Mote Marine Laboratory / Florida Keys National Marine Sanctuary

Coral Bleaching Early Warning Network

Current Conditions Report #20240701

Updated July 1, 2024

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 June 29, 2024 (experimental)

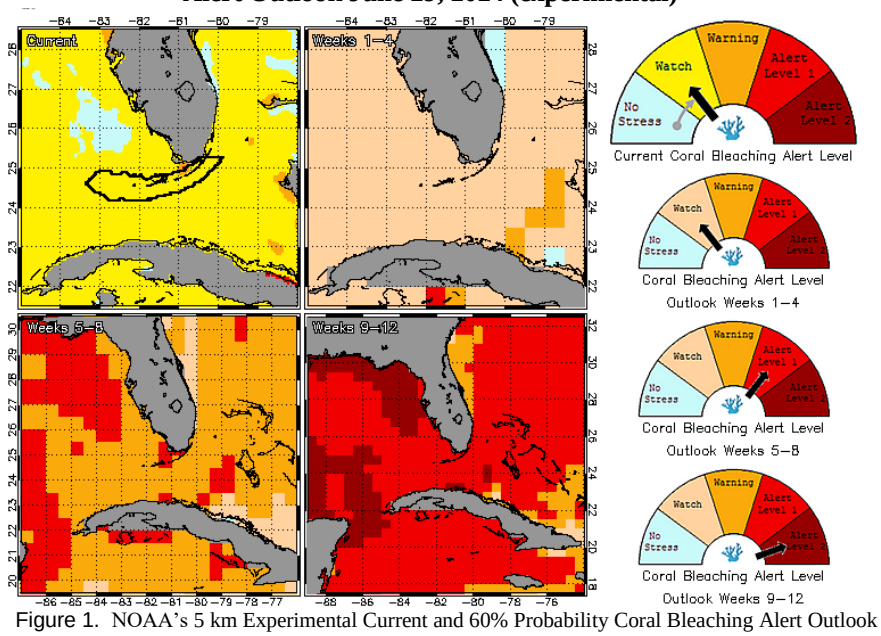

Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through September 2024. Updated June 29, 2024.
https://coralreefwatch.noaa.gov/product/vs/gauges/florida_keys.php

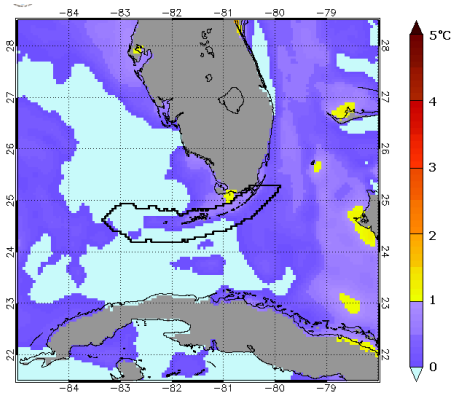

Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida June 29, 2024.
NOAA Coral Reef Watch Website

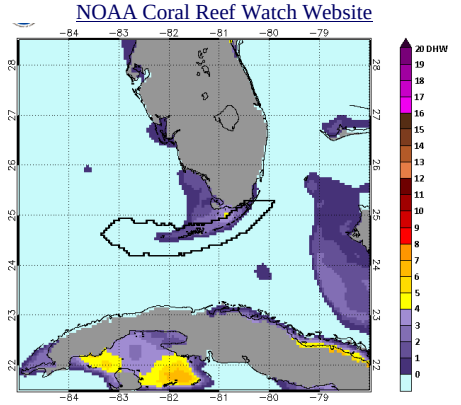

Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida June 29, 2024.
NOAA Coral Reef Watch Website

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, the Florida Keys National Marine Sanctuary are under a "Bleaching Watch", with the 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 minimal 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 Sand Key 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 at or below30°C (Fig.4) for several weeks over the past month, likely due in part to elevated wind conditions during 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.

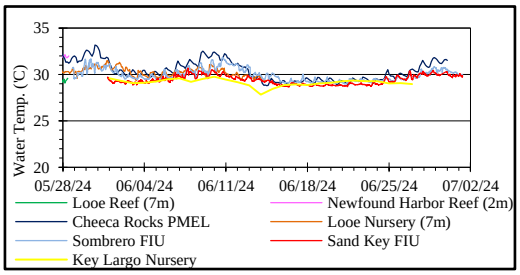

Figure 4. *in-situ* sea temperature from NOAA/ICON monitoring stations (June 1-30, 2024).

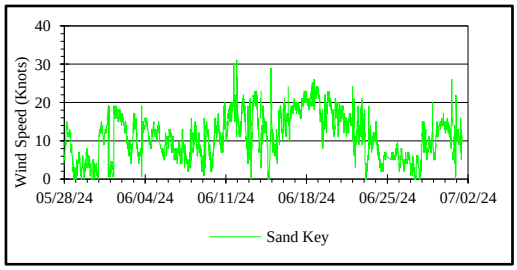

Figure 5. Wind speed data from NOAA/ICON monitoring stations (June 1-30, 2024).

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Current Coral Conditions

A total of 32 BleachWatch Observer reports were received during the month of June (Fig. 6), with 16 reports indicating isolated colonies exhibiting signs of paling or partial bleaching (Fig. 7). The remaining 16 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 1-30% and the majority of paling/partial bleaching observations consisted of isolated colonies of Encrusting/Mound/Boulder corals (*Siderastrea spp*.), Flowering (*Eusmilia fastigiana*) (Fig. 7) and Brain corals. Other observations included paling of *Palythoa spp.* and Fire Coral, several reports of coral disease, as well as many observations of sponge spawning (Fig. 8).

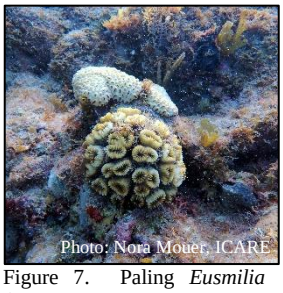

Figure 7. Paling *Eusmilia fastigiana* at Davey Crocker Reef off Islamorada on 6/16/2024.

Figure 8. Sponge spawning at Western Dry Rocks on 6/26/2024.

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.

BleachWatch Reports for June 1-30, 2024

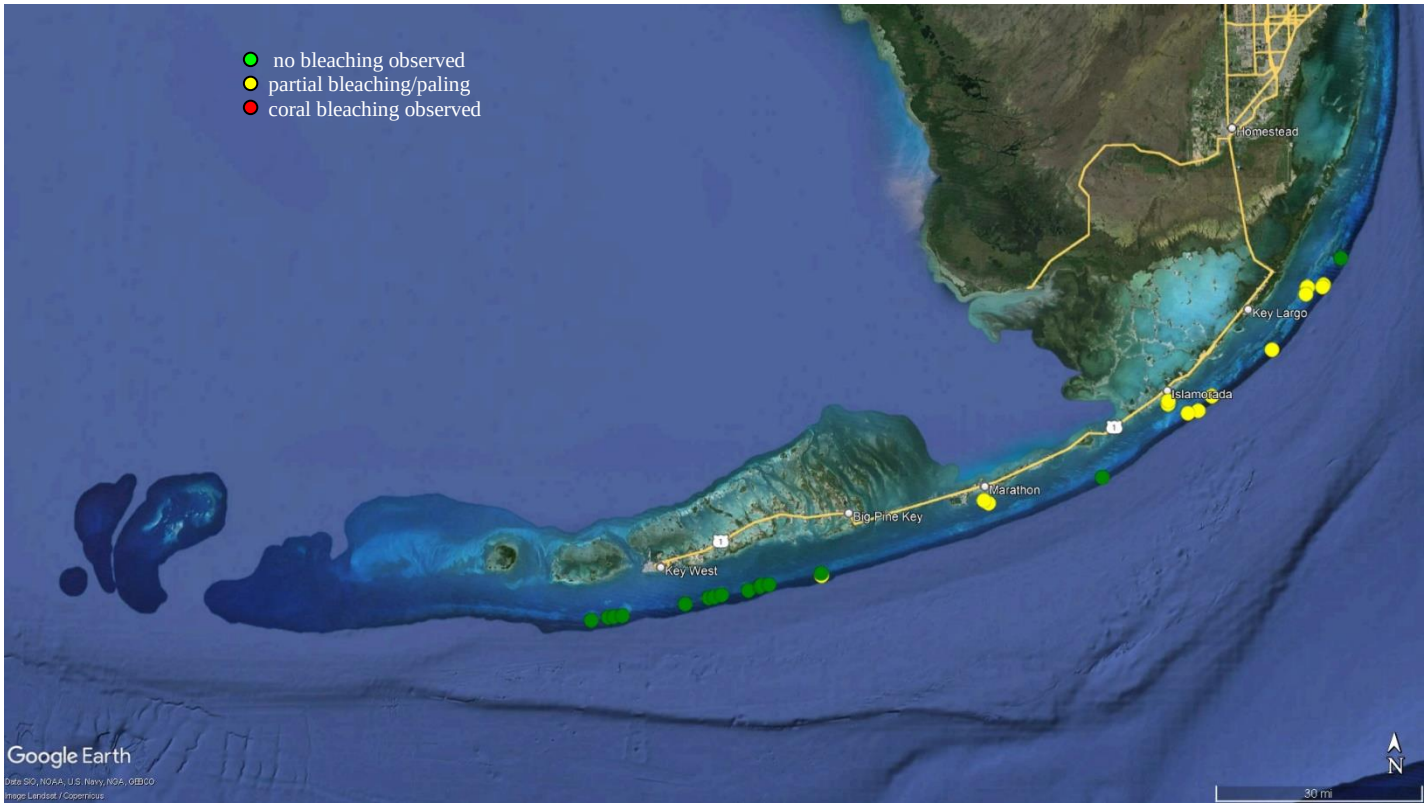

Figure 6. Overview of BleachWatch observer reports submitted from June 1-30, 2024

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

BLEACHWATCH MOTE MARINE LABORATORY

Mote Marine Laboratory
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http://www.mote.org/bleachwatch

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FLORIDA 4 REEF Protect Our Reefs

NOAA CORAL REEF CONSERVATION PROGRAM