



Updated August 13, 2007

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

### Weather and Sea Temperatures

Current remote sensing analysis by NOAA’s Coral Reef Watch program reveals that the Florida Keys region is continuing to show signs of building thermal stress. NOAA’s recent Coral Bleaching HotSpot Map (Figure 1), which provides current SST’s compared to the historically expected SST’s for the region, indicates elevated temperature anomalies for most of the Florida Keys National Marine Sanctuary and surrounding waters. Similarly, NOAA’s latest Degree Heating Weeks (DHW) map, which illustrates the accumulation of elevated temperature in an area based on the previous 12 weeks, indicates increasing temperature stress in the Florida Keys region (Figure 2). NOAA’s Coral Reef Watch program continues to be at a “Bleaching Alert – Level 1”, indicating that coral bleaching is expected in the Florida Keys region based on the current trend of accumulating thermal stress in the area. Sea temperature readings at NOAA’s Integrated Coral Observing Network (ICON) monitoring stations confirms that sea temperatures throughout the Florida Keys have exceeded 30°C for several weeks (Figure 3), and light and variable winds during that same period (Figure 4) have likely further increased the potential for coral bleaching to occur.

Mote Marine Laboratory will continue to monitor the NOAA HotSpot maps, DHW maps, and ICON sea temperature data from NOAA monitoring stations on a weekly basis for the remainder of the bleaching season.

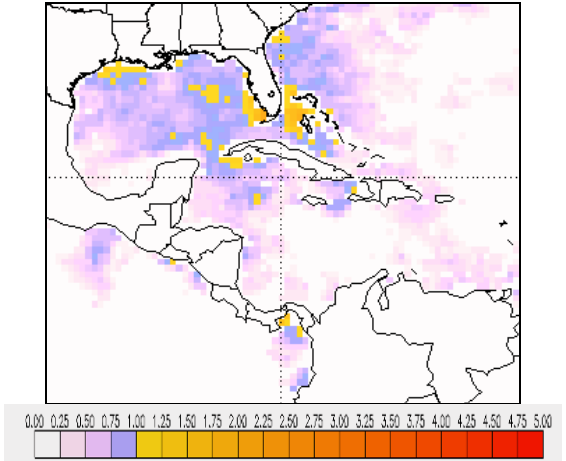


Figure 1. NOAA’s Coral Bleaching HotSpot Map for August 13, 2007.

[www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html](http://www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html)

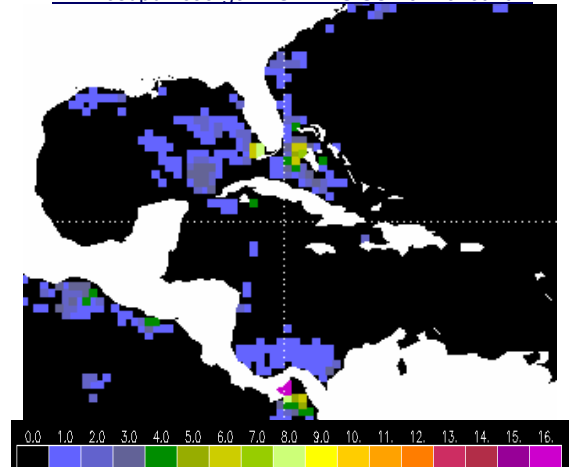


Figure 2. NOAA’s Degree Heating Weeks Map for August 13, 2007.

[www.osdpd.noaa.gov/PSB/EPS/SST/dhw\\_retro.html](http://www.osdpd.noaa.gov/PSB/EPS/SST/dhw_retro.html)

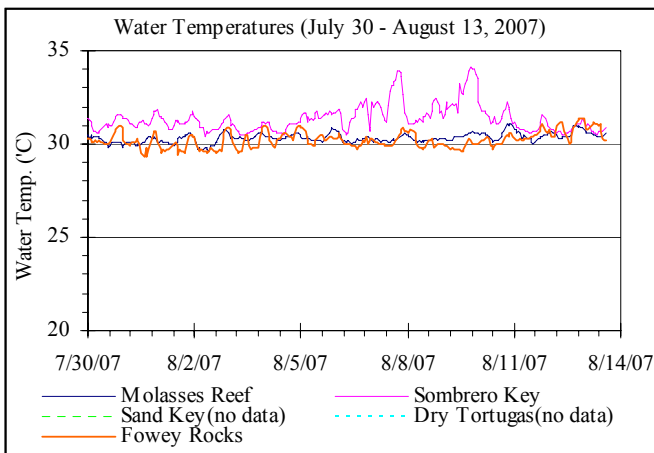


Figure 3. Summary of *in-situ* sea temperature data from NOAA/ICON monitoring stations (July 30 – August 13, 2007).

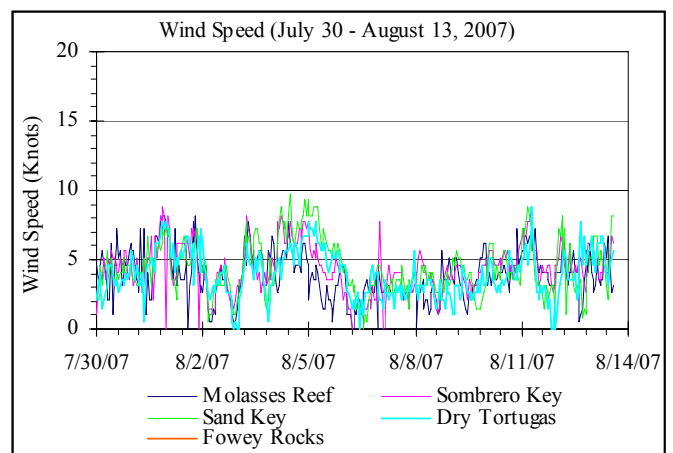


Figure 4. Summary of wind speed data from NOAA/ICON monitoring stations (July 30 – August 13, 2007).



# Coral Bleaching Early Warning Network

## Current Conditions Report #20070813



### Conditions of Corals

A total of 30 BleachWatch Observer reports were received during the last two weeks, with 20 reports indicating isolated colonies exhibiting signs of paling or partial bleaching (Figure 5) and 3 reports of several isolated bleached colonies (Figure 6) located throughout the Florida Keys and Key Biscayne (Figure 7).



Figure 6. Bleached *Siderastrea radians* on August 7, 2007 near Big Pine Shoal.

These isolated paling/bleaching observations consisted of Mound and Boulder corals (*Montastraea spp.*, *Solenastrea spp.*, *Porites astreoides*, and *Siderastrea spp.*), Brain corals, Branching Corals (*Porites porites* and *Oculina spp.*) as well as additional observations of paling/bleached *Palythoa spp.*, Fire Coral and Gorgonians. Reports from several inshore patch reefs indicated that as much as 50% of coral present at those sites were paling and/or bleaching.



Figure 5. *Siderastrea siderea* paling on August 7, 2007 near Big Pine Shoal.

These isolated observations of paling and partial bleaching do not necessarily indicate the onset of a mass bleaching event; however, continued field observations are needed as more widespread bleaching could develop if environmental conditions continue to be favorable.

### BleachWatch Reports for July 30-August 13, 2007

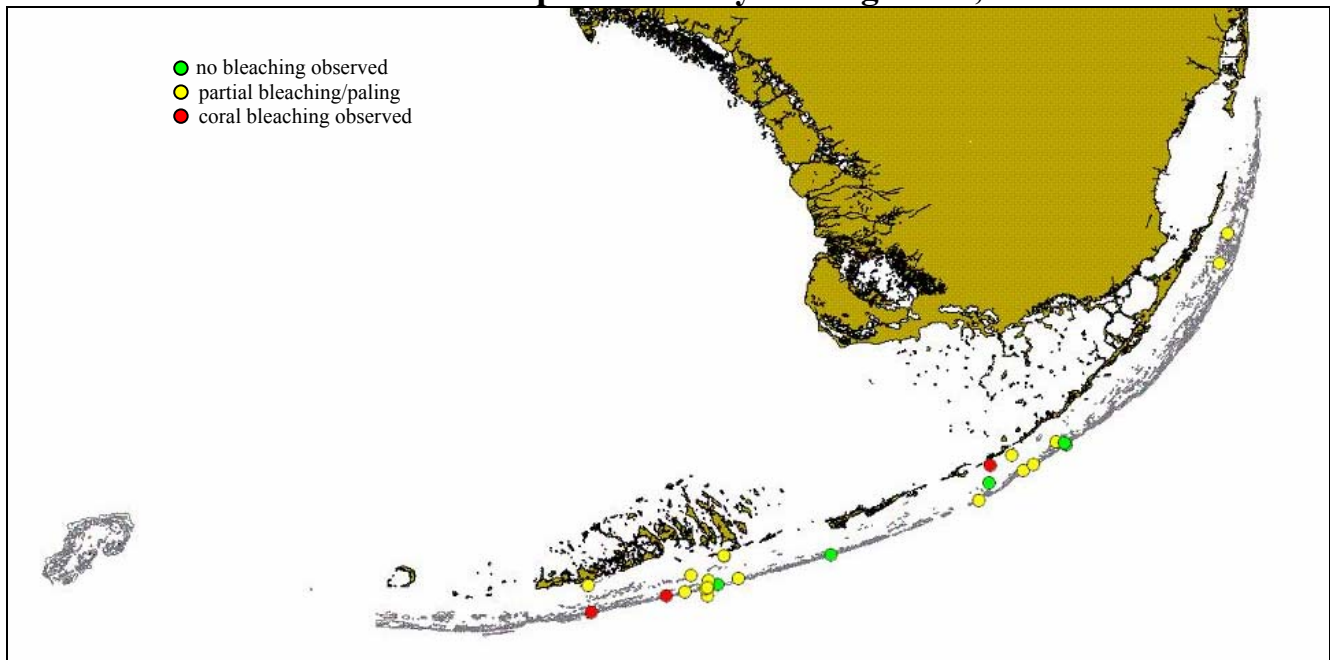


Figure 7. Overview of BleachWatch observer reports submitted from July 30-August 13, 2007.

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>