



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20170703



Updated July 3, 2017

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

NOAA Coral Reef Watch Current and 60% Probability Coral Bleaching Alert Outlook July 2, 2017 (experimental)

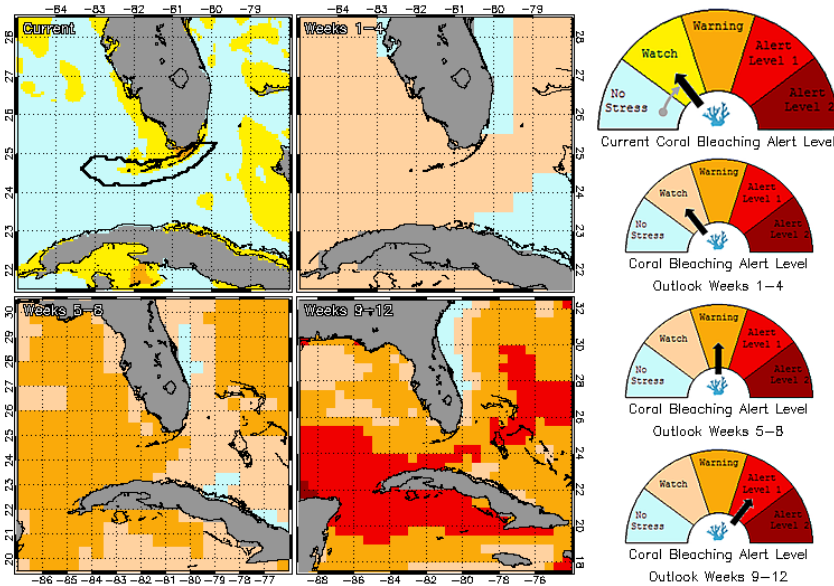


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through September 2017. Updated July 2, 2017.
http://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php

Weather and Sea Temperatures

According to the newly released NOAA Coral Reef Watch (CRW) experimental 5 kilometer (km) Satellite Current and 60% Probability Coral Bleaching Alert Area, there is currently a bleaching watch for the Florida Keys National Marine Sanctuary, with the potential for more bleaching warnings and alerts if sea temperatures continue to increase in the next few weeks (Fig. 1).

Recent remote sensing analysis by NOAA's CRW program indicates that most of the Florida Keys region is currently experiencing minimal 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 temperatures are only slightly elevated for the Florida Keys. Similarly, NOAA's 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 minimal accumulating temperature stress currently 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, confirm that while temperatures have been steadily increasing over the past four weeks they remain below 30°C (Fig.4), likely due in part to lighter wind conditions observed during the past week (Fig. 5). *In-situ* sea temperature data is currently only available at Molasses Reef and Fowey Rocks. Sombrero 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 NOAA monitoring stations on a weekly basis for the remainder of the bleaching season.

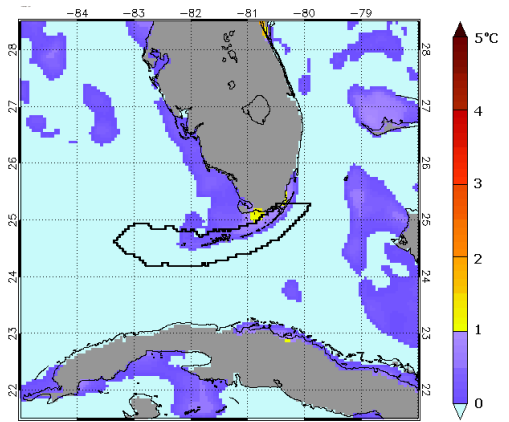


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida July 2, 2017.
<http://coralreefwatch.noaa.gov/regions/florida.php>

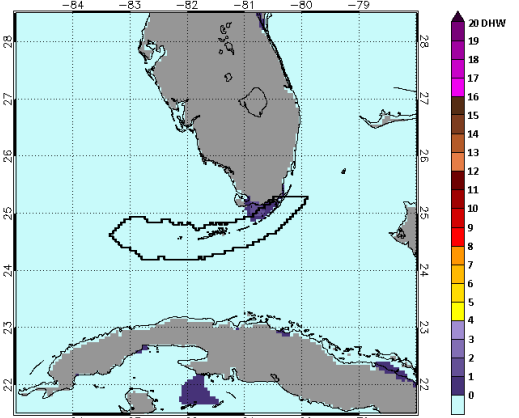


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida July 2, 2017.
<http://coralreefwatch.noaa.gov/regions/florida.php>

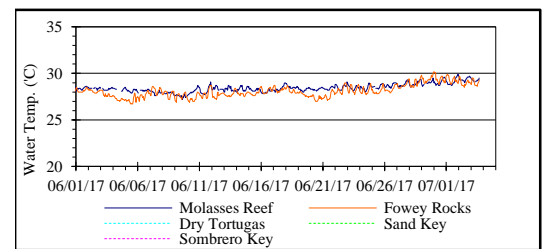


Figure 4. *in-situ* sea temperature from NOAA/ICON monitoring stations (June 1-July 3, 2017).

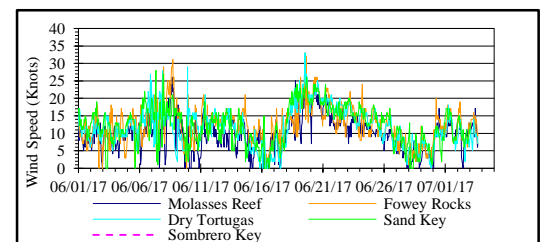


Figure 5. Wind speed data from NOAA/ICON monitoring stations (June 1-July 3, 2017).



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Current Coral Conditions

A total of 29 BleachWatch Observer reports were received during the month of June (Fig. 6), with only 3 reports indicating isolated colonies exhibiting signs of paling (Fig. 7). The remaining 26 reports indicated that no significant signs of coral bleaching were observed. At those sites where paling was noted, the overall percentage of corals exhibiting signs of thermal stress was mostly 1-10%, and the majority of paling observations consisted of isolated colonies of Encrusting/Mound/Boulder corals; *Siderastrea siderea* and *S. radians*. Other observations included paling of *Palythoa spp.*, and Fire Coral as well as several reports of potential coral disease (Fig. 8). Due to increase in coral disease observations in the Key Largo and Islamorada area, observers are encouraged to report if disease is both present or absent at their sites.



Figure 7. Paling/stressed *Siderastrea siderea* at a patch east of Looe Key SPA on 7/3/17.
 Photo: Steady Hansen, USM



Figure 8. A stressed *Diploria labyrinthiformis* with unusual dark coloring at a patch reef off Long Key on 6/27/17.
 Photo: Elliot Hart, FWRI

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

BleachWatch Reports for June 1-July 3, 2017

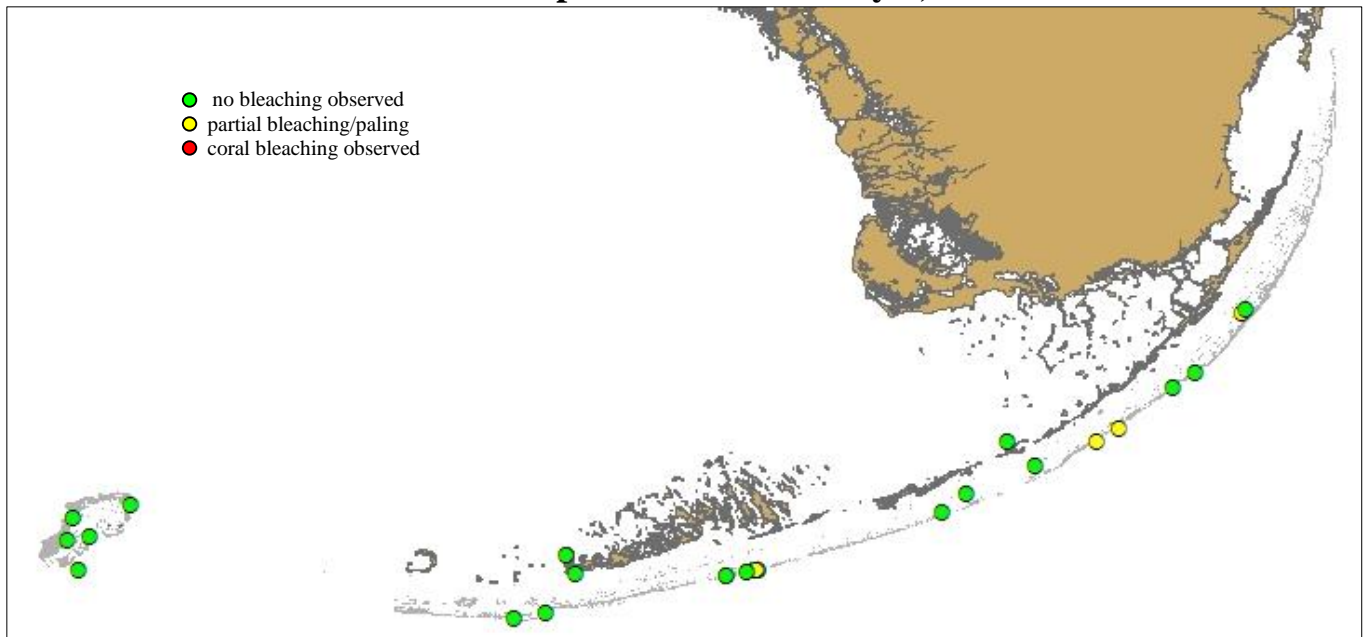


Figure 6. Overview of BleachWatch observer reports submitted from June 1-July 3, 2017

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



Cory Walter
 Mote Marine Laboratory
 24244 Overseas Highway
 Summerland Key, FL 33042
 (305) 745-2729 x301

<http://www.mote.org/bleachwatch>

FUNDING THANKS TO....

