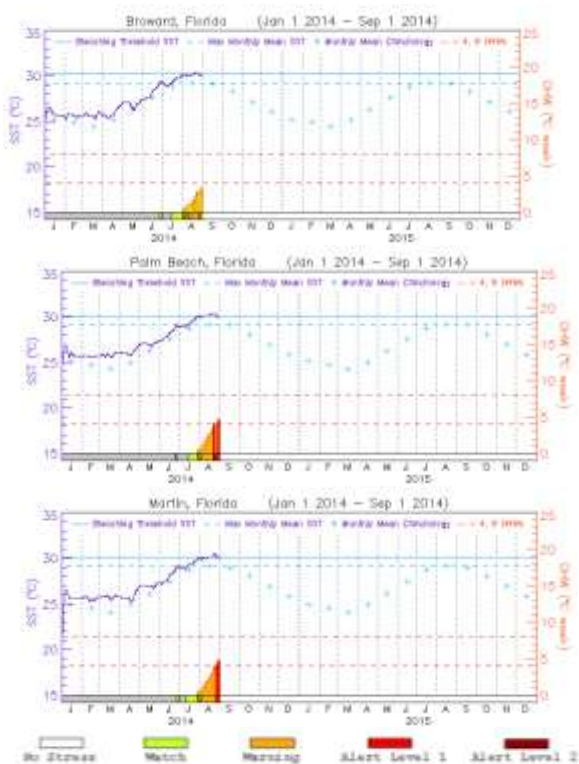


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 – September 1, 2014.
<http://coralreefwatch.noaa.gov/satellite/vs.php>

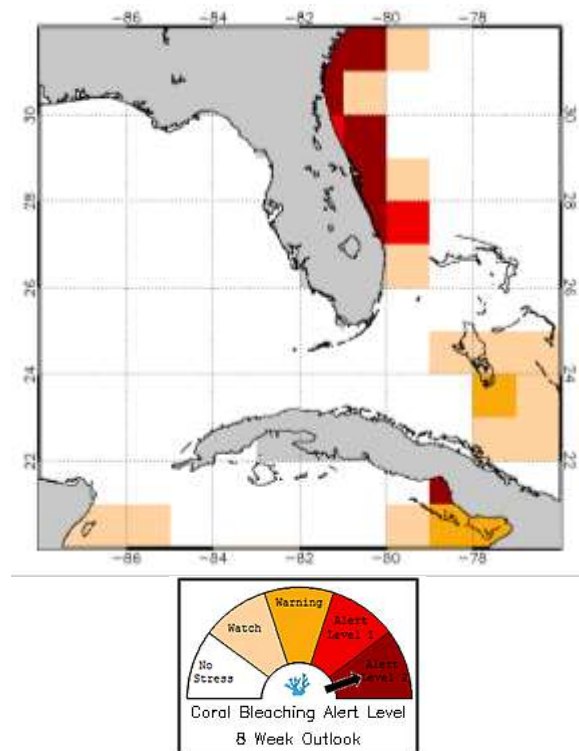


Figure 5. NOAA Coral Reef Watch 60% Probability Coral Bleaching Thermal Stress Outlook for Week 8. August 17, 2014.
http://coralreefwatch.noaa.gov/testing/csp_testing/test_page_florida.php

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