



Updated September 13, 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 **moderate**.

### Weather and Sea Temperatures

Current remote sensing analysis by NOAA's Coral Reef Watch program shows sea temperatures are still slightly elevated for this time of year in the Florida Keys region. NOAA's recent Coral Bleaching HotSpot Map (Figure 1), which indicates the current Sea Surface Temperature (SST) compared to the historically expected SST's for the region, still indicates above-average temperature for the Florida Keys National Marine Sanctuary and surrounding waters; however, the HotSpots have decreased since the last Coral Bleaching Current Conditions Report (#20050830). NOAA's latest Degree Heating Weeks (DHW) map, illustrating accumulation of elevated sea surface temperature in an area based on the previous 12 weeks, indicates accumulated temperature stress continuing to impact this region, despite the apparent decrease in temperatures since Hurricane Katrina (Figure 2). Sea temperature readings at the NOAA/FIO *in-situ* monitoring stations show temperatures holding below 30°C until just the past few days, and the level and duration of temperature changes noted recently may be an indication of sensor problems or short term localized temperature anomalies at some stations (Figure 3). Light winds over the past few days and NOAA's National Weather Service forecast of 5-10 knot winds or less for the remainder of the week will likely continue the potential for observations of "patchy" coral bleaching. (Figure 4)

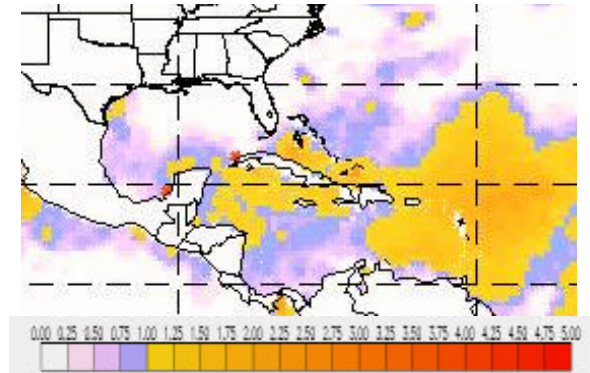


Figure 1. NOAA's Coral Bleaching HotSpot Map for Sept. 13, 2005.

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

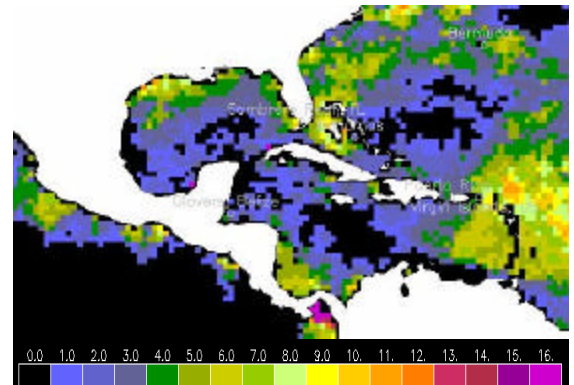


Figure 2. NOAA's Degree Heating Weeks Map for Sept 13, 2005.

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

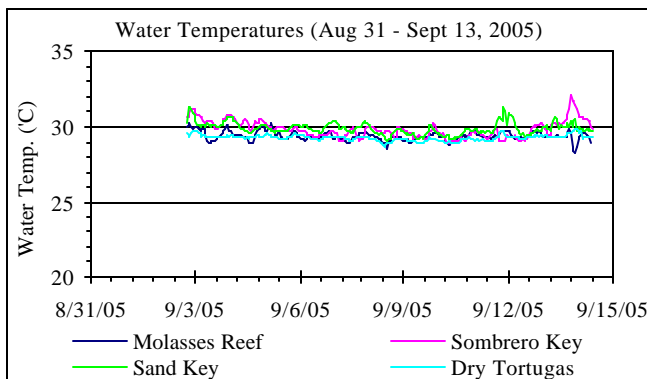


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations \*(Aug 31 – Sept 13, 2005).

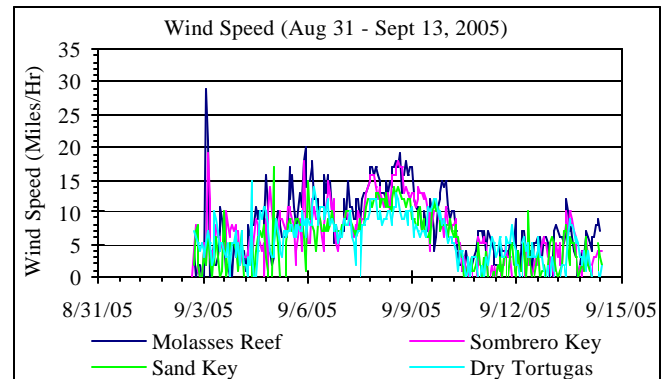


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations \*(Aug 31 – Sept 13, 2005).

\*Note: all stations were down Aug 30-Sept 2, 2005



Mote Marine Laboratory / Florida Keys National Marine Sanctuary  
**Coral Bleaching Early Warning Network**  
**Current Conditions Report #20050913**



**Conditions of Corals**

A total of 35 BleachWatch Observer reports were received during the last two weeks, with 27 reports indicating signs of isolated paling or partial bleaching colonies, and only 4 reports of areas significantly affected or where observations included several completely bleached colonies. There were also 4 reports submitted where no bleaching was observed, mostly from deeper reefs. The paling observations included colonies of *Siderastrea sp.*, *Montastraea sp.*, *Porites sp.*



Figure 5. Photo of "paling/bleaching" brain corals (Off Lower Matecumbe on 9/3/05).

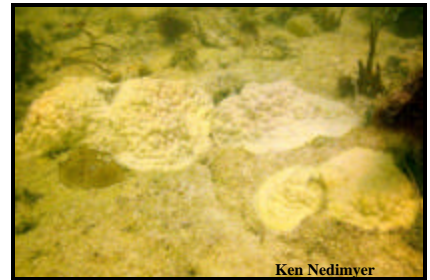


Figure 6. Photo of "paling/bleaching" *Porites astreoides* (Channel 2 on 9/3/05).

and *Agaricia sp.* Most observations of completely bleached colonies included *Agaricia sp.*, *Montastraea sp.*, *Siderastrea sp.*, *Diploria sp.*, and *Porites sp.* (Figures 5 & 6) as well as additional observations of completely bleached *Palythoa sp.* and *Millepora sp.* Sites that exhibited completely bleached coral heads have until recently been confined to nearshore patch reefs or hardbottom areas, but have now expanded to include offshore patch and bank reefs (Figure 7).

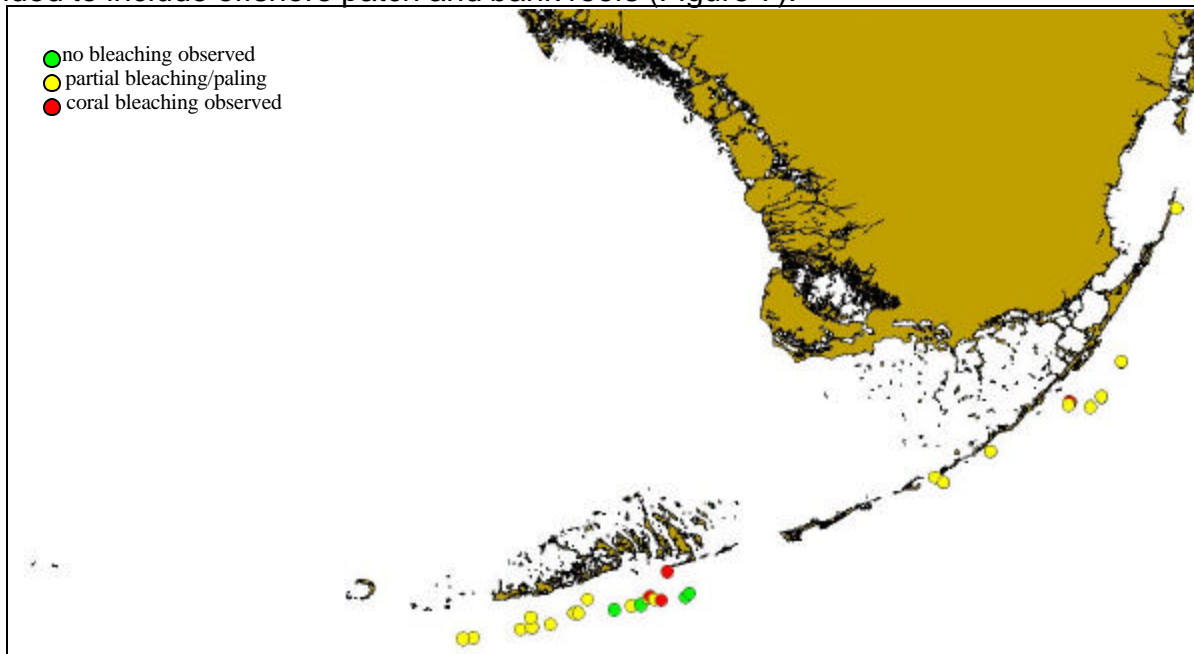


Figure 7. Overview of BleachWatch Observer reports submitted from Aug 31 – Sept 13, 2005

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>