



Updated September 27, 2012

Summary: Based on climate predictions, current conditions, and field observations, the threat for mass coral bleaching within the FKNMS is now **LOW**.

NOAA Coral Reef Watch Satellite Coral Bleaching Alert Area
September 26, 2012 (experimental)

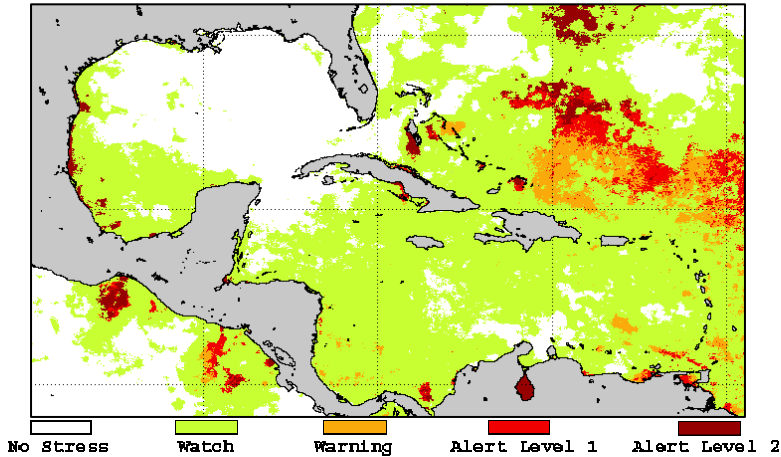


Figure 1. NOAA's 5 km Experimental Coral Bleaching Alert Areas for September 26, 2012.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.html>

Weather and Sea Temperatures

According to the newly released NOAA Coral Reef Watch (CRW) experimental 5 kilometer (km) Satellite Coral Bleaching Alert Area, there is only a low level of thermal stress throughout the Florida Keys and the potential for coral bleaching is minimal if current conditions continue (Fig. 1).

Recent remote sensing analysis by NOAA's CRW program indicates that the Florida Keys region is presently experiencing limited thermal stress. NOAA's new experimental 5 km Coral Bleaching HotSpot Map (Fig.2), which illustrates current sea surface temperatures compared to the average temperature for the warmest month, shows that sea surface temperatures are not elevated above normal for this time of year in the Florida Keys. However, NOAA's new experimental 5 km Degree Heating Weeks (DHW) map, which illustrates how much heat stress has built up over the past 12 weeks (Fig.3), indicates that a low level of accumulated temperature stress is still evident in the Florida Keys region. NOAA's Integrated Coral Observing Network (ICON) monitoring stations, which provide near real time *in-situ* sea temperature data along the outer reef tract throughout the Florida Keys, suggests that temperatures have decreased to below 30°C over the past three weeks (Fig.4), perhaps due in part to breezy conditions observed during this time frame(Fig. 5). *In-situ* sea temperature data is currently not available for Sand Key or Sombrero. Dry Tortugas is not recording any data at this time.

Mote Marine Laboratory will continue to monitor the NOAA HotSpot maps, DHW maps, and ICON sea temperature data from monitoring stations on a weekly basis for the remainder of the bleaching season.

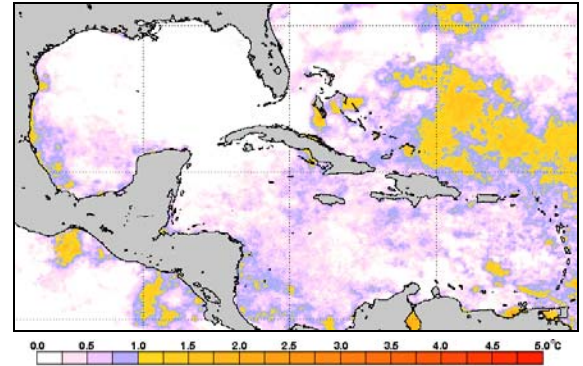


Figure 2. NOAA's Experimental 5 km Coral Bleaching HotSpot Map for September 26, 2012.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.html>

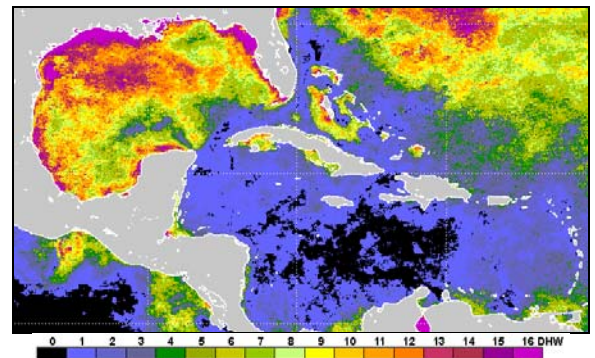


Figure 3. NOAA's Experimental 5 km Degree Heating Weeks Map for September 26, 2012.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.html>

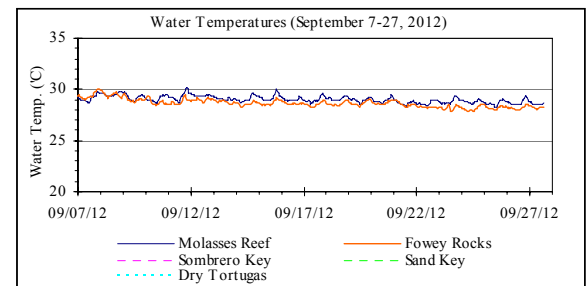


Figure 4. *in-situ* sea temperature from NOAA/ICON monitoring stations (September 7-27, 2012).

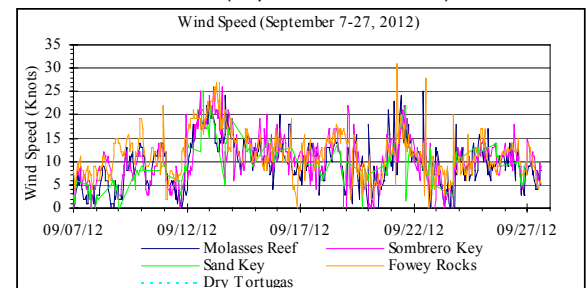


Figure 5. Wind speed data from NOAA/ICON monitoring stations (September 7-27, 2012).



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20120927



Conditions of Corals

A total of 57 BleachWatch Observer reports were received during the last three weeks (Fig. 6), with only 19 reports indicating isolated colonies exhibiting signs of paling or surface bleaching. The remaining reports indicated that no significant signs of coral bleaching were observed (Fig. 7). At all sites where partial bleaching or paling was noted, the overall percentage of corals exhibiting signs of thermal stress was only 1-10% of corals at each site.



Figure 7. Healthy *Acropora palmata* at Looe Key on September 7, 2012.

The majority of isolated paling observations consisted of Encrusting/Mound/Boulder corals (*Montastraea spp.* and *Siderastrea spp.*) and Brain Corals (*Diploria spp.*, *Colpophyllia natans*, and *Meandrina meandrites*). Other observations included paling of *Palythoa spp.* Fire Coral, and Gorgonians as well as several reports of coral diseases throughout Upper, Middle, and Lower Keys as well as the Dry Tortugas National Park (Fig. 8).



Figure 8. *Siderastrea siderea* in the Dry Tortugas with Black Band Disease on September 14, 2012

These isolated observations of paling and partial bleaching do not necessarily indicate the onset of a mass bleaching event; however, continued field observations are needed as more widespread coral bleaching could develop if environmental conditions become more favorable.

BleachWatch Reports for September 7-27, 2012

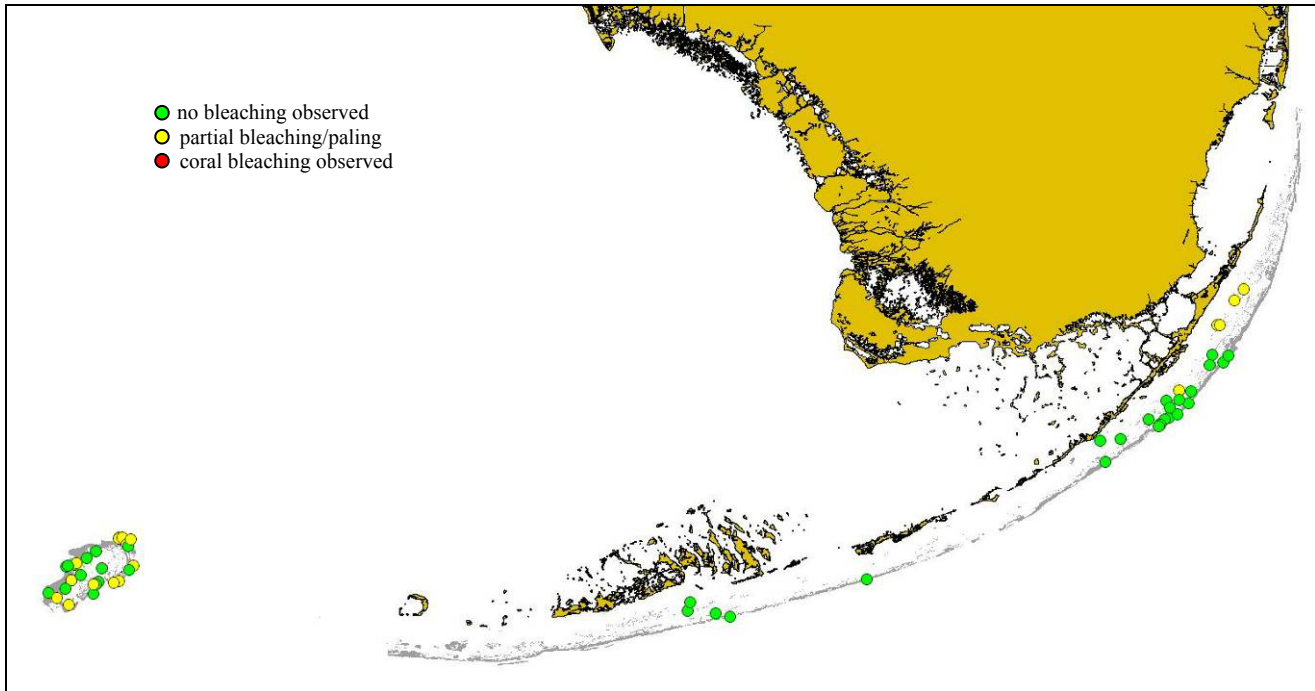


Figure 6. Overview of BleachWatch observer reports submitted from September 7-27, 2012.

**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>

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