



Mote Marine Laboratory / Florida Keys National Marine Sanctuary  
**Coral Bleaching Early Warning Network**  
**Current Conditions Report #20151012**



Updated October 12, 2015

**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 October 10, 2015 (experimental)**

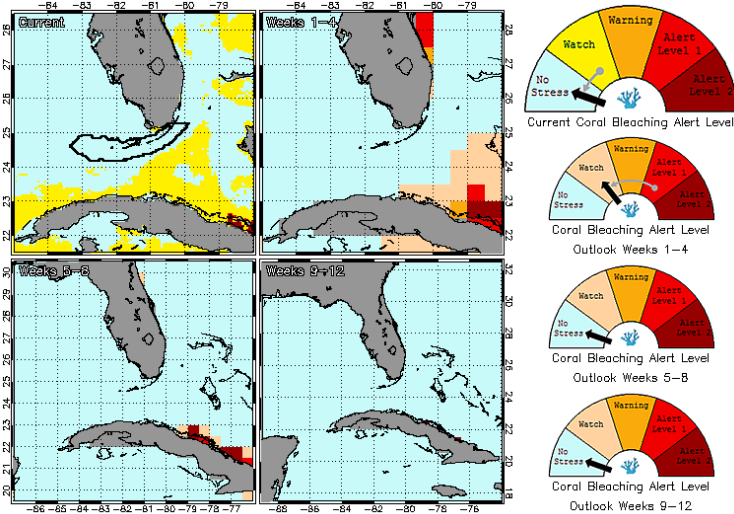


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through December 2015 (Updated October 10, 2015).  
[http://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](http://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

**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, most areas of the Florida Keys National Sanctuary (FKNMS) has been reduced to No Stress, indicating that although previous thermal stress exposure may still be adversely impacting corals, recovery may be underway (Fig. 1).

Recent remote sensing analysis by NOAA's CRW program indicates that the entire Florida Keys region continues to experience decreasing 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 temperatures are not significantly 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), confirms that the level of accumulated temperature stress has not increased for 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, confirms that sea temperatures have decreased to near 30°C or below (Fig.3), likely due in part to breezy conditions observed during most of the past 2 weeks (Fig 4) *In-situ* sea temperature data is currently only available at Molasses Reef and Fowey Rocks. Sombrero and Sand Key is not recording 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.

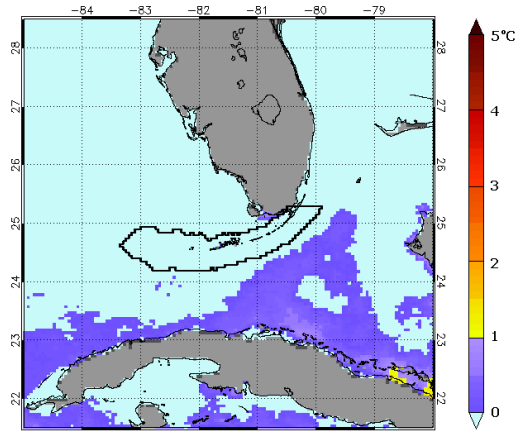


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida October 10, 2015.  
<http://coralreefwatch.noaa.gov/regions/florida.php>

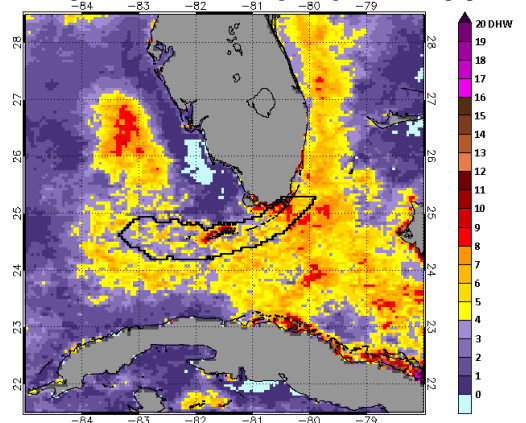


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida October 10, 2015.  
<http://coralreefwatch.noaa.gov/regions/florida.php>

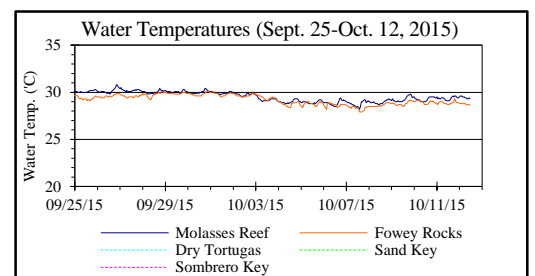


Figure 4. *in-situ* sea temperature from NOAA/ICON monitoring stations (Sept. 25-Oct. 12, 2015).

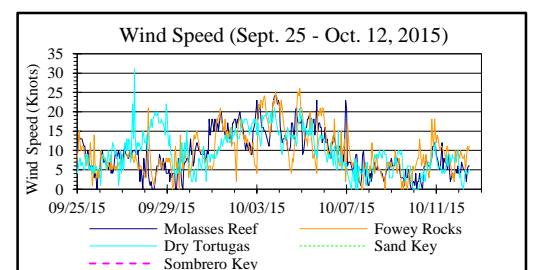


Figure 5. Wind speed data from NOAA/ICON monitoring stations (Sept. 25 - Oct. 12, 2015).



# Coral Bleaching Early Warning Network

## Current Conditions Report #20151012



### Current Coral Conditions

A total of 33 BleachWatch Observer reports were received during the last two weeks (Fig. 6), with all reports indicating isolated colonies exhibiting signs of paling and partial bleaching (Fig. 7&8)). The overall percentage of corals exhibiting signs of thermal stress at sites visited ranged from 11-50%.



Figure 7. Partially bleached *Orbicella faveolata* at a patch reef off the Lower Keys on 9/30/15.

Paling and partial bleaching observations consisted of nearly all species including Brain corals, Encrusting/Mound/Boulder corals, Flower corals, Branching/Pillar corals, Fleshy corals, and Leaf/Plate corals. Other observations included bleached *Palythoa spp.*, Fire Coral, and Gorgonians as well as several reports of Black Band and White Plague Disease affecting various corals throughout the Florida Key's Reefs.

Despite these widespread visual observations of coral bleaching, recent changes in environmental conditions make the onset of a significant and sustained mass bleaching event unlikely at this time.

However, additional field observations are needed to determine the range, duration, and severity of coral bleaching impacts throughout the remainder of the summer.



Figure 8. Partially bleached and pale *O. faveolata* at an inshore patch reef off Tavernier on 10/8/15.

### BleachWatch Reports for September 25 – October 12, 2015

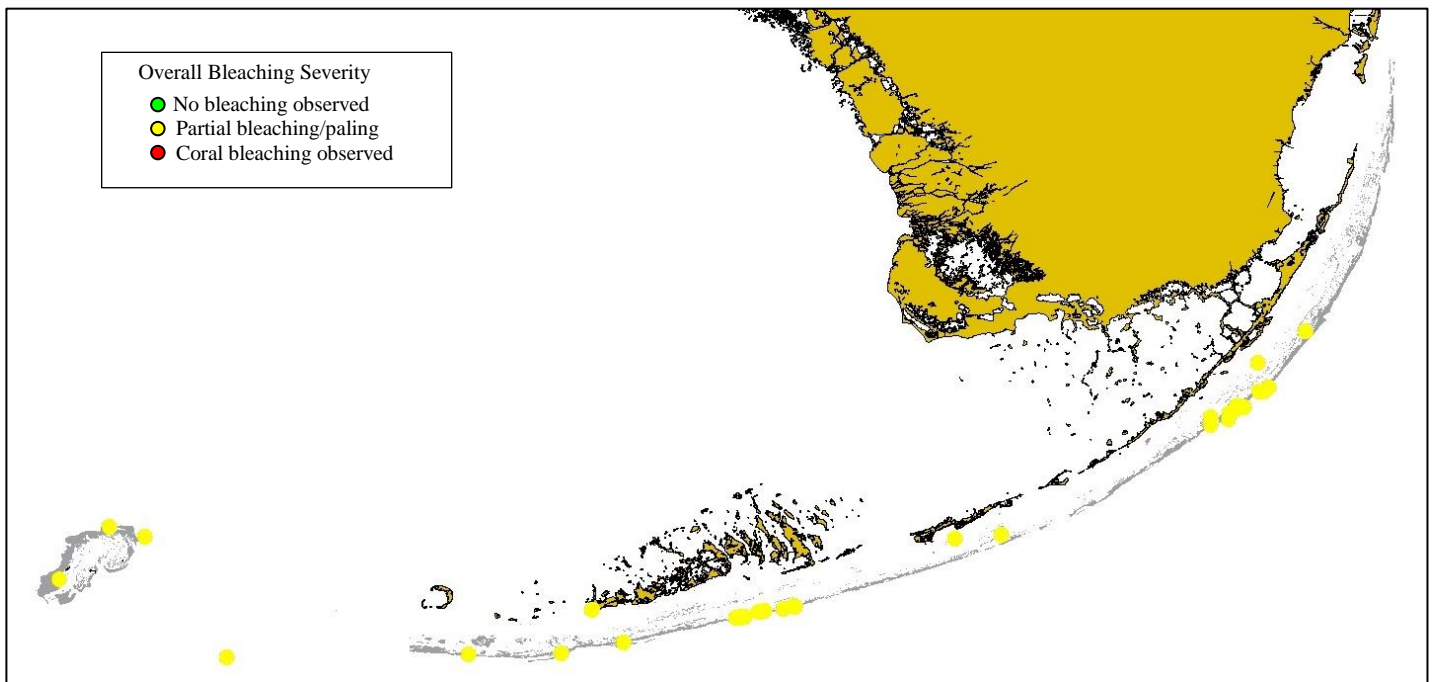


Figure 6. Overview of BleachWatch observer reports submitted from September 25 – October 12, 2015.

**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....**

