



Updated October 18, 2005

**Summary.** Based on current remote sensing, environmental monitoring data, field observations, and climate predictions, the threat for mass coral bleaching within the Florida Keys National Marine Sanctuary (FKNMS) continues to be **LOW**. As a result, this will be the final current conditions report for 2005.

### 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 depicts the current Sea Surface Temperature (SST) compared to the historically expected SST's for the region, shows that despite the elevated temperatures continuing to affect the eastern Caribbean, 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 reflects the previously accumulated temperature stress potentially impacting the region; however, as SST's continue to decrease, DHW maps will continue to show the reduction in accumulated temperature stress. While no data is currently available for Sand Key or the Dry Tortugas since Hurricane Rita, sea temperature readings at other NOAA/FIO *in-situ* monitoring stations show temperatures holding well below 30°C (Figure 3). Winds have increased in the past few days (Figure 4), due to the tropical depression 24 and now Hurricane Wilma which is presently forecasted to affect the Florida Keys. Overall, while some observations of isolated coral bleaching are still likely due to accumulated stress from previously elevated water temperatures, continued decreasing sea temperatures and increasing winds have further reduced the potential for mass coral bleaching events within the Florida Keys National Marine Sanctuary.

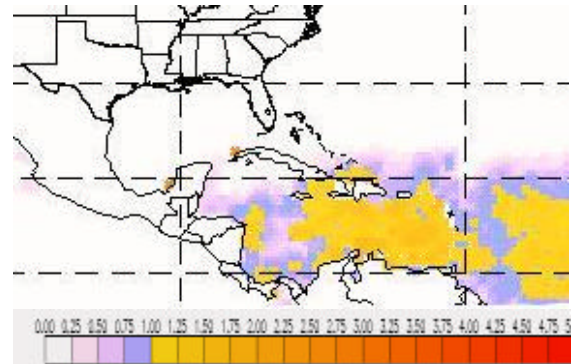


Figure 1. NOAA's Coral Bleaching HotSpot Map for Oct. 18, 2005.

[www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html](http://www.osdpd.noaa.gov/PSB/EPS/SST/climohot.html)

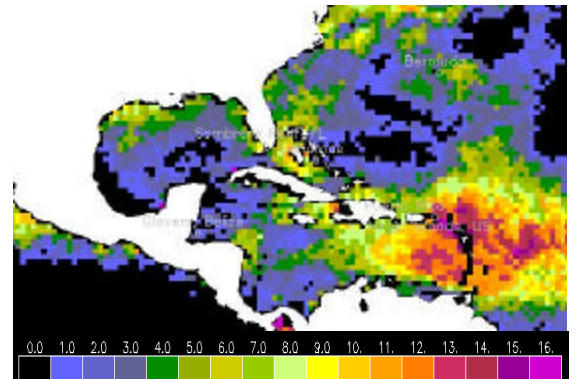


Figure 2. NOAA's Degree Heating Weeks Map for Oct. 18, 2005.

[www.osdpd.noaa.gov/PSB/EPS/SST/dhw\\_retro.html](http://www.osdpd.noaa.gov/PSB/EPS/SST/dhw_retro.html)

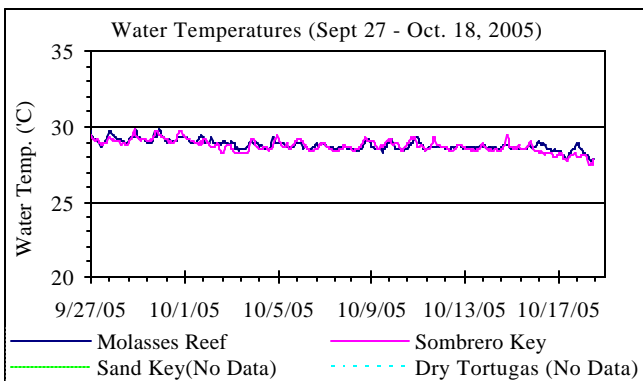


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations \*(Sept 27 – Oct. 18, 2005).

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

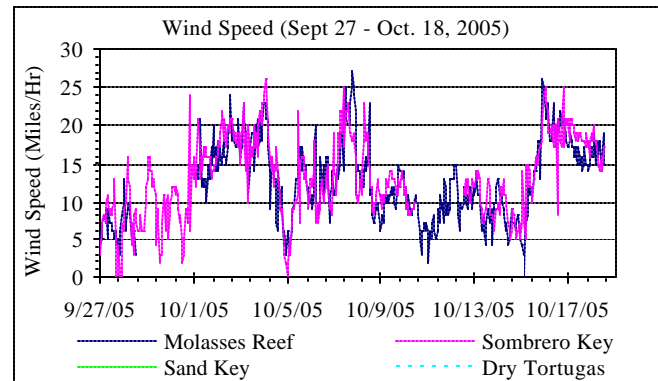


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations \*(Sept 27 – Oct. 18, 2005).



### Conditions of Corals



Figure 5. Bleached Grooved Brain Coral, *Diploria labyrinthiformis*. (Triangles Reef-9/29/05).

In the past three weeks there have been 10 BleachWatch Observer reports received, bringing an end to the BleachWatch Professional Observer season. Only 1 report noted significant bleaching, including *Porites* sp., *Siderastrea* sp., and *Diploria* sp., at a shallow inshore patch reef (Figure 5). Another single report indicated

isolated paling or partial bleaching colonies, also from a shallow inshore reef. The remaining 8 reports, while they did include observations of isolated paling at many sites (Figure 6), would be categorized overall as reports

of "no bleaching". In most instances, recovery of previously bleached corals to their "normal" color continues to be observed throughout the FKNMS; however, observations of bleached *Agaricia* sp., *Oculina* sp. *Dichocoenia* sp., and some *Diploria* sp. are still being noted.

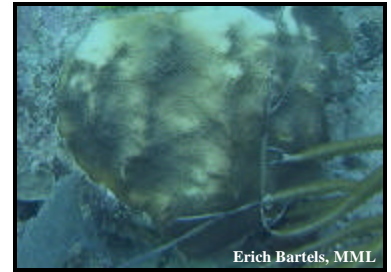


Figure 5. Paling Star Coral *Montastraea* sp. (E. of Looe Key on 10/13/05).

On the basis of current conditions and recent BleachWatch observations, the threat of severe and widespread coral bleaching in the Florida Keys National Marine Sanctuary and surrounding waters no longer exists. As a result, this will be the final current conditions report for 2005.

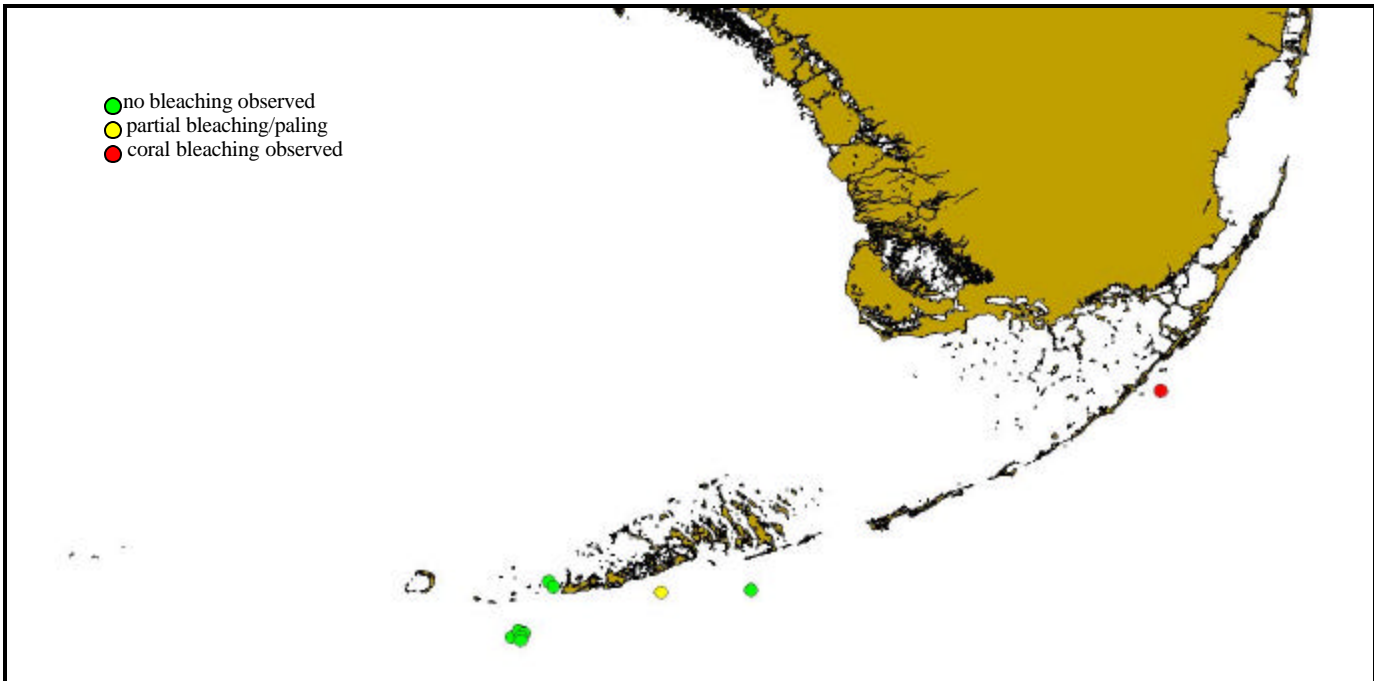


Figure 7. Overview of BleachWatch Observer reports submitted from Sept 27 – Oct. 18, 2005

### GREAT JOB BLEACHWATCH OBSERVERS!

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