



Updated September 19, 2006

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

Weather and Sea Temperatures

Current remote sensing analysis by NOAA's Coral Reef Watch program shows that sea temperatures and accumulated thermal stress remain only slightly elevated for the Florida Keys region. 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 only slightly elevated temperature anomalies for 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, shows minimal accumulated temperature stress for the Florida Keys region (Figure 2). However, measurements at NOAA's *in-situ* monitoring stations show sea temperatures for the Upper and Middle Reef Keys increasing to 30°C or more for the past week (Figure 3), along with decreased winds (Figure 4). Because sea temperatures remain cooler than last year at this time and accumulated thermal stress does not appear to be significant, a mass coral bleaching event is currently unlikely; however, recent environmental conditions indicate that continued field observations to monitor for bleaching are recommended.

Mote Marine Laboratory will continue to review the NOAA HotSpot maps, DHW maps, and *in-situ* sea temperature data on a routine basis as long as the potential for coral bleaching remains elevated.

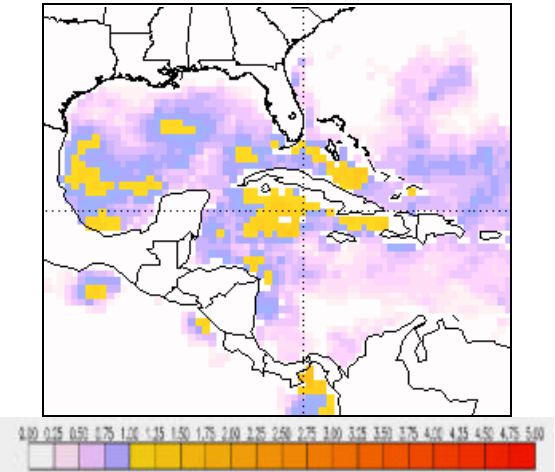


Figure 1. NOAA's Coral Bleaching HotSpot Map for Sept. 19, 2006.

www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html

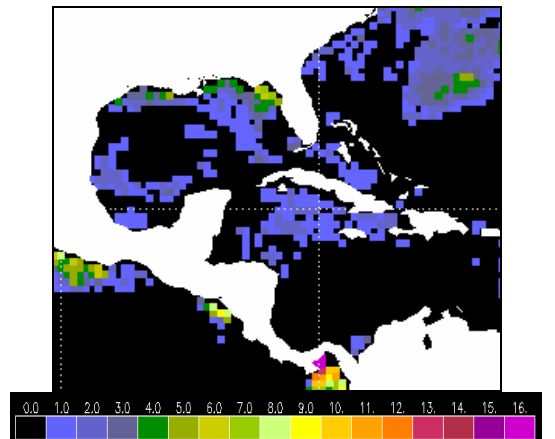


Figure 2. NOAA's Degree Heating Weeks Map for Sept. 19, 2006.

www.osdpd.noaa.gov/PSB/EPS/SST/dhw_retro.html

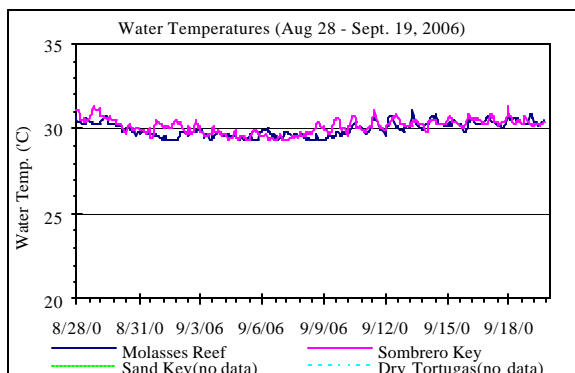


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations (Aug 28- Sept. 19, 2006).

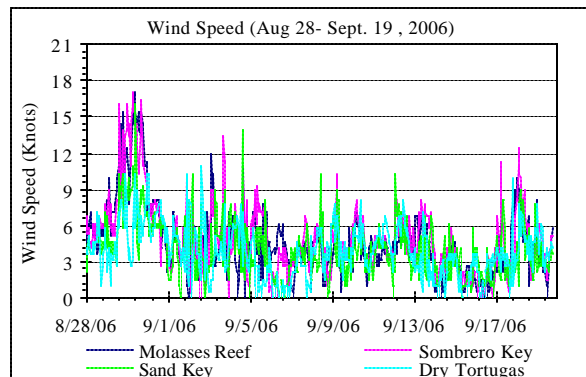


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations (Aug 28- Sept. 19, 2006).



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20060919



Conditions of Corals

A total of 47 BleachWatch Observer reports were received during the last 3 weeks, with 29 reports indicating isolated colonies exhibiting signs of paling or partial bleaching (Figure 5), mostly distributed throughout the Lower and Middle Keys (Figure 6). These isolated paling/bleaching observations consisted of *Siderastrea sp.*, *Diploria sp.*, *Oculina sp.*, and *Montastraea sp.* as well as additional observations of paling/bleached *Palythoa sp.*



Figure 5. *Siderastrea siderea* paling at Key Largo Dry Rocks. (Sept.9, 2006)

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.

**Current conditions remain favorable for coral bleaching.
 Please report after every reef visit, even if no bleaching is observed.**

BleachWatch Reports for August 28 – September 19, 2006

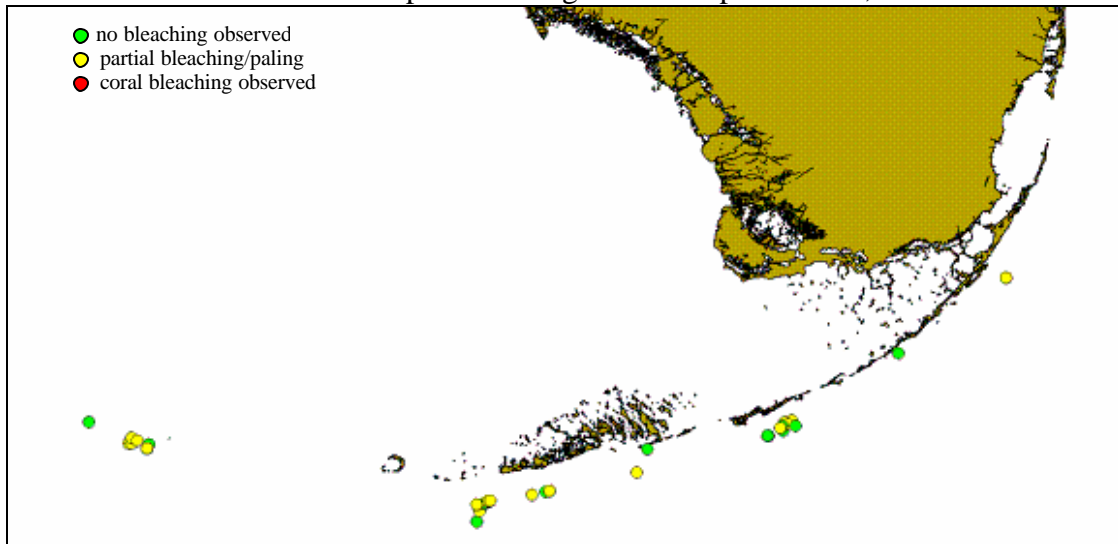


Figure 6. Overview of BleachWatch observer reports submitted from Aug 28 - Sept. 19, 2006.

Thanks to all of our BleachWatch Observers for your reports!

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>