



Updated August 23, 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 **HIGH**.

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 significant elevated temperature anomalies for the Florida Keys National Marine Sanctuary and surrounding waters. Similarly, 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 temperature stress continuing to build (Figure 2). According to NOAA's Coral Reef Watch Program, the area in the vicinity of Sombrero Reef is at its highest recorded heating week of 7.4 DHW. In addition, sea temperature readings at the NOAA/FIO *in-situ* monitoring stations all indicate temperatures throughout the Florida Keys exceeding 30°C, and in many cases nearing 32°C, for more than the past two weeks (Figure 3). In addition, winds recently decreased again over the past week (Figure 4), resulting in continuing favorable conditions for coral bleaching. NOAA's National Weather Service forecasts winds near or less than 10 knot winds for the remainder of the week; however, a tropical depression near the Bahamas is anticipated to bring increasing winds and cloud cover to the Florida Keys region by the weekend.

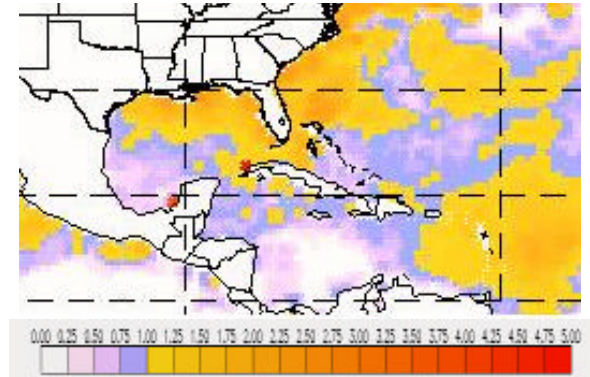


Figure 1. NOAA's Coral Bleaching HotSpot Map for Aug 23, 2005.

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

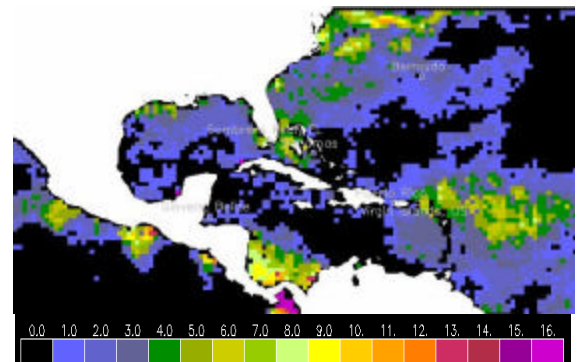


Figure 2. NOAA's Degree Heating Weeks Map for Aug 23, 2005.

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

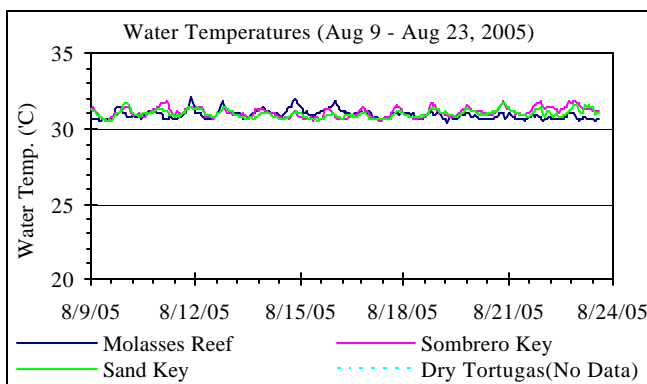


Figure 3. Summary of *in-situ* sea temperature data from NOAA/FIO monitoring stations (Aug 9 - Aug 23, 2005).

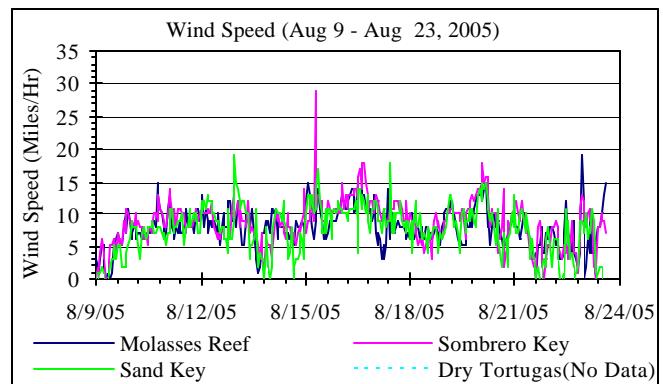


Figure 4. Summary of wind speed data from NOAA/FIO monitoring stations (Aug 9 - Aug 23, 2005).

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

A total of 25 BleachWatch Observer reports were received during the last two weeks, with 16 reports indicating signs of isolated paling or partial bleaching colonies, and 7 reports of areas significantly affected, including observations of completely bleached colonies (Figure 5). 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.* For the most part, sites that exhibited completely bleached coral heads were nearshore patch reefs or hardbottom areas.

Current conditions remain favorable for coral bleaching – please report after every reef visit, even if no bleaching is observed.

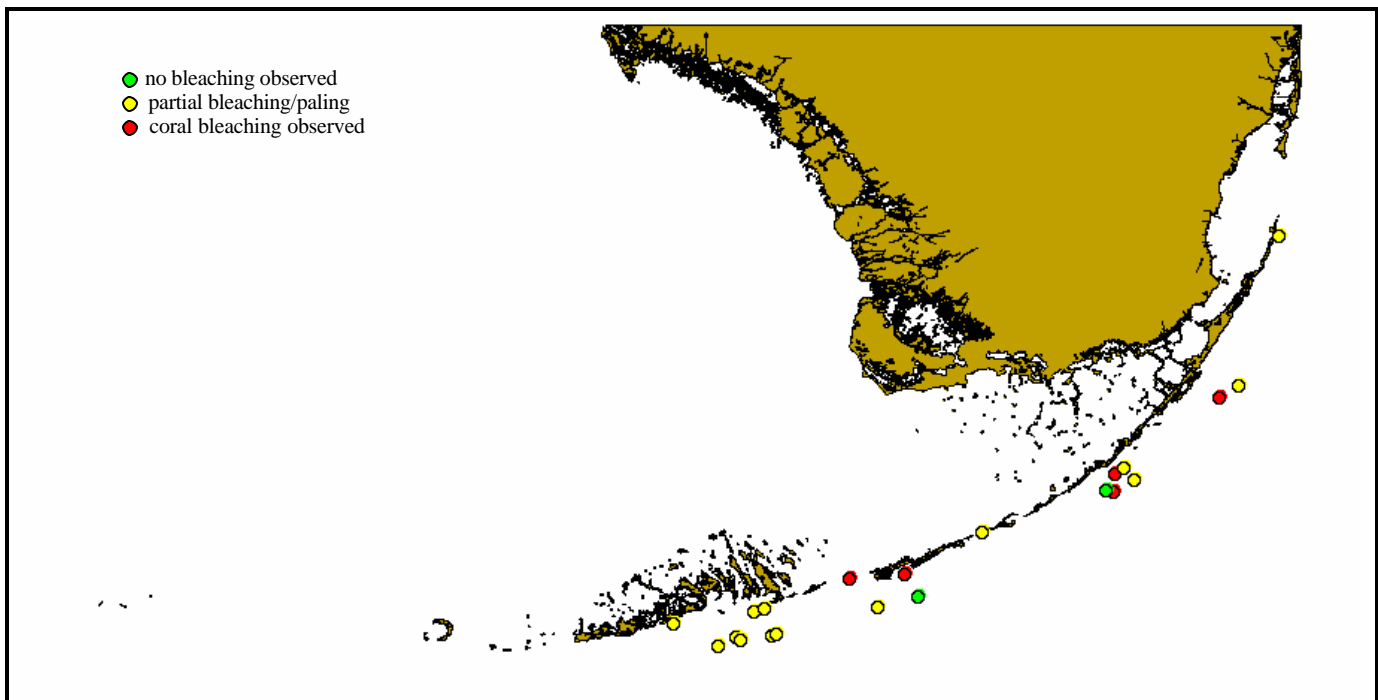


Figure 5. Overview of BleachWatch Observer reports submitted from Aug 9-Aug23, 2005

Thanks to all of the BleachWatch Observers. Keep up the good work!

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>