



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20200602



Updated June 2, 2020

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 May 31, 2020 (experimental)

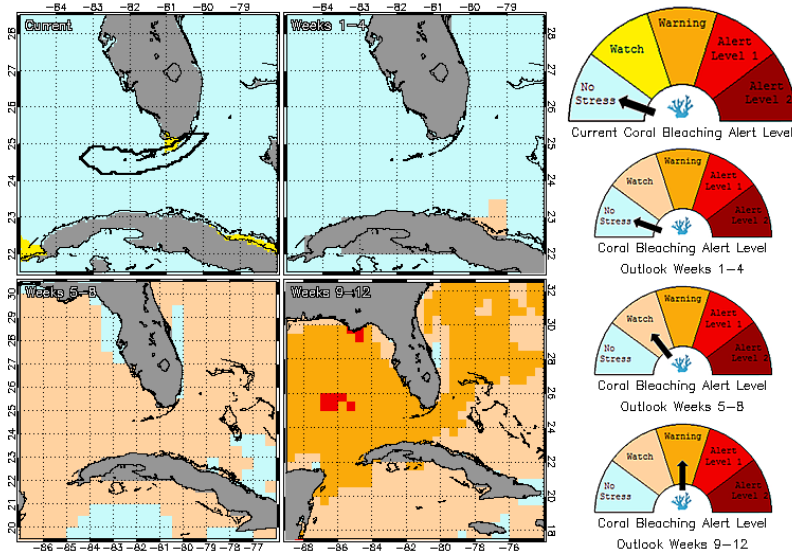


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through August 2020. Updated May 31, 2020.
http://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php

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 no bleaching threat for the Florida Keys National Marine Sanctuary. However, potential bleaching watches, warnings and alerts are possible if sea temperatures continue to increase in the next few months (Fig. 1).

Recent remote sensing analysis by NOAA's CRW program indicates that the Florida Keys region is not 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 sea surface temperatures are currently not elevated above normal in 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 no 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/or wind data throughout the Florida Keys reefs, as well as Mote Marine Laboratory (MML) *in-situ* temperature data confirm that temperatures have increased over the past two weeks but still remain below 30°C (Fig.4), likely due in part to low 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.

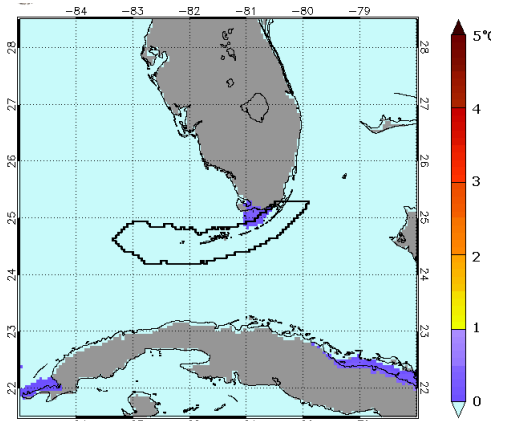


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida May 31, 2020.
<http://coralreefwatch.noaa.gov/regions/florida.php>

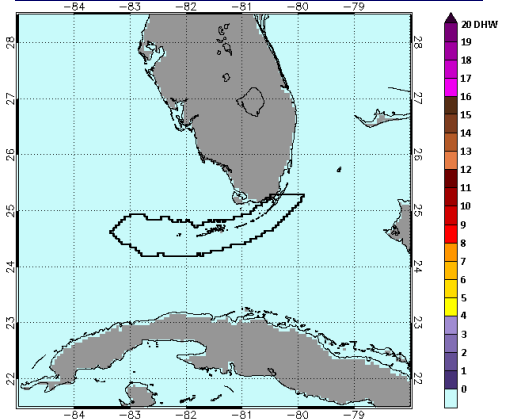


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida May 31, 2020.
<http://coralreefwatch.noaa.gov/regions/florida.php>

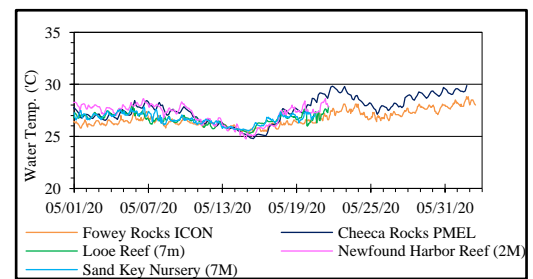


Figure 4. *in-situ* sea temperature from NOAA/ICON, PMEL, and MML monitoring stations (May 1-31, 2020).

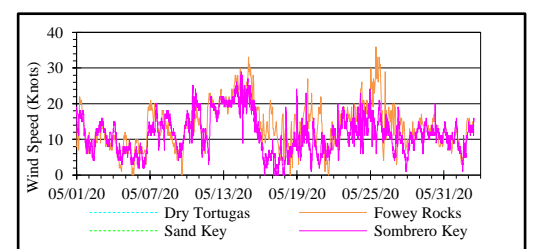


Figure 5. Wind speed data from NOAA/ICON monitoring stations (May 1-31, 2020).



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Current Coral Conditions

BleachWatch observers are encouraged to start submitting your observations of **coral bleaching and disease** (Fig. 6) after every visit to the reef, **even if NO bleaching was observed** (Fig. 7). Frequent coral conditions observations from throughout the Florida Keys are needed for the remainder of the summer season. Please also report ANY coral disease at your sites. To submit an observation on coral condition, or for more information on the Florida Keys BleachWatch program, please go to www.mote.org/bleachwatch

Due to Covid-19 and the need for social distancing, there are currently no training events planned for the near future. Efforts are underway to provide an online training module which can also be used for a refresher for the trained observers. The online data entry has been simplified and updated on the webpage. Feel free to try it before your first trip to the reef, just note “trial” in the notes section. For questions or information about the BleachWatch program please contact the number below or email bleachwatch@mote.org.



Figure 6. *Diploria labyrinthiformis* with tissue loss disease at Rock Key, 5/19/20



Photo: Donna Blaszcak

Figure 7. Healthy reef site off Marquesas Keys on 5/16/20.

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

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