



Updated July 17, 2020

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

### NOAA Coral Reef Watch Current and 60% Probability Coral Bleaching Alert Outlook July 15, 2020 (experimental)

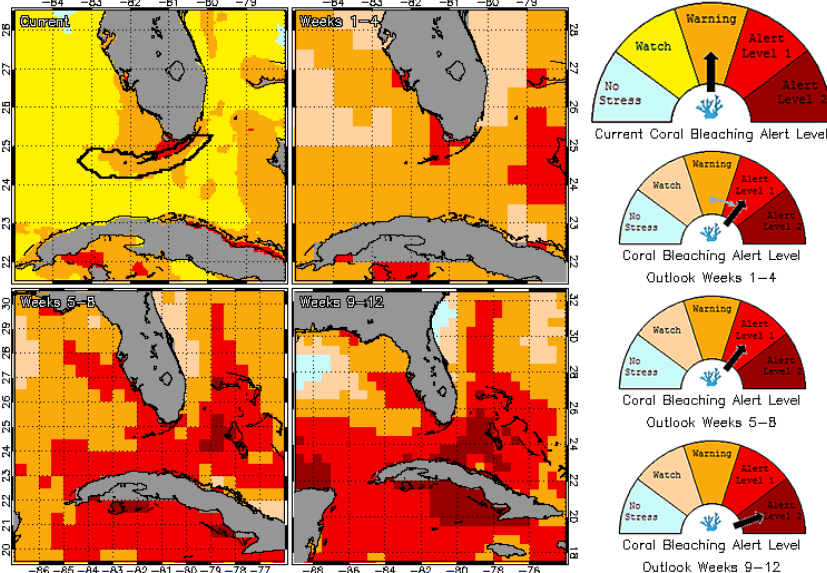


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through October 2020. Updated July 15, 2020. [http://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](http://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

### 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 a bleaching Warning, which means bleaching is likely and the potential exists 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 all of the Florida Keys region is currently experiencing 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 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 accumulating 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 along the outer reef tract throughout the Florida Keys 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 steadily increasing over the past two weeks to 30°C or well above (Fig.4), likely due in part to lighter wind conditions observed during the majority of this time (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.

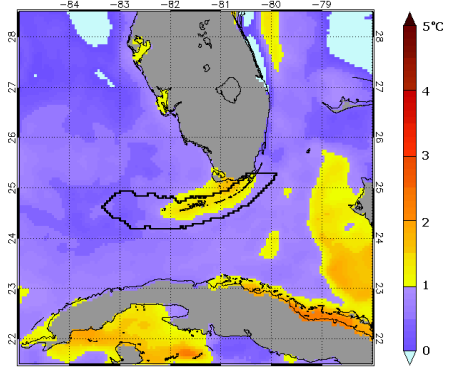


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida July 15, 2020. [https://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](https://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

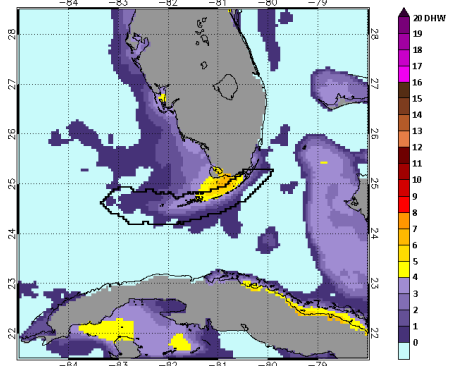


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida July 15, 2020. [https://coralreefwatch.noaa.gov/vs/gauges/florida\\_keys.php](https://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php)

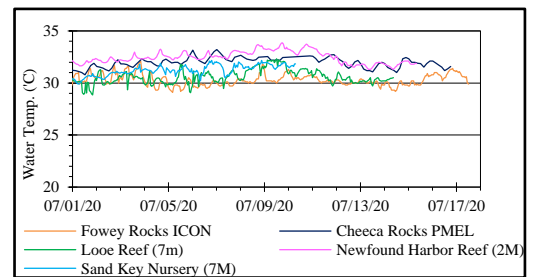


Figure 4. *in-situ* sea temperature from NOAA/ICON, MML, PMEL monitoring stations (July 1-17, 2020).

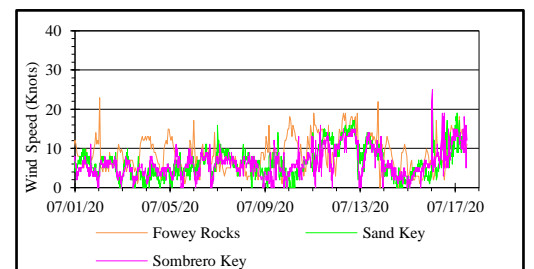


Figure 5. Wind speed data from NOAA/ICON monitoring stations (July 1-17, 2020).



Mote Marine Laboratory / Florida Keys National Marine Sanctuary  
**Coral Bleaching Early Warning Network**  
**Current Conditions Report #20200717**



**Current Coral Conditions**

A total of 31 BleachWatch Observer reports were received during the first 2 weeks of July (Fig. 6), with 8 reports indicating isolated colonies exhibiting signs of paling or partial bleaching (Fig. 7). The remaining

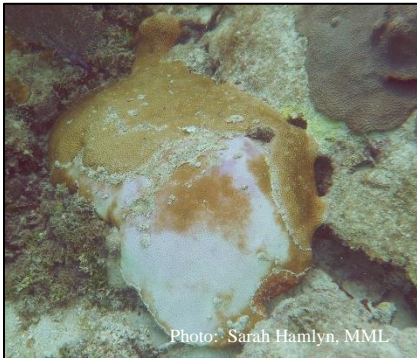


Figure 7. Partially bleached *Siderastrea siderea* at Newfound Harbor on 7/7/2020.

23 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 only 1-10%, and the majority of paling observations consisted of isolated colonies of Encrusting/Mound/Boulder corals; *Siderastrea siderea* and *Siderastrea radians*. Other observations included paling of *Palythoa spp.*, and Fire Coral as well as abundant reports of coral disease (Fig. 8).



Figure 8. *Pseudodiploria strigosa* with Stony Coral Tissue Loss Disease at Ft. Zachary Taylor 7/1/2020

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 July 1-16, 2020**



Figure 6. Overview of BleachWatch observer reports submitted from July 1-16, 2020

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



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**FUNDING THANKS TO....**

