



Updated July 2, 2009

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

Weather and Sea Temperatures

NOAA Coral Reef Watch Coral Bleaching Thermal Stress Outlook June -September, 2009 (Updated June 30th)

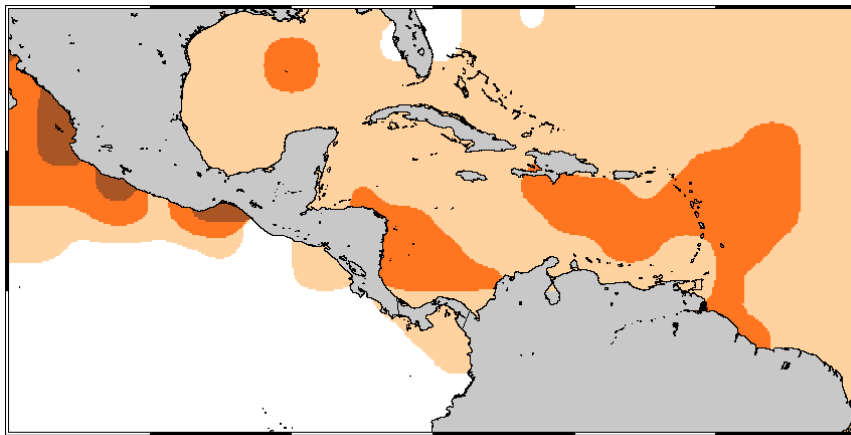


Figure 1. NOAA's Coral Bleaching Thermal Stress Outlook for June-September 2009.

According to the latest NOAA Coral Reef Watch Coral Bleaching Thermal Stress Outlook updated June 30, 2009, there is potential for coral bleaching throughout the Caribbean, including the Florida Keys region for the remainder of the summer of 2009. (Fig. 1).

NOAA's Coral Reef Watch current remote sensing analysis indicates that the Florida Keys region is not currently experiencing building thermal stress. NOAA's recent Coral Bleaching HotSpot Map, which provides current SST's compared to the historically expected SST's for the region, reveals only minimal elevated temperature anomalies near the Florida Keys National Marine Sanctuary waters (Fig. 2). 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, shows no significant cumulative temperature stress in the Florida Keys region (Fig. 3). Finally, sea temperature readings at NOAA's Integrated Coral Observing Network (ICON) monitoring stations confirm that sea temperatures throughout the Florida Keys were at or above 30°C for about 1 week (Fig 4) and have decreased over the past week. As a result, the "Bleaching Warning" issued earlier this month by NOAA's Coral Reef Watch Program has been downgraded to a "Bleaching Watch", indicating that while some coral bleaching is likely to be observed significant mass coral bleaching is not likely in the Florida Keys region.

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 remainder of the bleaching season.

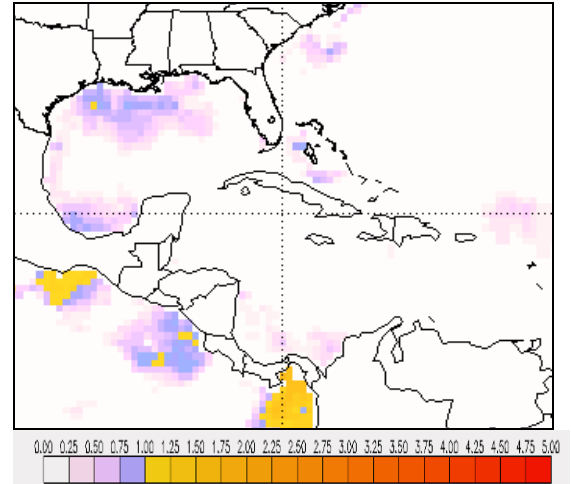


Figure 2. NOAA's Coral Bleaching HotSpot Map For July 2, 2009.
www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html

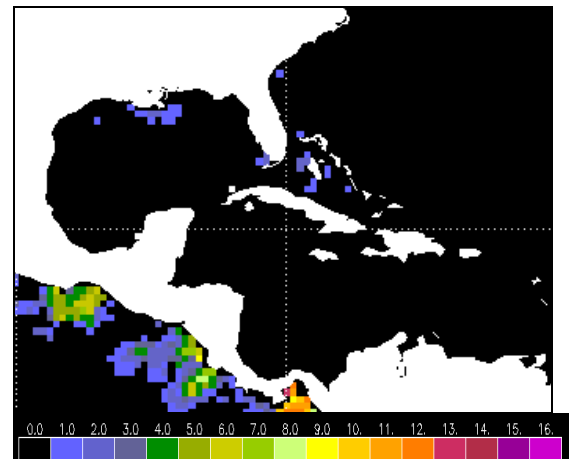


Figure 3. NOAA's Degree Heating Weeks Map For July 2, 2009.
www.osdpd.noaa.gov/PSB/EPS/SST/dhw_retro.html

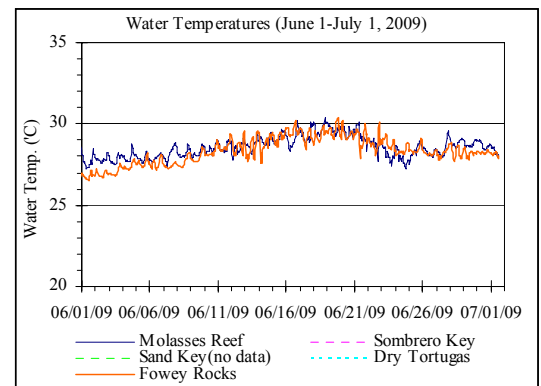


Figure 4. Summary of *in-situ* sea temperature data from NOAA/ICON monitoring stations (June 1- July 1, 2009).



Coral Bleaching Early Warning Network

Current Conditions Report #20090702



Conditions of Corals

A total of 46 BleachWatch Observer reports were received during the month of June from throughout the Florida Keys National Marine Sanctuary and surrounding waters (Fig. 5).



Figure 6. Upper surface paling of *Siderastrea siderea* in Biscayne NP on June 13, 2009.

Of those, 29 reports indicated no signs of coral bleaching. The remaining 17 reports described isolated colonies exhibiting signs of upper surface paling/partial bleaching (Fig. 6). These isolated paling observations consisted of Mound and Boulder corals (mostly *Siderastrea spp.*) and Brain corals.

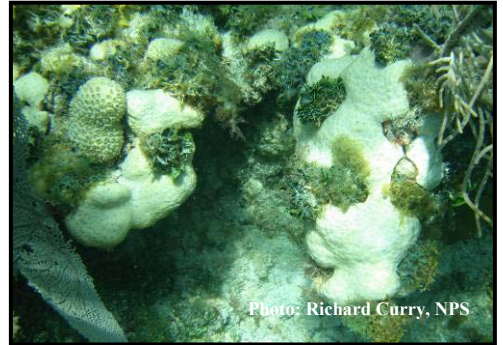


Figure 7. *Palythoa spp.* paling/partial bleaching on June 13, 2009 in Biscayne NP.

In Addition, many volunteers reported observations of paling *Palythoa spp.* (Fig. 7).

Although environmental conditions and observations indicate that no significant mass coral bleaching is currently occurring throughout the Florida Keys, continued field observations are needed.

BleachWatch Reports for June 1-30, 2009

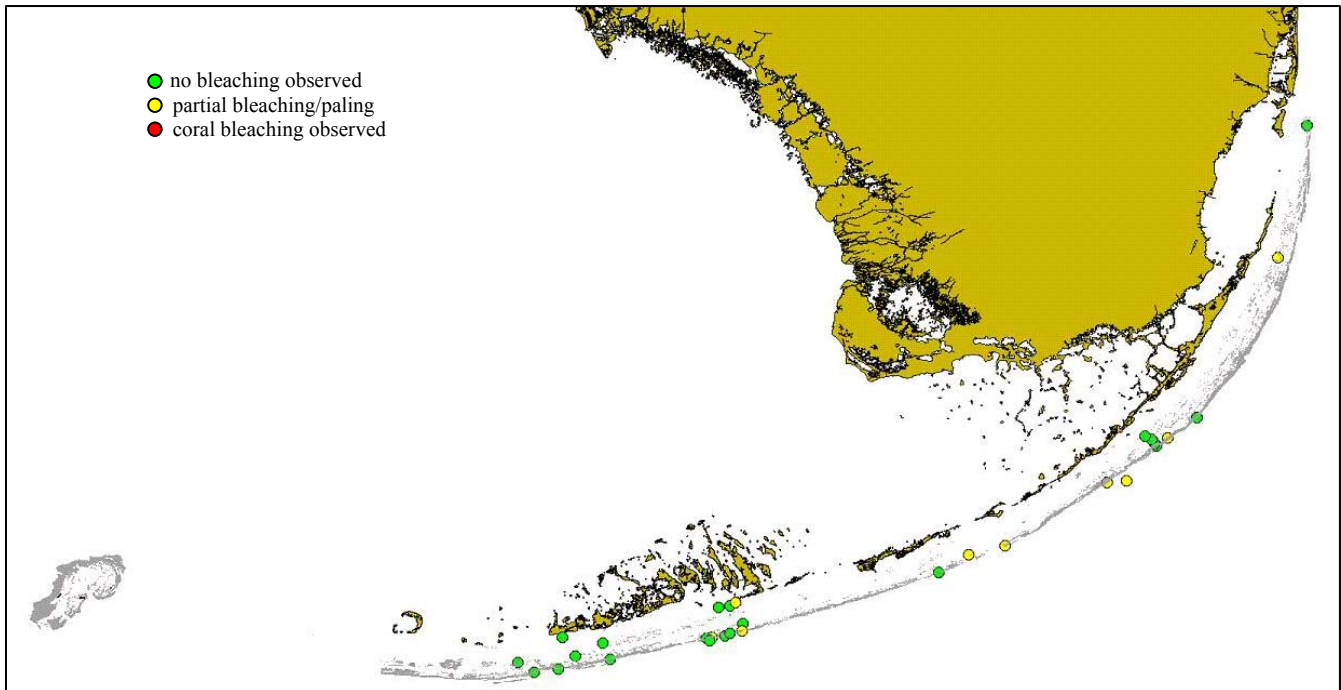


Figure 5. Overview of BleachWatch observer reports submitted from June 1- 30, 2009

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>

Additional Funding Provided By:



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