



Updated September 27, 2005

Summary: Based on current remote sensing and environmental monitoring data, field observations, and climate predictions, 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 indicates that sea temperature stress continues to decrease for the Florida Keys region. NOAA's recent Coral Bleaching HotSpot Map, which indicates the current Sea Surface Temperature (SST) compared to the historically expected SST's for the region, indicates that sea surface temperatures have returned to "normal" for the Florida Keys National Marine Sanctuary and surrounding waters (Figure 1). NOAA's latest Degree Heating Weeks (DHW) map, illustrating accumulation of elevated sea surface temperature in an area based on the previous 12 weeks (Figure 2), still indicates the previously accumulated temperature stress potentially impacting the region, despite the apparent decrease in temperatures since Hurricane Rita passed near the Florida Keys on September 20th. While no data is currently available for Sand Key or the Dry Tortugas since the hurricane, sea temperature readings at the other NOAA/FIO *in-situ* monitoring stations currently show temperatures holding below 30°C (Figure 3). Finally, while winds have decreased in the past few days (Figure 4), NOAA's National Weather Service forecasts winds increasing to 15 knots by the weekend. Overall, while some observations of coral bleaching are still likely due to accumulated stress from previously elevated water temperatures, continued decreasing sea temperature stress and increasing winds should likely reduce the potential for mass coral bleaching events in the Florida Keys National Marine Sanctuary and surrounding waters.

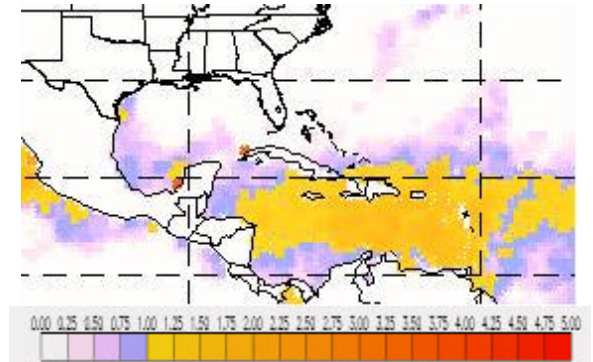


Figure 1. NOAA's Coral Bleaching HotSpot Map for Sept. 27, 2005.

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

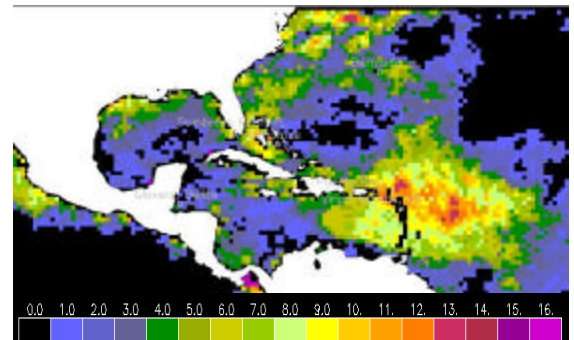


Figure 2. NOAA's Degree Heating Weeks Map for Sept 27, 2005.

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

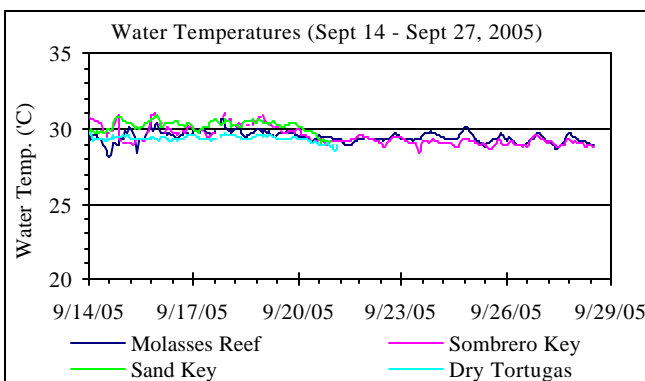


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations *(Sept 14 – Sept 27, 2005).

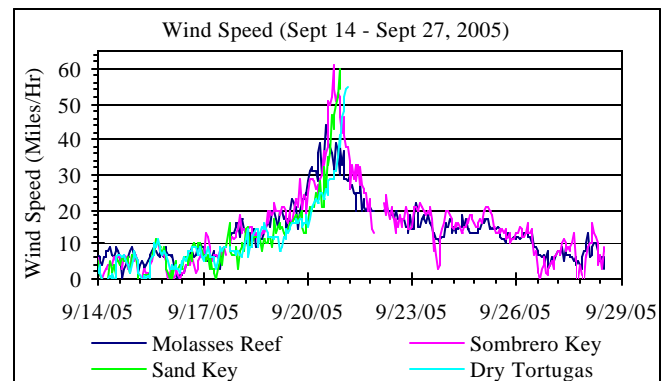


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations *(Sept 14 – Sept 27, 2005).

*Note: Dry Tortugas and Sand Key monitoring stations down after Hurricane Rita.



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20050927



Conditions of Corals

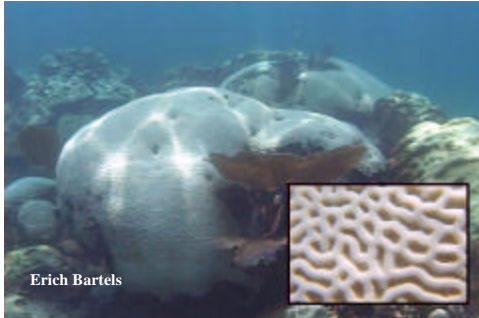


Figure 5. Bleached Boulder Brain Coral, *Colpophyllia natans* with close-up of coral head. (Marker "48" reef on 9/16/05).

Unfortunately due to Hurricane Rita only 10 BleachWatch Observer reports were received during the last two weeks. There were 6 reports containing minimal signs of paling but all these sites had an overall severity of no bleaching. There were 2 reports indicating signs of isolated paling or partial bleaching colonies, and only 1 report of corals significantly affected and

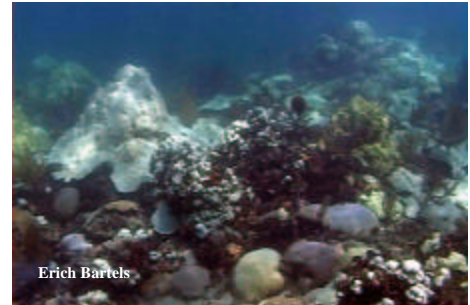


Figure 6. Paling/Bleached coral reef scene. (Marker "48" reef on 9/16/05)

included observations of several completely bleached colonies (Figures 5 & 6). The paling observations included colonies of *Siderastrea sp.*, *Montastraea sp.*, *Porites sp.* and *Agaricia sp.* Most observations of completely bleached colonies included *Agaricia sp.*, *Montastraea sp.*, *Siderastrea sp.*, *Diploria sp.*, and *Porites sp.* as well as additional observations of completely bleached *Palythoa sp.* and *Millepora sp.* From reports received, completely bleached coral heads have been confined to nearshore patch reef areas (Figure 7).

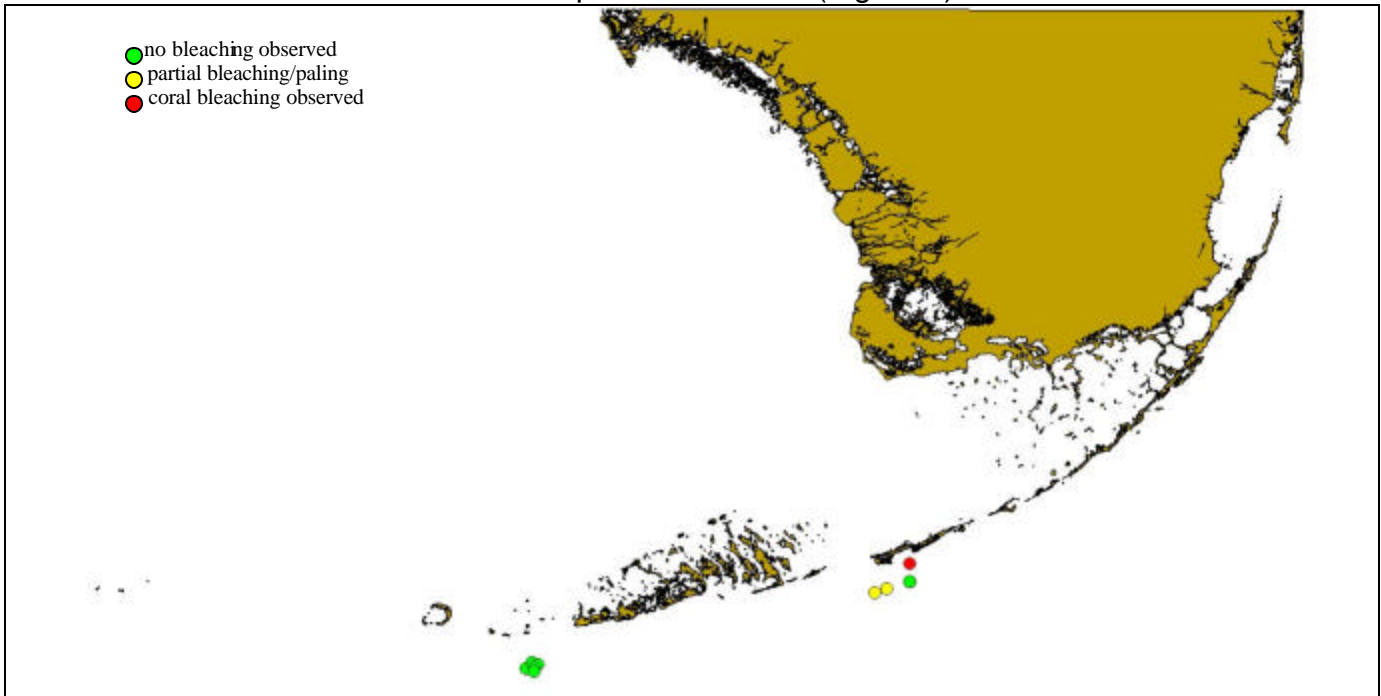


Figure 7. Overview of BleachWatch Observer reports submitted from Sept 14 – Sept 27, 2005

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>