



# Mote Marine Laboratory / Florida Keys National Marine Sanctuary

## Coral Bleaching Early Warning Network

### Current Conditions Report #20240805



Updated August 5, 2024

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

#### NOAA Coral Reef Watch Current and 60% Probability Coral Bleaching Alert Outlook August 3, 2024 (experimental)

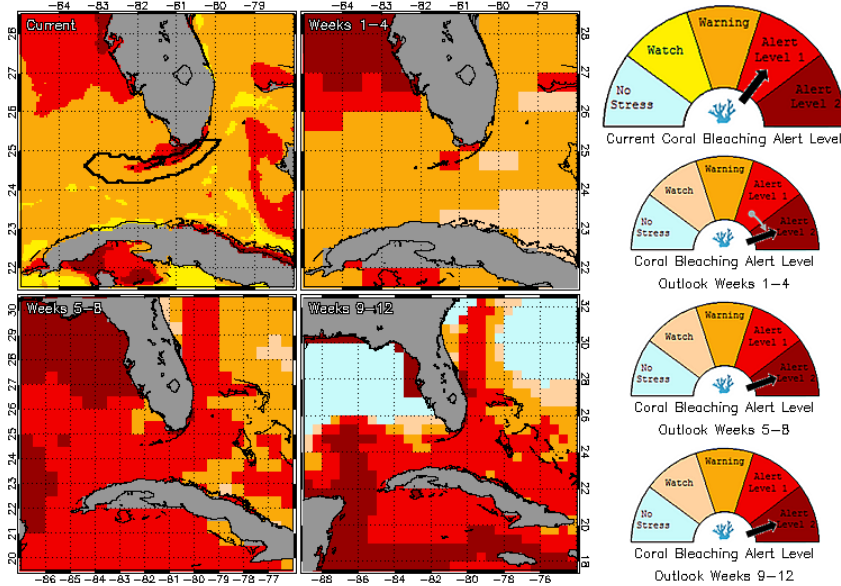


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through October 2024. Updated August 3, 2023.

[https://coralreefwatch.noaa.gov/product/vs/gauges/florida\\_keys.php](https://coralreefwatch.noaa.gov/product/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, some areas of the Florida Keys National Marine Sanctuary are under a "Bleaching Alert Level 1", which means there is a reef-wide risk of bleaching and potential 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 most 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 sea surface temperatures are currently 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 accumulating temperature stress currently evident in the Florida Keys region.

NOAA's Integrated Coral Observing Network (ICON), which provides near real time *in-situ* wind data at Sombrero Reef, as well as Mote Marine Laboratory (MML), Florida International University (FIU), and Pacific Marine Environmental Laboratory (PMEL) *in-situ* temperature data confirm that temperatures have been steadily increasing over the past four weeks, with several areas at 30°C or well above (Fig.4), likely due in part to lighter wind conditions during most of this period (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.

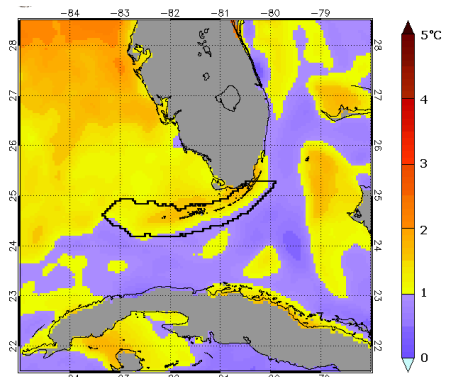


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida August 3, 2024.

[NOAA Coral Reef Watch Website](https://coralreefwatch.noaa.gov)

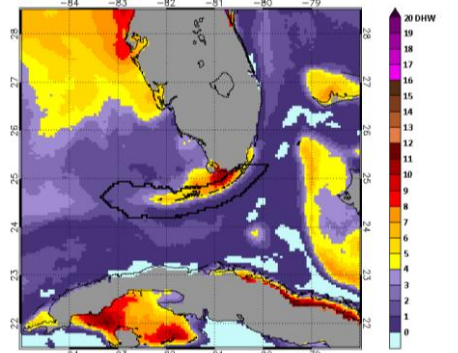


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida August 3, 2024.

[NOAA Coral Reef Watch Website](https://coralreefwatch.noaa.gov)

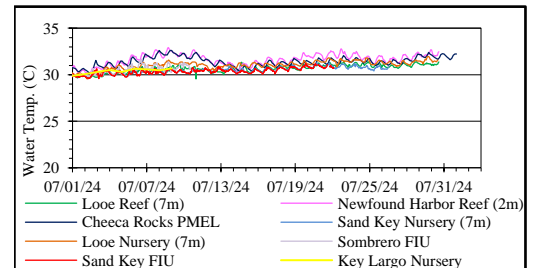


Figure 4. *in-situ* sea temperature from NOAA/ICON monitoring stations (July 1- August 2, 2024).

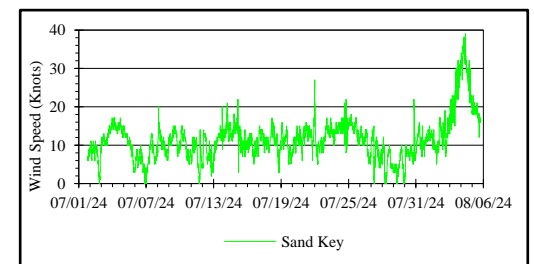


Figure 5. Wind speed data from NOAA/ICON monitoring stations (July 1-August 5, 2024).



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**Current Coral Conditions**

A total of 24 BleachWatch Observer reports were received during the month of July (Fig. 6), with 18 reports indicating isolated colonies exhibiting signs of paling or partial bleaching (Fig. 7 & 8). The remaining 5 reports indicated that no significant signs of coral bleaching were observed. In areas where paling/partial bleaching was identified, the overall percentage of corals exhibiting signs of thermal stress was 1-50%. The affected corals mainly included Encrusting/Mound/Boulder corals, Flower corals, Branching/Pillar corals, and Brain corals. Other observations included paling of *Palythoa* spp. and Fire Coral, and several reports of coral disease (Fig. 8).

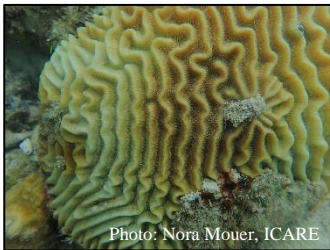


Figure 7. Paling *Pseudodiploria strigosa* at off Islamorada on 7/19/2024.

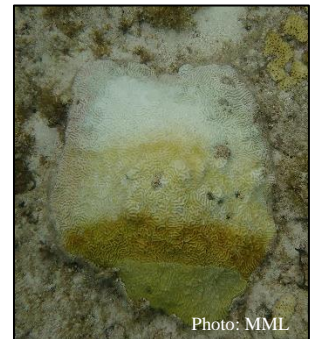
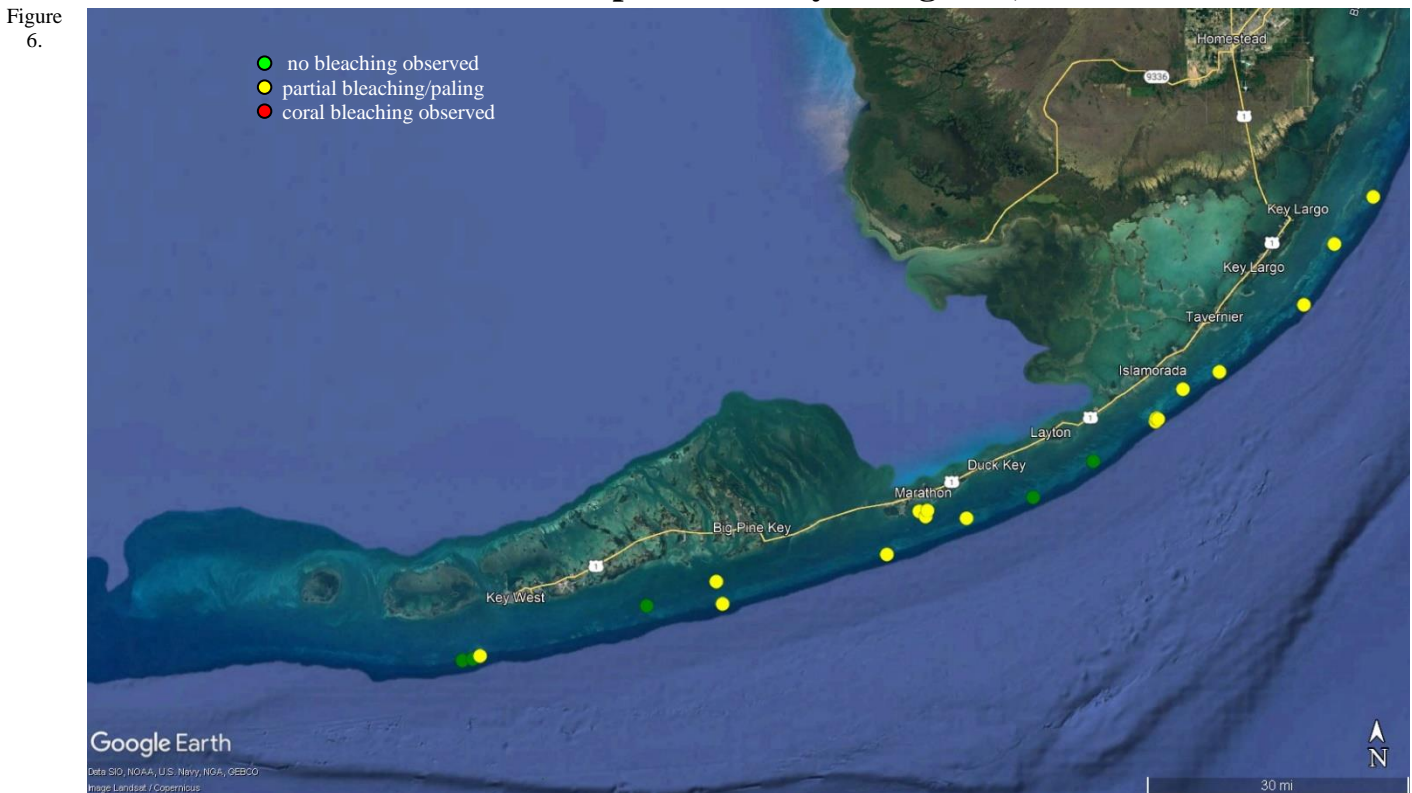


Figure 8. *Pseudodiploria clivosa* with SCTLD at EDR on 8/1/24.

Continued field observations are needed as widespread coral bleaching could potentially develop if environmental conditions continue to be favorable. Please remember to report even if there is no bleaching at your site. Report at [www.mote.org/bleachwatch](http://www.mote.org/bleachwatch).

**BleachWatch Reports for July 1-August 3, 2024**



Overview of BleachWatch observer reports submitted from July 1-August 3, 2024

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

Mote Marine Laboratory  
 bleachwatch@mote.org  
<http://www.mote.org/bleachwatch>



**FUNDING THANKS TO....**

