



Mote Marine Laboratory / Florida Keys National Marine Sanctuary  
**Coral Bleaching Early Warning Network**  
**Current Conditions Report #20200828**



Updated August 28, 2020

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

**NOAA Coral Reef Watch Current and 60% Probability Coral Bleaching Alert Outlook August 26, 2020 (experimental)**

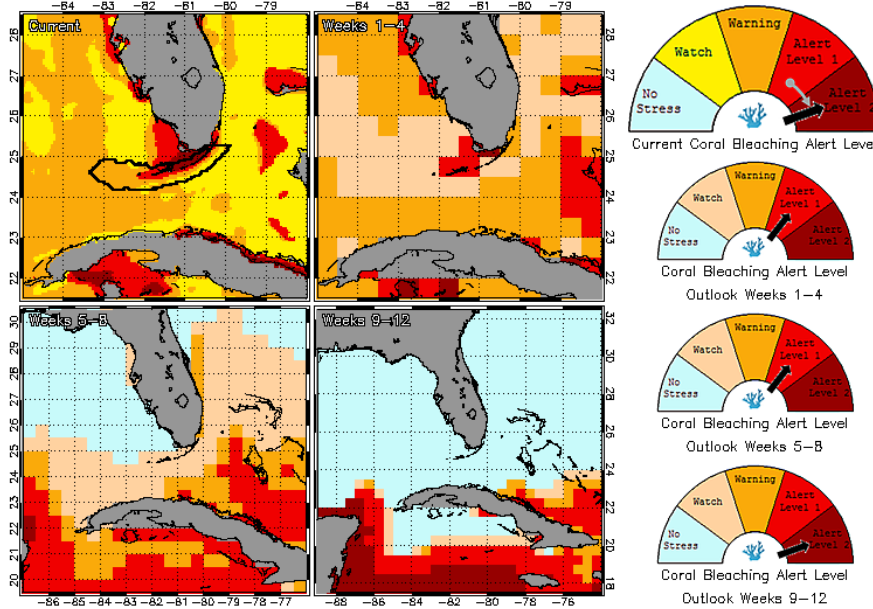


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through November 2020. Updated August 26, 2020. [http://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](http://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

**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 Marine Sanctuary are under "Bleaching Alert Level 1 or 2", which means severe bleaching and significant mortality is likely, and the potential exists for more bleaching warnings and alerts if sea temperatures continue to be elevated in the next few weeks (Fig. 1).

Recent remote sensing analysis by NOAA's CRW program indicates that all of the Florida Keys region is currently experiencing elevated 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 elevated temperatures for parts of 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 accumulated temperature stress currently evident in the Florida Keys region. NOAA's Integrated Coral Observing Network (ICON) and Pacific Marine Environmental Laboratory (PMEL) monitoring stations, which provide near real time *in-situ* sea temperature and wind data throughout the Florida Keys reefs as well as Mote Marine Laboratory (MML) *in-situ* temperature collected at Looe Key SPA, Newfound Harbor SPA, and Sand Key Nursery confirm that temperatures have been at or well above 30°C over the past few weeks (Fig.4), likely due in part to light wind conditions observed during the same period (Fig. 5) with an exception of high winds due to Hurricane Laura. 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.

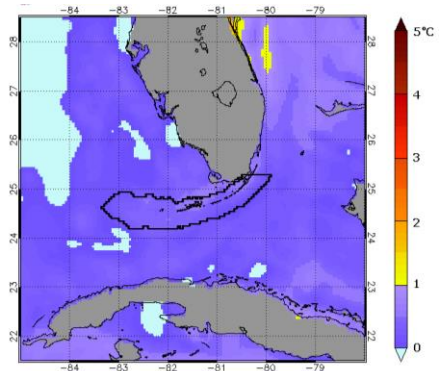


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida August 26, 2020. [https://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](https://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

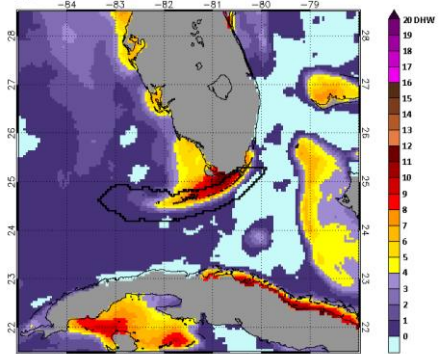


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida August 26, 2020. [https://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](https://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

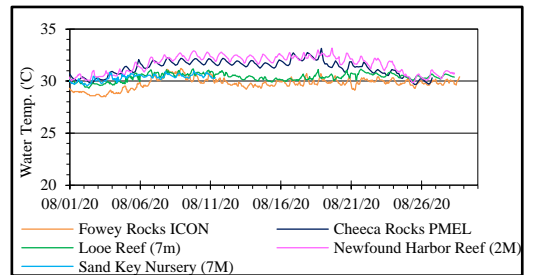


Figure 4. *in-situ* sea temperature from NOAA/ICON, MML, PMEL monitoring stations (August 1-28, 2020).

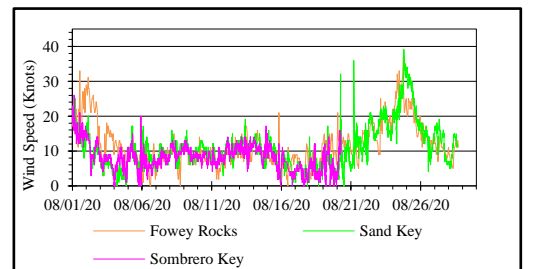


Figure 5. Wind speed data from NOAA/ICON monitoring stations (August 1-28, 2020).



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**Current Coral Conditions**

A total of 62 BleachWatch Observer reports were received during the last 2 weeks of August (Fig. 6), with 21 reports indicating isolated colonies exhibiting signs of paling (Fig. 7) or bleaching (Fig. 8). The remaining 41 reports indicated that no significant signs of coral bleaching were observed. At those sites where paling/partial bleaching was noted, the overall percentage of corals exhibiting signs of thermal stress was mostly 1-30%, however several inshore reefs noted over 75% of corals affected and many of the corals were fully bleached (Fig. 8). The majority of paling/partial bleaching observations consisted of isolated colonies of Encrusting/Mound/Boulder corals (*Siderastrea spp.*, *Orbicella spp.* and *Dichocoenia stokesi*), Leaf/Plate/Sheet (*Agaricia spp.*) and Brain corals. Other observations included paling of *Palythoa spp.*, and Fire Coral as well as abundant reports of coral disease.



Figure 7. Paling *Colpophyllia natans* at a mid-channel reef off Key West (8/19/2020).

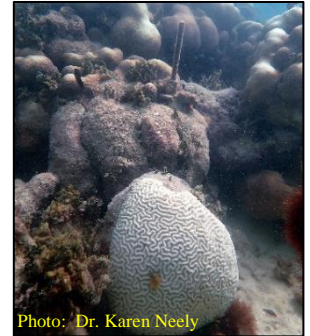


Figure 8. Bleached *Pseudodiploria strigosa* at an inshore patch reef off Sugarloaf Key (8/19/2020).

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 be favorable.

**BleachWatch Reports for August 13-27, 2020**

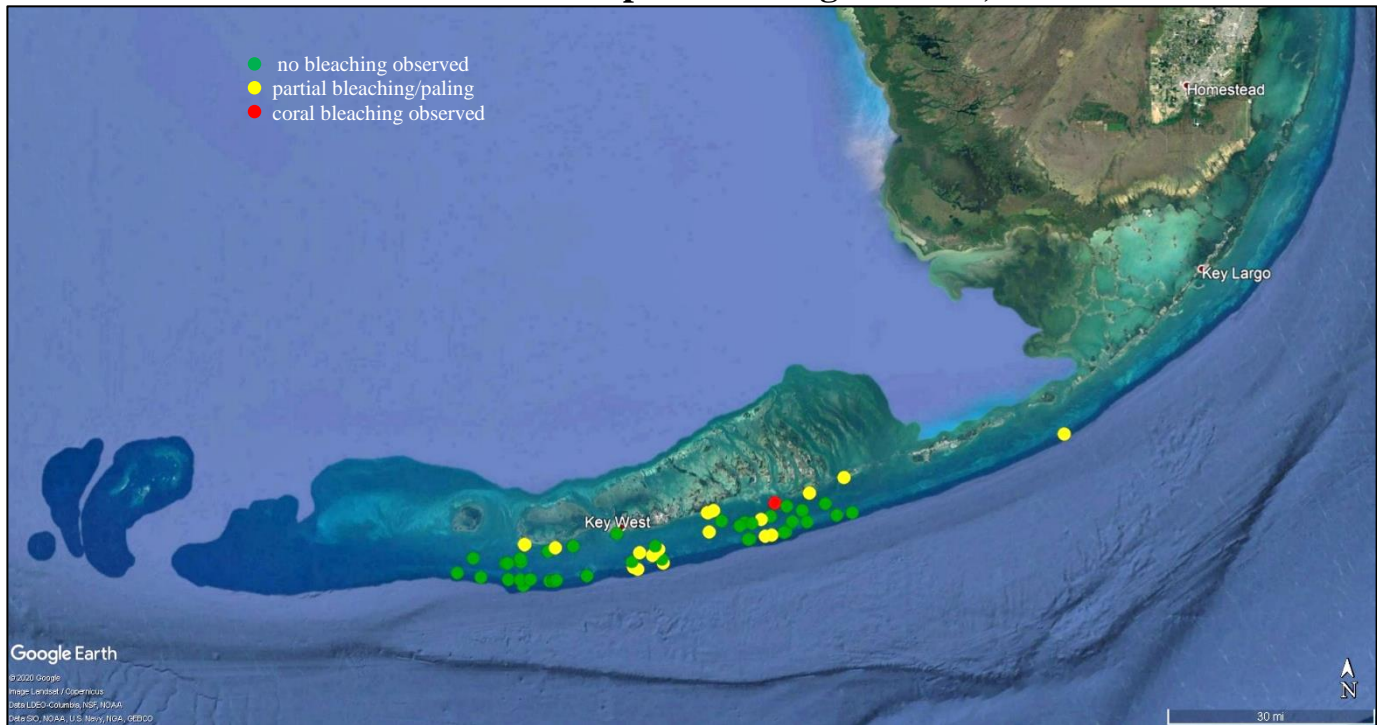


Figure 6. Overview of BleachWatch observer reports submitted from August 13-27, 2020



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

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**FUNDING THANKS TO....**

