



Coral Bleaching Early Warning Network

Current Conditions Final 2006 Report #20061019



Updated October 19, 2006

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 2006.

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), indicates that temperature stress for the Florida Keys region has not accumulated significantly. In addition, as SST's continue to decrease, DHW maps will likely continue to show an even greater reduction in accumulated temperature stress.

While no data is currently available for Sand Key or the Dry Tortugas, sea temperature readings at other NOAA/FIO *in-situ* monitoring stations in the Middle and Upper Keys show sea temperatures holding below 30°C (Figure 3). Overall, while some observations of isolated coral bleaching are still likely to be observed, continued decreasing sea temperatures and increasing winds have further reduced the potential for mass coral bleaching events within the Florida Keys National Marine Sanctuary.

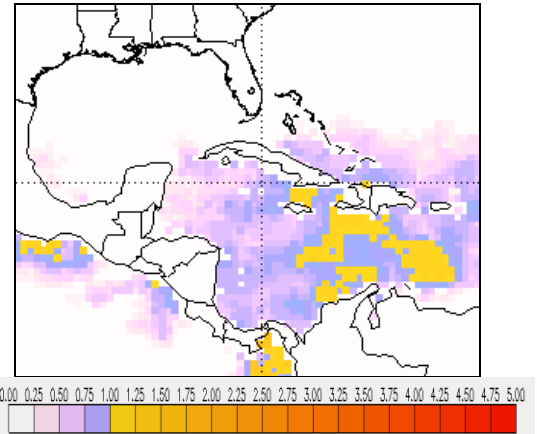


Figure 1. NOAA's Coral Bleaching HotSpot Map for Oct. 17, 2006.

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

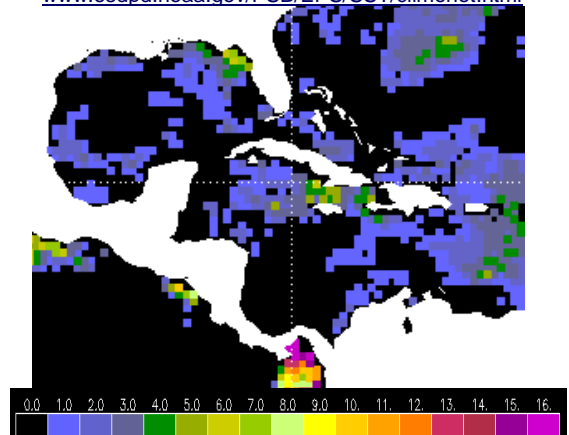


Figure 2. NOAA's Degree Heating Weeks Map for Oct. 17, 2006.

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

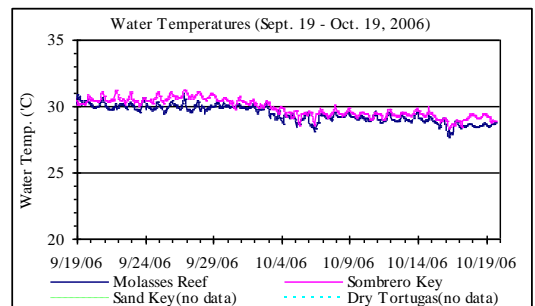


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations (Sept. 19-Oct. 19, 2006)



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Conditions of Corals

The 2006 BleachWatch season has come to an end with a total of 206 reports submitted by BleachWatch observers, including both reports of bleaching and no bleaching. In the past month there have been 19 BleachWatch Observer reports received from throughout the Florida Keys (Figure 5), with 6 reports indicating isolated paling or partial bleached colonies, including *Agaricia sp.*, *Oculina sp.*, *Siderastrea sp.*, and some *Diploria sp.*, still being noted.

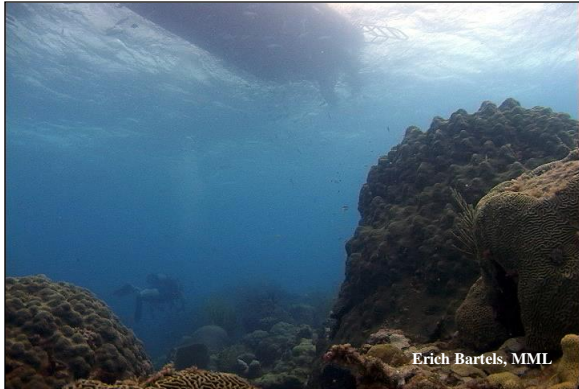


Photo of Lower Keys reef showing no significant bleaching.
(Looe Key Reef - August, 2006)

Based on current environmental conditions and the limited number of isolated paling or partially bleached corals noted by BleachWatch observers, the threat of mass coral bleaching in the Florida Keys National Marine Sanctuary and surrounding waters seems highly unlikely. As a result, this will be the final current conditions report for 2006.

BleachWatch Reports for September 19 – October 19, 2006

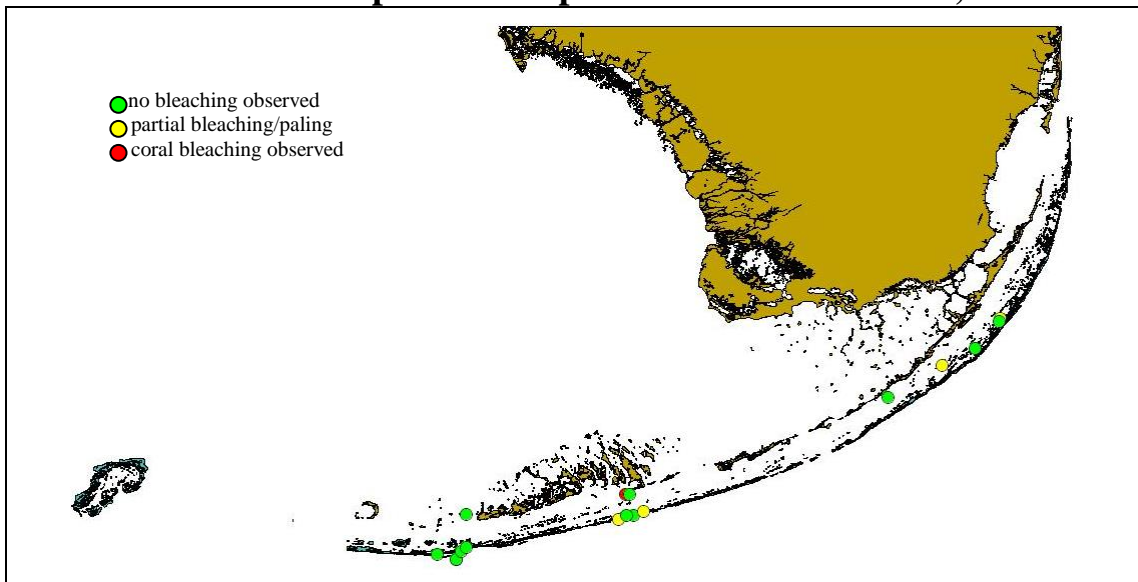


Figure 5. Overview of BleachWatch Observer reports submitted from Sept 19 – Oct. 19, 2006

THANKS AND GREAT JOB BLEACHWATCH OBSERVERS!

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