



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20050809



Updated August 9, 2005

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 are showing signs of 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 all 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 temperature stress in the Florida Keys region (Figure 2). Sea surface temperature readings at NOAA's *in-situ* monitoring stations (Figure 3) show temperatures throughout the Florida Keys exceeding 30°C for approximately a week along with light winds (Figure 4) occurring except for an occasional thunderstorm which produces variable winds. With light winds, calm seas, and limited cloud cover forecasted for the remainder of the week, conditions are favorable for coral bleaching. Mote Marine Laboratory will continue to monitor the NOAA HotSpot maps, DHW maps, and *in-situ* sea temperature data from NOAA monitoring stations on a weekly basis for the remainder of the bleaching season.

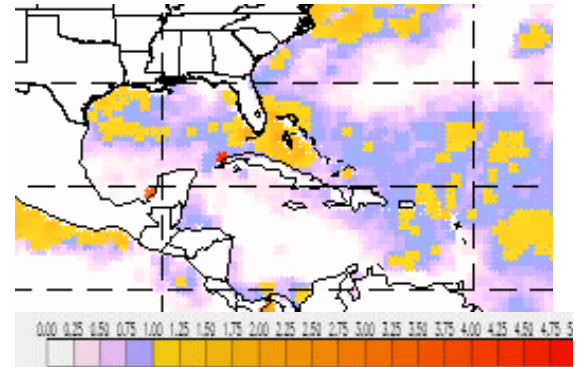


Figure 1. NOAA's Coral Bleaching HotSpot Map for Aug 9, 2005.
www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html

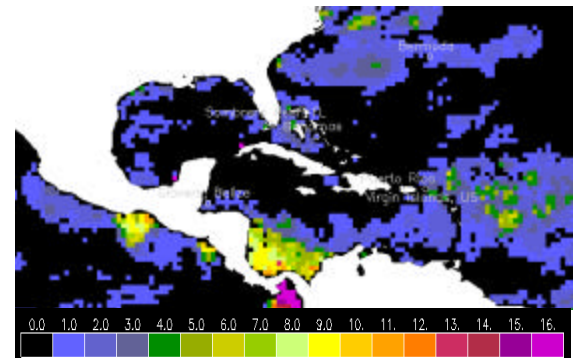


Figure 2. NOAA's Degree Heating Weeks Map for Aug 9, 2005.
www.osdpd.noaa.gov/PSB/EPS/SST/dhw_retro.html

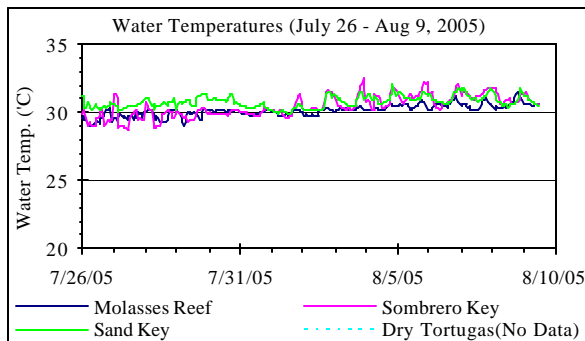


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations (July 26- Aug 9, 2005).

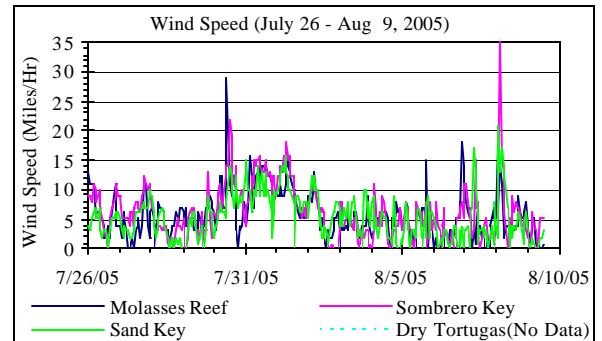


Figure 4. Summary of *in-situ* wind speed data from NOAA/FIO monitoring stations (July 26 – Aug 9, 2005).

Note : *In-situ* sea temperature data is still not available for the Dry Tortugas region as a result of hurricane damage in 2004, but NOAA plans to have a platform operational in the coming months.



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Conditions of Corals

A total of 27 reports were received during the last report period, with 8 reports indicating signs of isolated paling or partial bleaching colonies (Figure 5) throughout the Florida Keys National Marine Sanctuary (Figure 6). These paling observations were minimal, mostly limited to isolated colonies of *Siderastrea sp.* and *Oculina sp.*, and do not necessarily indicate the onset of a mass bleaching event; however more widespread bleaching could develop if environmental conditions continue to be favorable.



Photo Courtesy of Ken Nedimyer

Figure 5. *Siderastrea siderea*, Massive Starlet Coral partially bleached/paling on Aug 4, 2005.

It is highly favorable for coral bleaching and it is very important that we receive your data during this potential bleaching event.

REPORTS ARE NEEDED!

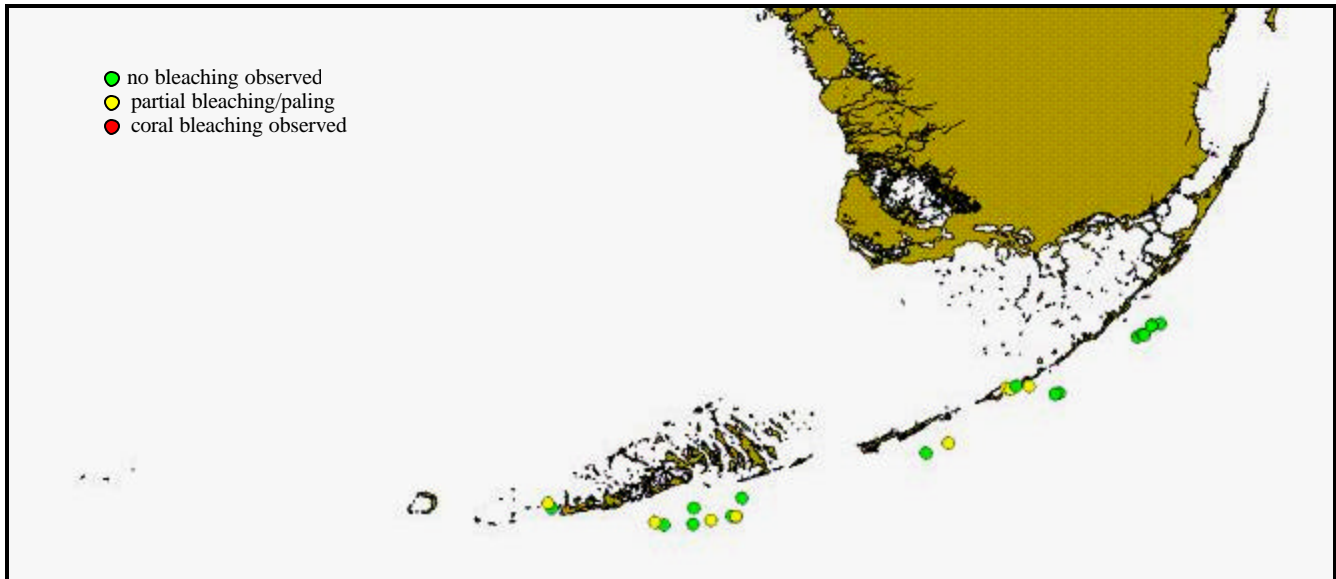


Figure 6. Overview of BleachWatch observer reports submitted from July 26-Aug 9, 2005

For more information on the BleachWatch observer program, or to submit a bleaching observation, contact:

Cory Walter
Mote Marine Laboratory
24244 Overseas Highway
Summerland Key, FL 33042
(305) 745-2729 x301

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