



Updated October 31, 2011

**Summary:** Based on climate predictions, current conditions, and field observations, the threat for mass coral bleaching within the FKNMS remains **LOW**.

### NOAA Coral Reef Watch Coral Bleaching Thermal Stress Outlook November 2011-February 2012 (Version 2, experimental)

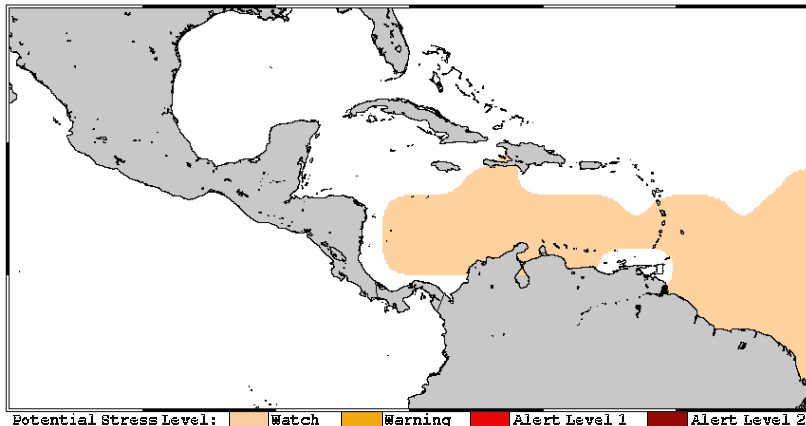


Figure 1. NOAA's Experimental Coral Bleaching Thermal Stress Outlook for November 2011– February 2012

<http://coralreefwatch.noaa.gov/satellite/bleachingoutlook/index.html>

According to the latest NOAA Coral Reef Watch (CRW) experimental Coral Bleaching Thermal Stress Outlook, there is a low possibility for thermal stress capable of causing coral bleaching throughout the southern Caribbean including the Florida Keys region for the remainder of 2011. (Fig.1).

Current remote sensing analysis by NOAA's CRW program indicates that the Florida Keys region is presently experiencing minimal to no thermal stress. NOAA's recent experimental Coral Bleaching HotSpot Map (Fig.2), which illustrates current sea surface temperatures compared to the average temperature for the warmest month, shows that sea surface temperatures are not elevated for this time of year in the Florida Keys. Similarly, NOAA's latest experimental Degree Heating Weeks (DHW) map, which shows how much heat stress has built up over the past 12 weeks (Fig.3), illustrates minimal accumulated temperature stress in the Florida Keys. Furthermore, NOAA's Integrated Coral Observing Network (ICON) monitoring stations, which provide near real time *in-situ* sea temperature data along the outer reef tract throughout the Florida Keys, confirm that sea temperatures throughout the Florida Keys have been well below 30°C over the past month (Fig. 4) and despite a brief period of calm winds over the past month, there have been no prolonged doldrum-like conditions in the Florida Keys region (Fig. 5). *In-situ* sea temperature data is not available for Sombrero, and the Dry Tortugas, Sand Key, and Fowey Rocks stations are currently not transmitting data.

Finally, NOAA's Coral Reef Watch program continues to maintain a coral bleaching alert status of "No Stress", indicating that significant coral bleaching is not likely to occur in the Florida Keys for the remainder of 2011. As a result, this will be the final current conditions report for 2011.

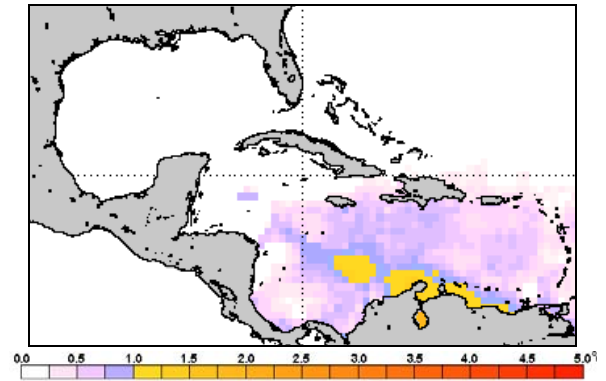


Figure 2. NOAA's Experimental Coral Bleaching HotSpot Map for October 31, 2011.

<http://coralreefwatch.noaa.gov/satellite/e50/>

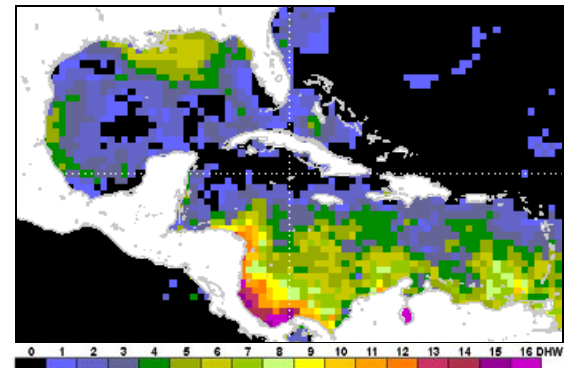


Figure 3. NOAA's Experimental Degree Heating Weeks Map for October 31, 2011.

<http://coralreefwatch.noaa.gov/satellite/e50/>

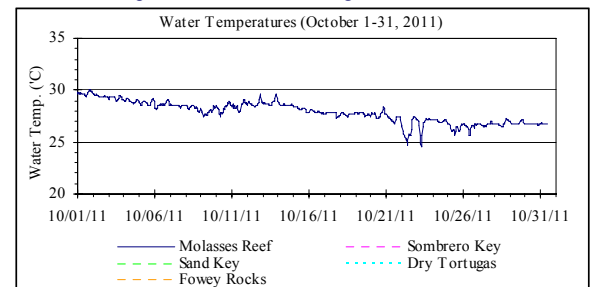


Figure 4. *In-situ* sea temperature from NOAA/ICON monitoring stations (October 1-31, 2011).

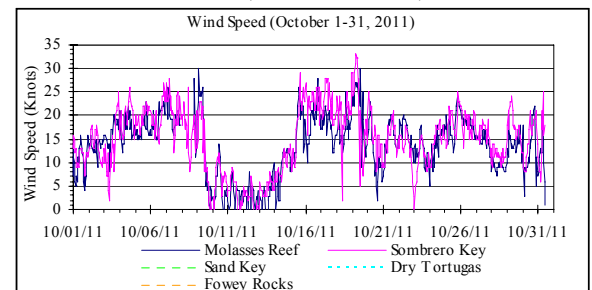


Figure 5. Wind speed data from NOAA/ICON monitoring stations (October 1-31, 2011).



# Coral Bleaching Early Warning Network

## Current Conditions Report #20111031



### Conditions of Corals

A total of 30 BleachWatch Observer reports were received during the month of October, with 25 report indicating only isolated colonies exhibiting signs of paling. Commonly affected corals included Mound and Boulder, Leaf and Plate, and Brain corals. The remaining reports indicated that no significant signs of coral bleaching were observed. At sites where paling was noted (Fig.6), the overall percentage of corals exhibiting signs of thermal stress ranged from only 1-10% of corals. Other observations included paling or bleaching of Gorgonians.

The 2011 BleachWatch season has come to an end with a record total of 290 reports submitted by BleachWatch observers (Fig. 7). Observer reports verified that only minimal signs of coral bleaching were observed in the Florida Keys region in 2011, with most reports noting only paling or partial bleaching. Based on current environmental conditions and the limited number of isolated paling or partially bleached corals noted by BleachWatch observers, significant coral bleaching in the Florida Keys National Marine Sanctuary and surrounding waters seems highly unlikely at this time. As a result, this will be the final current conditions report for 2011.

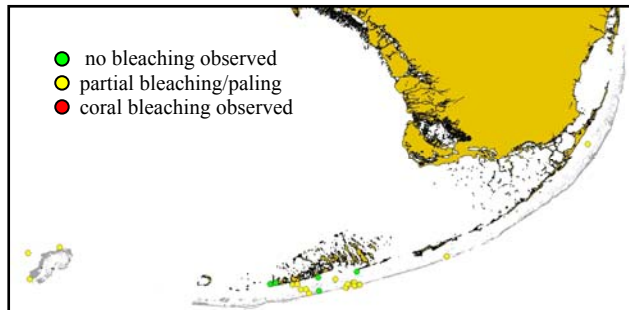


Figure 6. Overview of BleachWatch observer reports submitted October 1-31, 2011.

### BleachWatch Reports for June-October, 2011

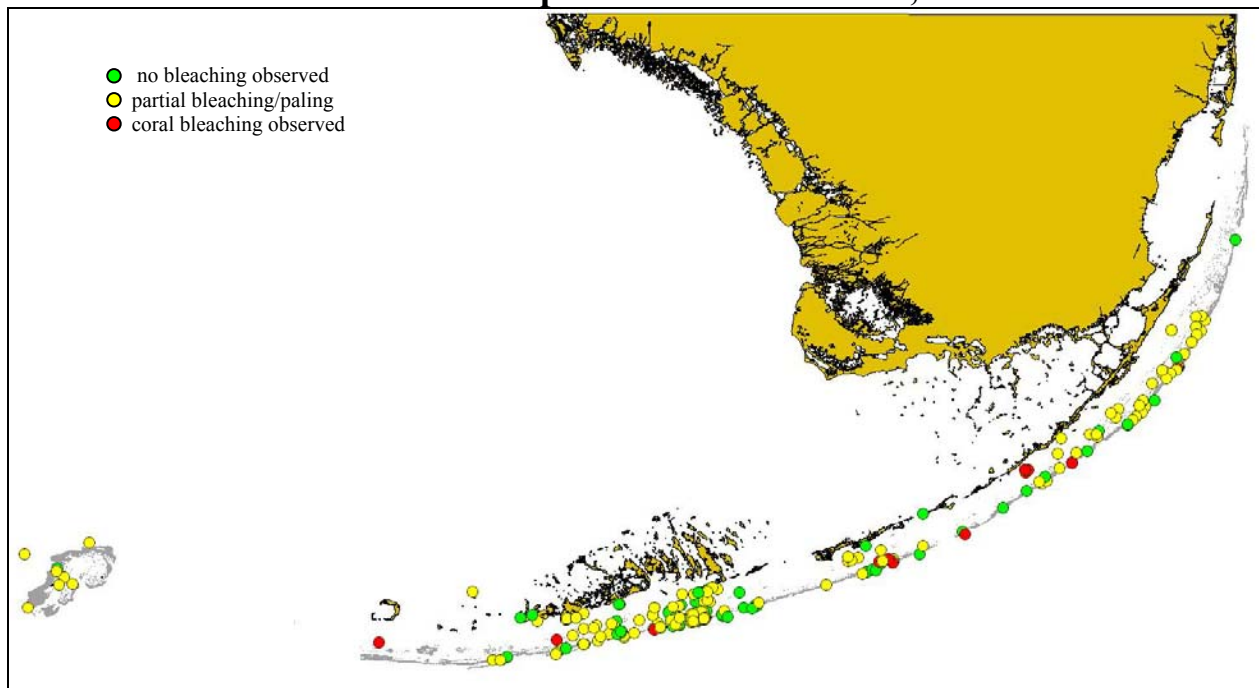


Figure 7. Summary map of all Florida Keys BleachWatch Observer reports submitted during the 2011 coral bleaching season.

### THANK YOU OBSERVERS FOR YOUR HARD WORK!

*For more information about the BleachWatch program, or to submit a bleaching observation, contact:*

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<http://www.mote.org/Keys/research/bleaching.phtml>

#### Funding Provided By:

