



Updated June 30, 2014

Summary: Based on climate predictions, current conditions, and field observations, the threat for mass coral bleaching within the FKNMS is currently **LOW** with potential to become moderate.

Current Environmental Conditions

Remote sensing analysis by NOAA's Coral Reef Watch (CRW) program indicates that most of the Florida Keys region is currently experiencing limited thermal stress. NOAA's recent experimental 5 km Coral Bleaching HotSpot Map (Fig.1), which illustrates current sea surface temperatures compared to the average temperature for the warmest month, shows only slightly elevated temperatures for the Florida Keys over the last 4 weeks. Similarly, NOAA's latest experimental 5 km Degree Heating Weeks (DHW) map, which indicates how much heat stress has built up over the past 12 weeks (Fig.2), shows minimal accumulated temperature stress in the Florida Keys region. Finally, NOAA's Integrated Coral Observing Network (ICON) monitoring stations confirms that sea temperatures throughout the Florida Keys, at least along the outer reef tract, are just recently beginning to rise to or just above 30°C (Fig.3); perhaps due in part to lighter wind conditions observed during most of the past month (Fig 4). *In-situ* sea temperature data is currently not available for Dry Tortugas, Sand Key or Sombrero Reef.

According to the latest NOAA CRW experimental 5 kilometer (km) Satellite Coral Bleaching Alert Area, there is currently a bleaching watch for the Atlantic side of the Florida Keys, with the potential for bleaching warnings and alerts if sea temperatures continue to increase (Fig. 5). Mote Marine Laboratory will continue to monitor the NOAA HotSpot maps, DHW maps, and ICON sea temperature data from NOAA monitoring stations on a weekly basis for the remainder of the bleaching season.

NOAA Coral Reef Watch Coral Bleaching Alert Area June 29, 2014 (experimental)

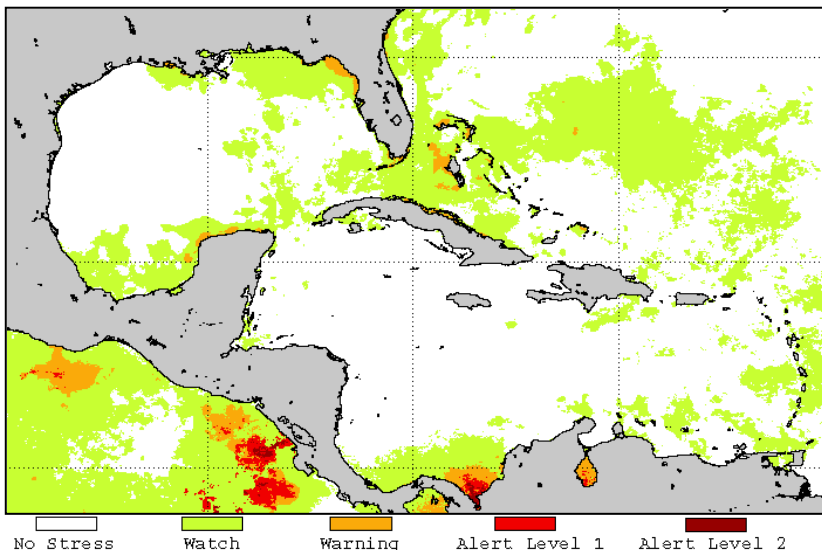


Figure 5. NOAA's 5 km Experimental Coral Bleaching Alert Areas for June 29, 2014.

<http://coralreefwatch.noaa.gov/satellite/bleaching5km>

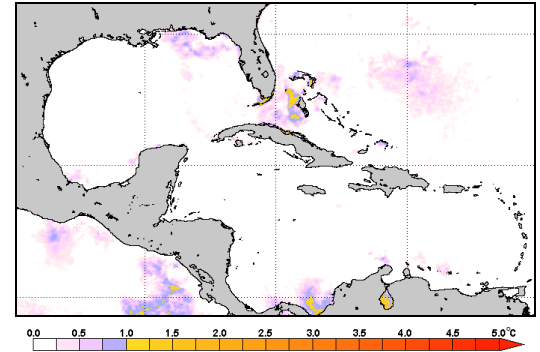


Figure 1. NOAA's Experimental 5km Coral Bleaching HotSpot Map for June 29, 2014.

<http://coralreefwatch.noaa.gov/satellite/bleaching5km>

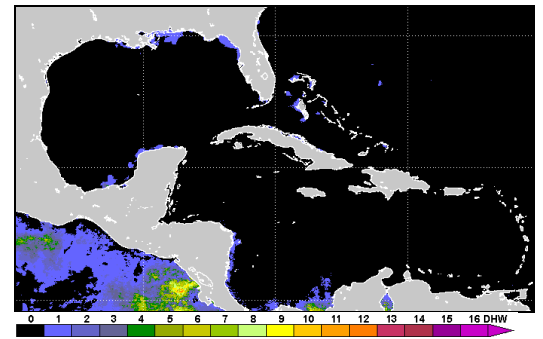


Figure 2. NOAA's Experimental 5km Degree Heating Weeks Map for June 29, 2014.

<http://coralreefwatch.noaa.gov/satellite/bleaching5km>

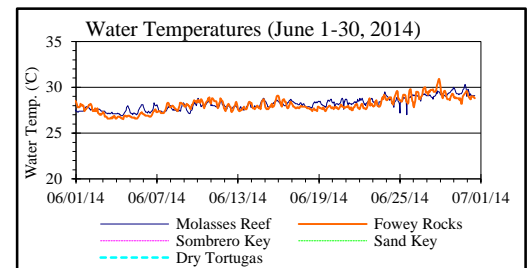


Figure 3. *in-situ* sea temperature from NOAA/ICON monitoring stations (June 1-30, 2014).

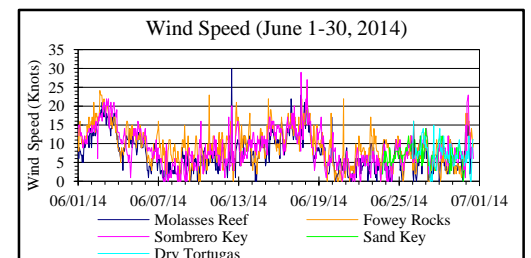


Figure 4. Wind speed data from NOAA/ICON monitoring stations (June 1-30, 2014).



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20140630



Current Coral Conditions



Figure 7. Healthy *Montastraea cavernosa* at Horseshoe Reef, Key Largo June 11, 2014

A total of 44 BleachWatch Observer reports were received during the month of June (Fig. 6), with 11 reports indicating isolated colonies exhibiting signs of paling. The remaining 33 reports indicated that no significant signs of coral bleaching were observed (Fig. 7). At those sites where paling was noted, the overall percentage of corals exhibiting signs of thermal stress was only 1-10% of corals at each site. The majority of paling observations consisted of isolated colonies of Encrusting/Mound/Boulder corals; *Siderastrea siderea* (Fig. 8) and Brain corals; *Colpohyllia*

natans. Other observations included paling of *Palythoa spp.*, and several reports of coral disease.

These isolated observations of paling and partial bleaching indicate that the onset of a mass bleaching event is unlikely at this time; however, continued field observations are needed as more widespread coral bleaching could develop if environmental conditions change.



Figure 8. Paling *S. siderea* at Big Pine Shoals, June 26, 2014

BleachWatch Reports for June 1-30, 2014

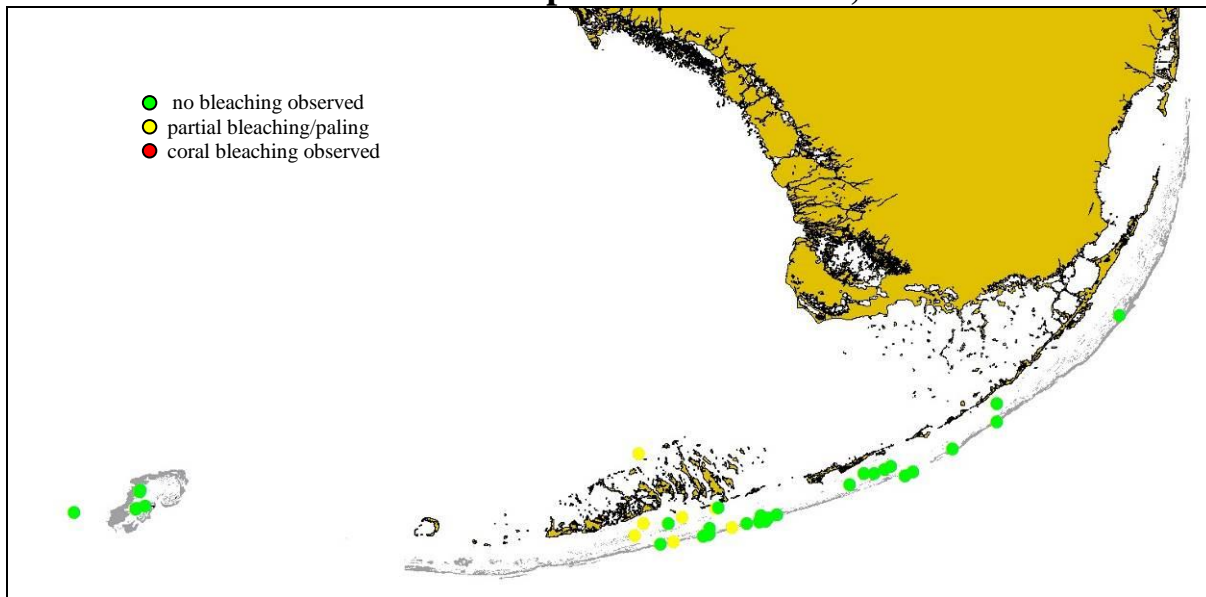


Figure 6. Overview of BleachWatch observer reports submitted from June 1-30, 2014

For more information about the BleachWatch program, or to submit a bleaching observation, contact:

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