



Updated August 16, 2005

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

Weather and Sea Temperatures

Current remote sensing analysis by NOAA's Coral Reef Watch program shows temperatures continuing to increase in 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 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, indicates temperature stress is building in the Florida Keys region (Figure 2). Sea surface temperature readings at NOAA's *in-situ* monitoring stations show temperatures throughout the Florida Keys exceeding 30°C for over a week (Figure 3), and winds remaining light during the same period (Figure 4), resulting in extremely favorable conditions for coral bleaching. However, winds have increased slightly and are forecasted to increase for the remainder of this week, so conditions for coral bleaching may become less favorable as the week progresses. 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 as long as the potential for bleaching remains elevated.

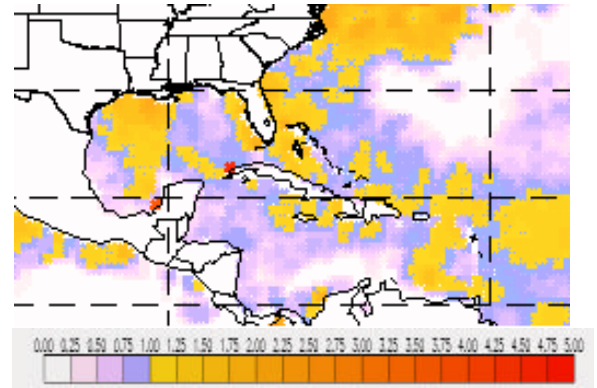


Figure 1. NOAA's Coral Bleaching HotSpot Map for Aug 16, 2005.
www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html

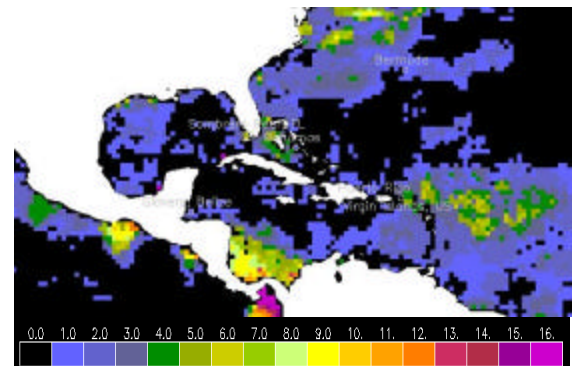


Figure 2. NOAA's Degree Heating Weeks Map for Aug 16, 2005.
www.osdpd.noaa.gov/PSB/EPS/SST/dhw_retro.html

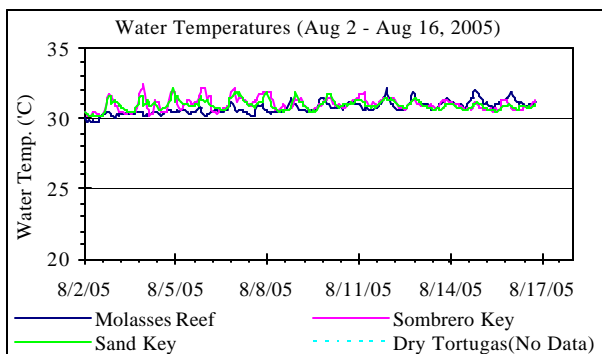


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations (Aug 2- Aug 16, 2005).

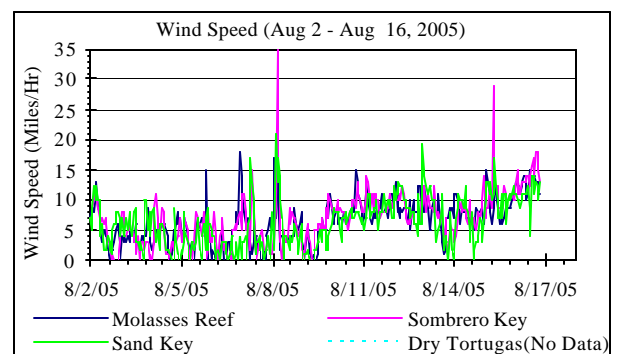


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations (Aug 2 – Aug 16, 2005).

Note: *In-situ* sea temperature data and wind data is still not available for the Dry Tortugas region as a result of hurricane damage in 2004.



Conditions of Corals

A total of 37 BleachWatch Observer reports were received during the last two weeks, with 24 reports indicating signs of isolated paling or partial bleaching colonies and 7 reports of bleached coral heads. The distribution of reports indicating completely bleached colonies was focused mainly in the upper Middle and Upper Keys; however, the nature of the reports, which indicated that observations were only isolated, individual completely bleached colonies, does not indicate that the Upper Keys region is experiencing significantly greater extent of bleaching than the remainder of the Florida Keys National Marine Sanctuary (Figure 5). The paling observations were mostly colonies of *Siderastrea sp.*, *Oculina sp.*, and *Montastraea sp.* and the bleached observations were mostly *Oculina sp.* and *Siderastrea sp.*, as well as additional observations of bleached *Palythoa sp.* and *Millipora sp.*

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

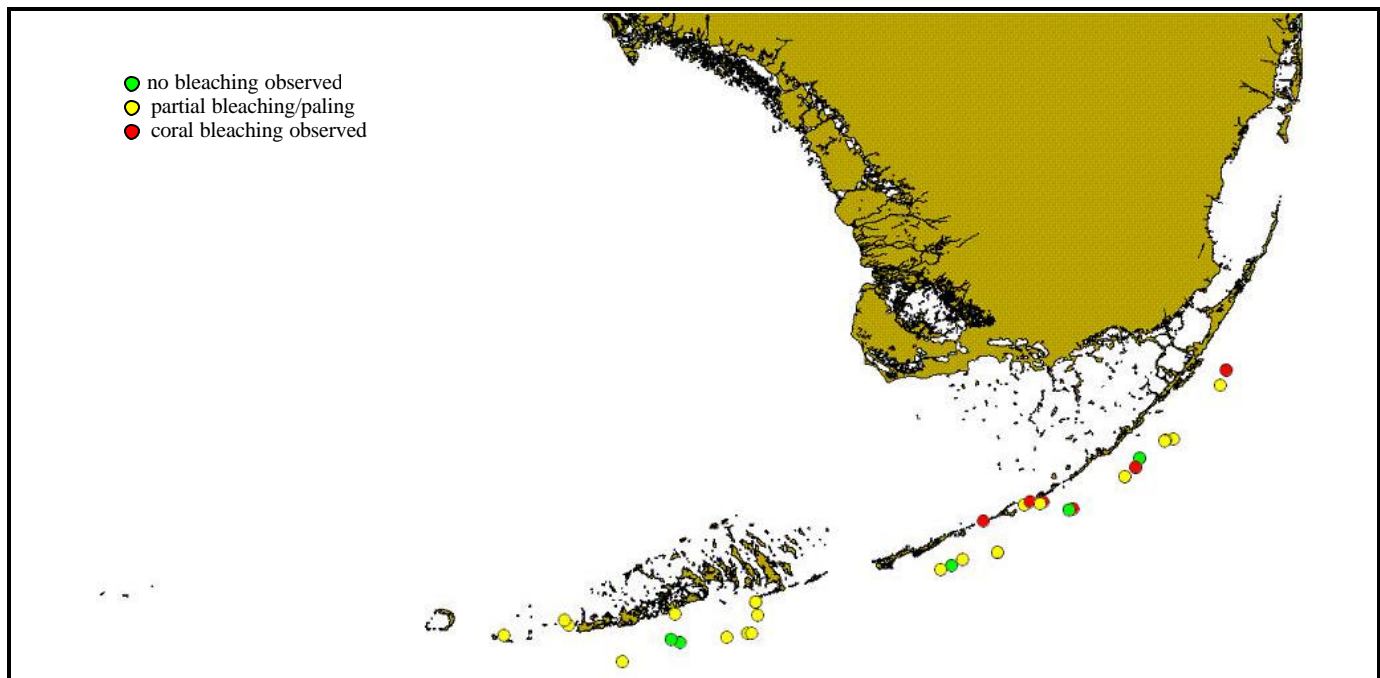


Figure 5. Overview of BleachWatch observer reports submitted from Aug 2-Aug16, 2005

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>