



Coral Bleaching Early Warning Network

Current Conditions Report #20221031

Updated October 31, 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 October 29, 2022 (experimental)

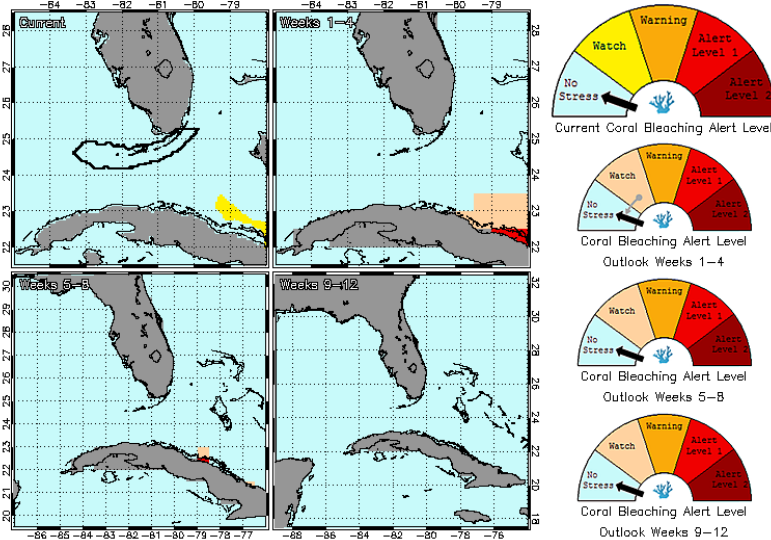


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through January, 2022 (Updated October 29, 2022). coralreefwatch.noaa.gov/vs/gauges/florida_keys.php

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, areas of the Florida Keys National Marine Sanctuary (FKNMS) has been reduced to "No Stress", indicating there is no longer a threat of mass bleaching this season for the Florida Keys.

Recent remote sensing analysis by NOAA's CRW program indicates that all the 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 currently not 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 is decreasing for the Florida Keys region. NOAA's Integrated Coral Observing Network (ICON), 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 well below 30°C over the past month (Fig.4), likely due in part to elevated wind conditions observed during the same period (Fig. 5). Because the CRW's program continues to maintain a coral bleaching alert status of "No Stress" indicating that coral bleaching is not likely, and due to the current environmental conditions, this will be the final current conditions report for the 2022 Florida Keys BleachWatch season.

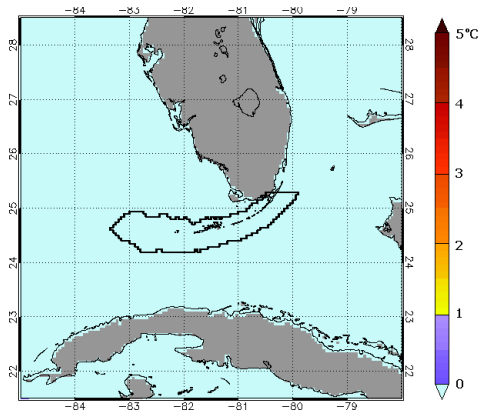


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida October 29, 2022. coralreefwatch.noaa.gov/vs/gauges/florida_keys.php

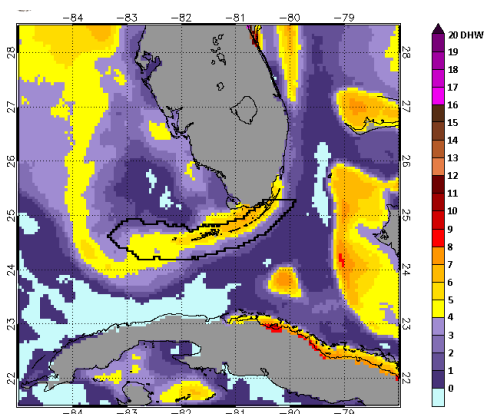


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida October 29, 2022. coralreefwatch.noaa.gov/vs/gauges/florida_keys.php

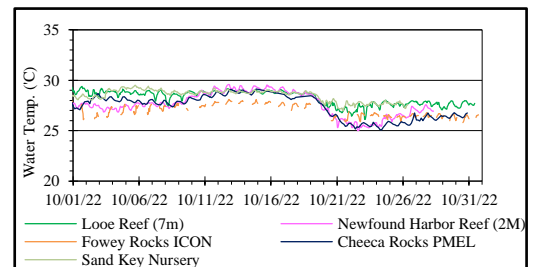


Figure 4. *in-situ* sea temperature from NOAA/ICON/Mote monitoring stations (October 1-31, 2022).

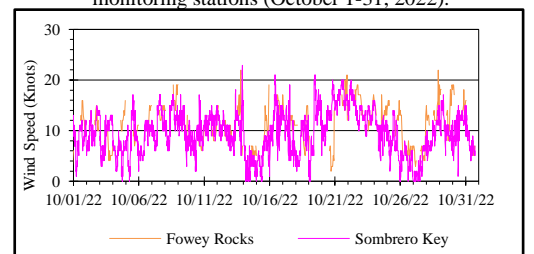


Figure 5. Wind speed data from NOAA/ICON monitoring stations (October 1-31, 2022).



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Current Coral Conditions

A total of 30 BleachWatch Observer reports were received during the last month (Fig. 6), with all reports indicating isolated colonies exhibiting signs of paling or partial bleaching. The affected corals were limited mostly to Mound/Boulder, Plate/Sheet and Brain corals. At the sites where paling/partial bleaching was noted (Fig.6), the overall percentage of corals exhibiting signs of thermal stress was 1-30%.

The 2022 Florida Keys BleachWatch season has officially come to an end with a total of 227 reports submitted by BleachWatch observers and researchers (Fig. 7). Observer reports verified that minor signs of coral bleaching were observed in the Florida Keys region in 2022, with most reports noting only paling or partial bleaching (Fig. 8) and with up to 50% of corals affected at most of those sites. Based on current environmental conditions significant coral bleaching in the Florida Keys National Marine Sanctuary and surrounding waters seems highly unlikely at this time. As a result, this will be the final current conditions report for 2022.

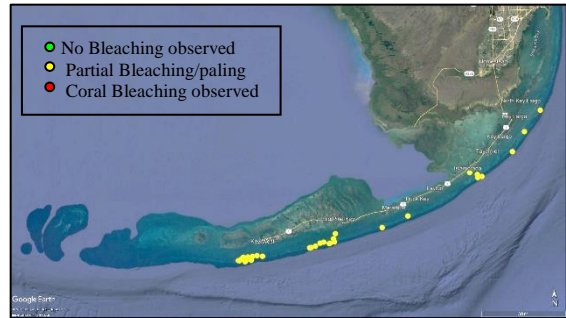


Figure 6. Overview of reports submitted October 1-30, 2022

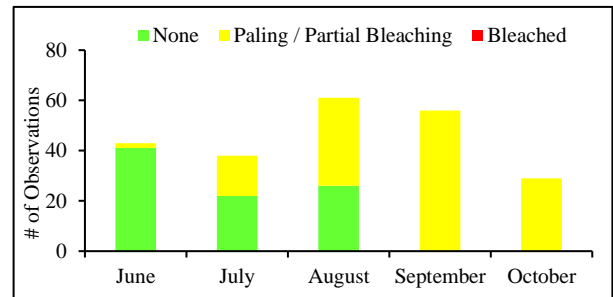


Figure 8. Bleaching severity by month for June-October 2022

THANK YOU BLEACHWATCH OBSERVERS!!!

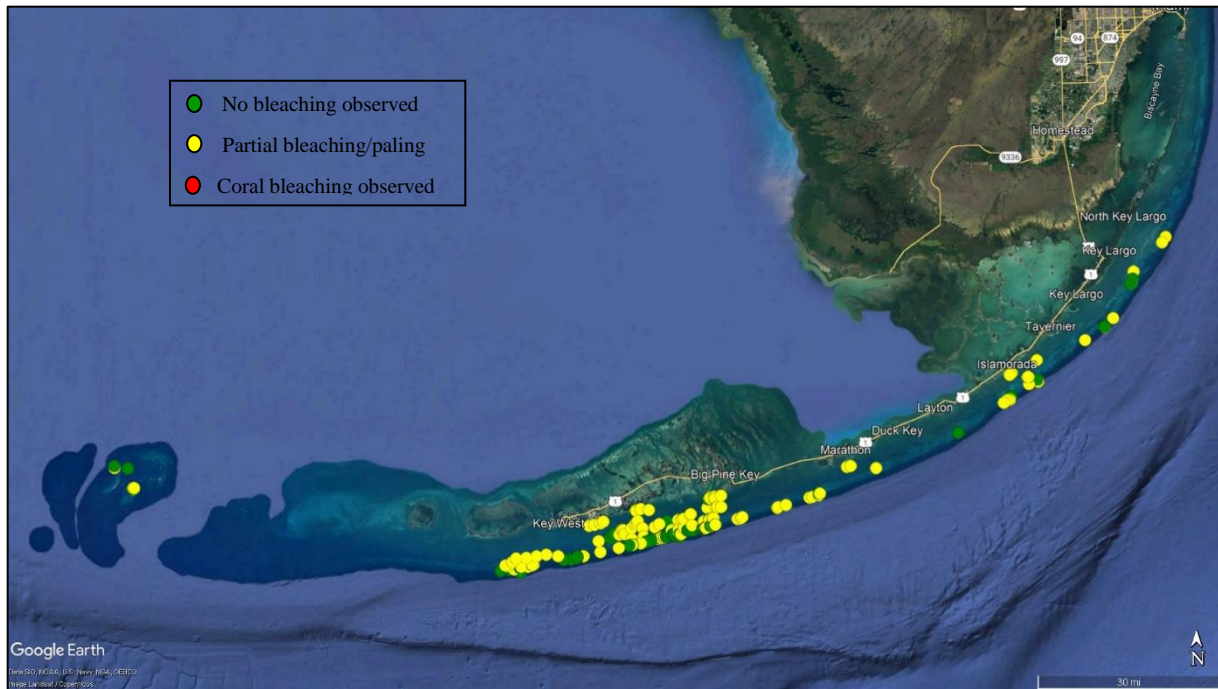


Figure 7. Summary map of all Florida Keys BleachWatch Observer reports submitted during the 2022 coral bleaching season.

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

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FUNDING THANKS TO....

