



Updated August 30, 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 continuing elevated temperatures 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, indicates a continued trend of above-average temperature for the Florida Keys National Marine Sanctuary and surrounding waters. In addition, 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 build (Figure 2). However, sea temperature readings at the NOAA/FIO *in-situ* monitoring stations all indicate a slight temperature decrease as a result of Hurricane Katrina last week, (Figure 3) and continued breezy conditions in the days following (Figure 4), hopefully providing some relief, at least temporarily, from the increased thermal stress experienced over the past few weeks. NOAA's National Weather Service forecasts winds to decrease to 10 knots or less as the week progresses, and it is likely that sea temperatures will rapidly return to the elevated levels seen prior to Hurricane Katrina.

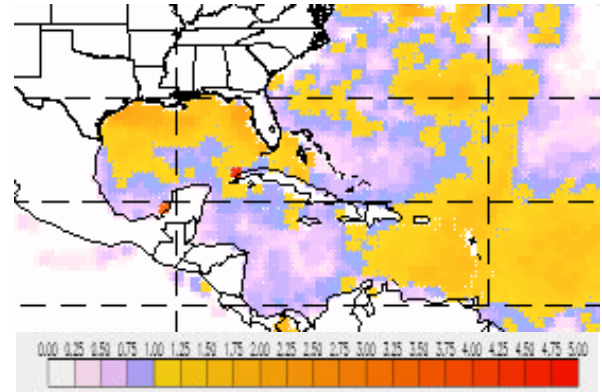


Figure 1. NOAA's Coral Bleaching HotSpot Map for Aug 30, 2005.

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

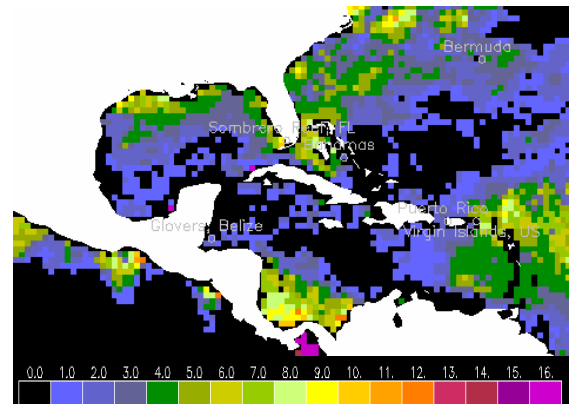


Figure 2. NOAA's Degree Heating Weeks Map for Aug 30, 2005.

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

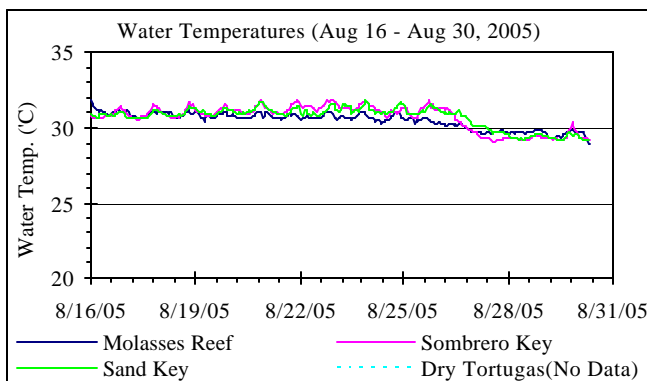


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations (Aug 16 - Aug 30, 2005).

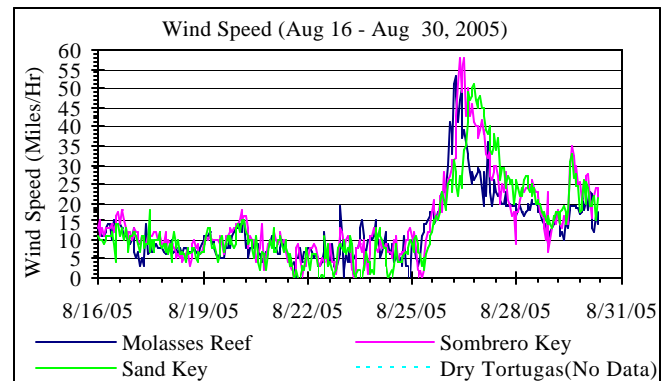


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations (Aug 16 - Aug 30, 2005).

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



Figure 5. Photo of "bleached" *Palythoa* sp. and "paling" *Montastraea cavernosa* (Looe Key)

A total of 23 BleachWatch Observer reports were received during the last two weeks, with 18 reports indicating signs of isolated paling or partial bleaching colonies, and 4 reports of areas significantly affected, including observations of completely bleached colonies. A single report of no bleaching was submitted as well from a reef deeper than 45 ft. The paling observations were mostly colonies of *Siderastrea* sp., *Montastraea* sp., *Porites*

sp. and *Agaricia* sp. Most observations of completely bleached colonies included *Montastraea* sp. and *Siderastrea* sp., as well as additional observations of completely bleached *Palythoa* sp. and *Millipora* sp. (Figures 5 & 6). For the most part, sites that exhibited completely bleached coral heads were nearshore patch reefs or hardbottom areas (Figure 7).

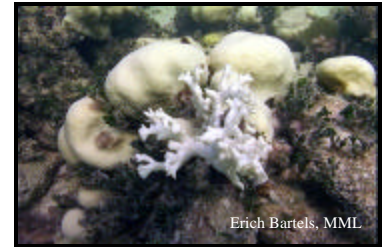


Figure 6. Photo of "bleached" *Millipora alcicornis* next to "paling" *M. annularis* (Newfound Harbor SPA).

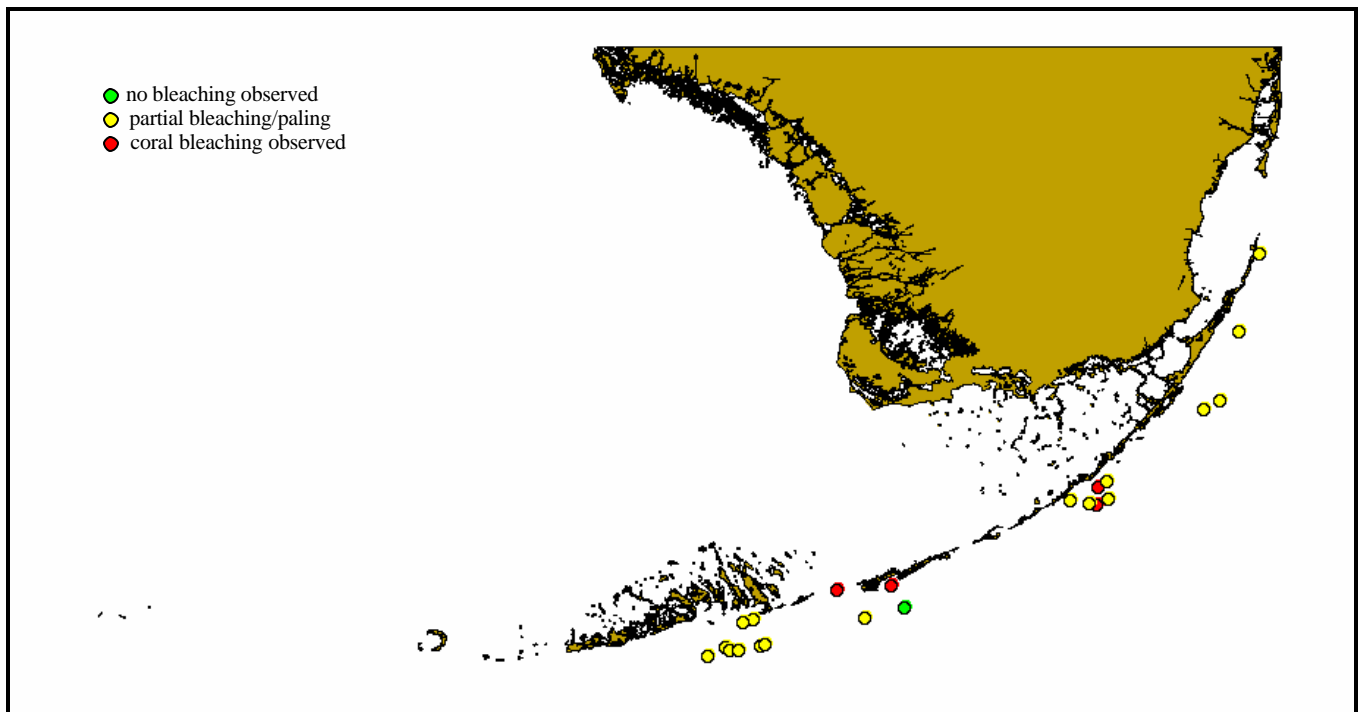


Figure 7. Overview of BleachWatch Observer reports submitted from Aug 16-Aug 30, 2005

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>