



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20220601



Updated June 1, 2022

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 30, 2022 (experimental)

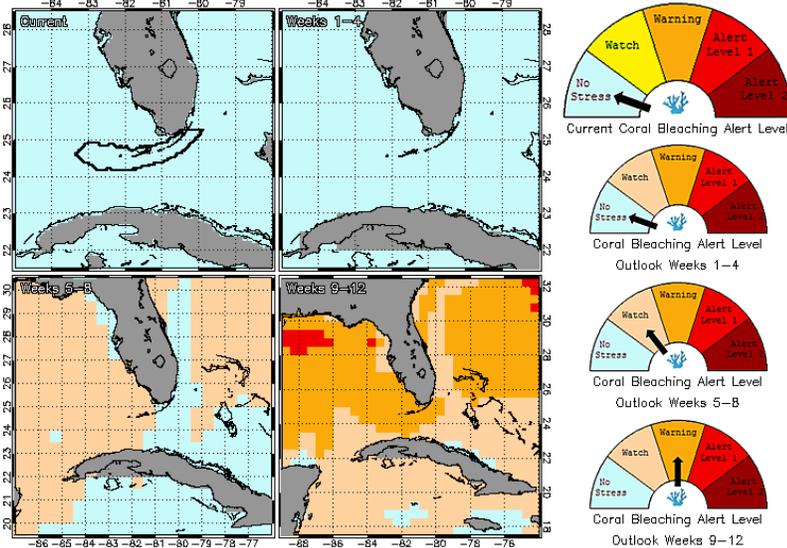


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through August 2022. Updated May 30, 2022.
http://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php

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), which provides 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 month to near or slightly above 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.

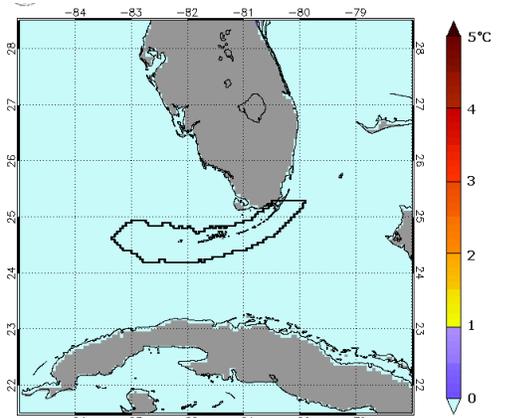


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida May 30, 2022.
<http://coralreefwatch.noaa.gov/regions/florida.php>

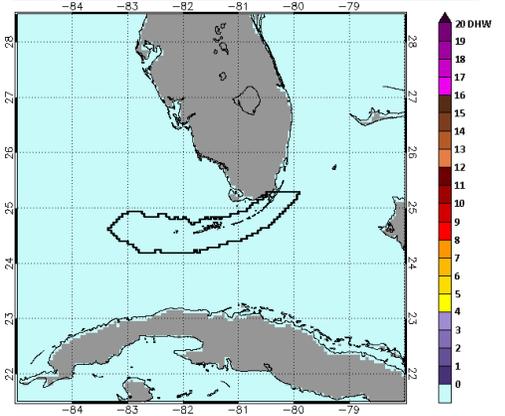


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida May 30, 2022.
<http://coralreefwatch.noaa.gov/regions/florida.php>

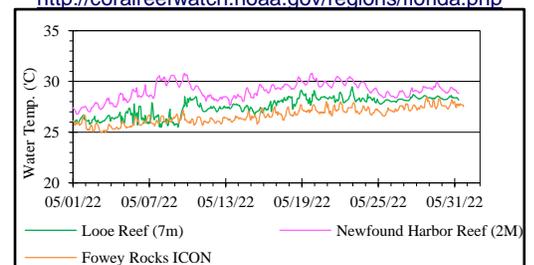


Figure 4. *in-situ* sea temperature from MML monitoring stations (May 1-31, 2022).

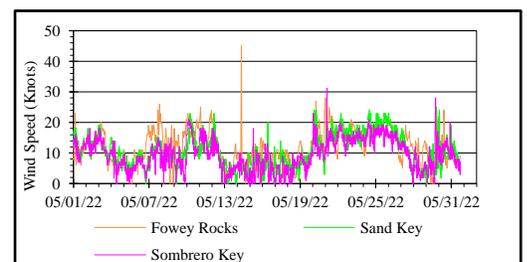


Figure 5. Wind speed data from NOAA/ICON monitoring stations (May 1-31, 2022).



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Current Coral Conditions

BleachWatch observers are encouraged to start submitting your observations of **coral bleaching/no bleaching and disease** (Fig. 6) after every visit to the reef, **even if NO bleaching was observed**. Frequent coral condition observations from throughout the Florida Keys are needed for the remainder of the summer season. To submit an observation on coral condition, or for more information on the Florida Keys BleachWatch program, please go to www.mote.org/bleachwatch. Please also keep a look out for long- spined urchins (Fig. 7) *Diadema antillarum*, dead or alive. There has been reported die-offs in other areas of the Caribbean and reports are needed in the Florida Keys. Please click [here](#) for more information.

Plans are in the works to conduct in-person training if you know of anyone interested in becoming an observer. Until then, there is an online training module at mote.org/bleachwatch 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 cwalter@mote.org.



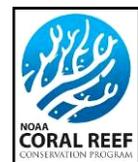
Figure 6. *Dendrogyra cylindrus* with a tissue loss disease at Looe Key SPA, 5/27/22.



Figure 7. Healthy long-spined urchin *Diadema antillarum* at Wonderland Reef on 6/1/22.



Funding Provided By:



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

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