



Updated September 17, 2024

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

NOAA Coral Reef Watch Current and 60% Probability Coral Bleaching Alert Outlook September 17, 2024 (experimental)

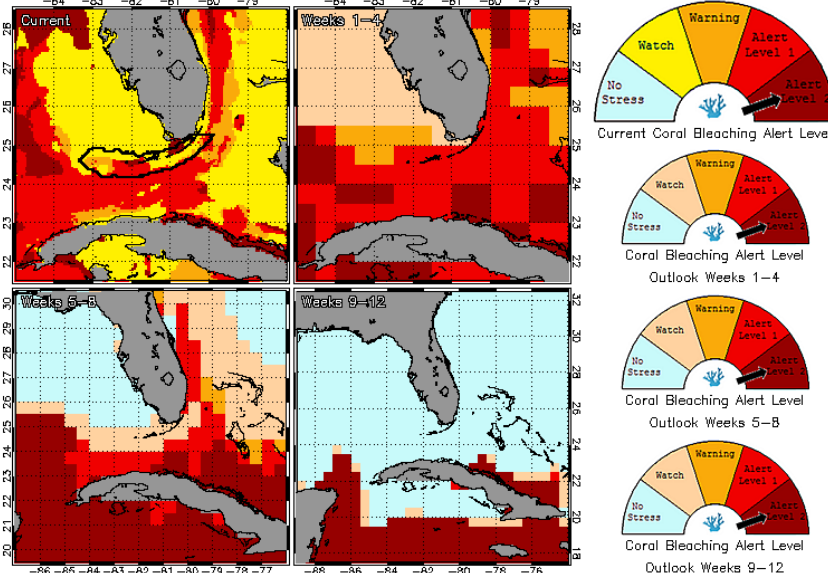


Figure 1. NOAA's 5 km Experimental Current and 60% Probability Coral Bleaching Alert Outlook Areas through Mid-December 2024. Updated September 15, 2024. https://coralreefwatch.noaa.gov/product/vs/gauges/florida_keys.php

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, most areas of the Florida Keys National Marine Sanctuary are under a "Bleaching Alert Level 1 and 2", which means there is a reef-wide risk of bleaching and potential for mortality if more bleaching Alerts are issued in the next few weeks (Fig. 1).

Recent remote sensing analysis by NOAA's CRW program indicates that all of the Florida Keys region is currently experiencing elevated 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 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 is 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, as well as Mote Marine Laboratory (MML), and Pacific Marine Environmental Laboratory (PMEL) *in-situ* temperature data confirm that temperatures have had a slight increase over the past week to over 30°C (Fig. 4), likely due in part to minimal wind speeds (Fig. 5). Mote Marine Laboratory will continue to monitor the NOAA HotSpot maps, DHW maps, and sea temperature data from monitoring stations on a weekly basis for the remainder of the bleaching season.

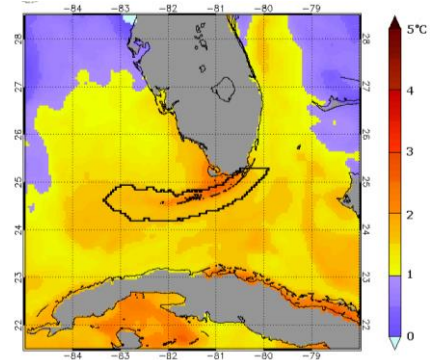


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for Florida September 15, 2024. [NOAA Coral Reef Watch Website](https://coralreefwatch.noaa.gov)

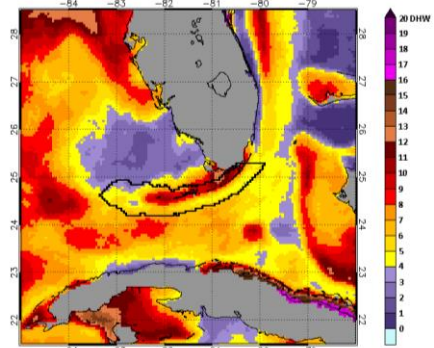


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for Florida September 15, 2024. [NOAA Coral Reef Watch Website](https://coralreefwatch.noaa.gov)

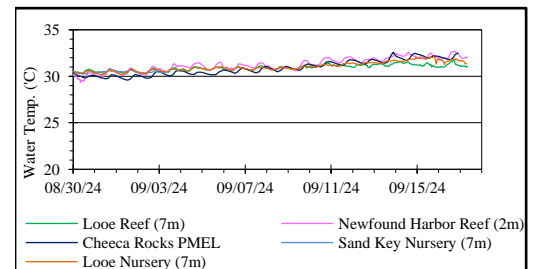


Figure 4. *in-situ* sea temperature from Mote/PMEL/FIU monitoring stations (August 30- September 17, 2024).

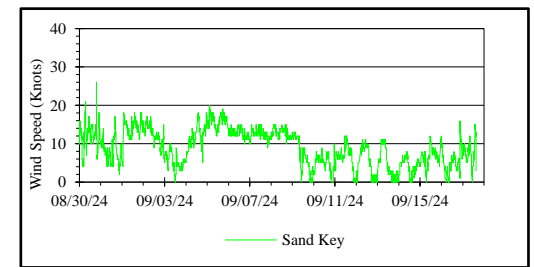


Figure 5. Wind speed data from NOAA/ICON monitoring stations (August 30 - September 17, 2024).



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20240917



Current Coral Conditions

A total of 17 BleachWatch Observer reports were received during the last two weeks of August (Fig. 6), with 16 reports indicating isolated colonies exhibiting signs of paling, partial bleaching or bleaching (Fig.7). The remaining report indicated that no significant signs of coral bleaching were observed (Fig. 8). In areas where paling/partial bleaching was identified, the overall percentage of corals exhibiting signs of thermal stress was 1-50%, with a few inshore sites up over 75%. The affected corals mainly included Encrusting/Mound/Boulder, Flower corals, Brain corals, and Branching corals. Other observations included paling of *Palythoa* spp., and Fire Coral, as well as several reports of coral disease.

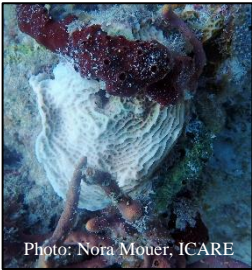


Figure 7. A bleached *Agaricia agaricites* off Islamorada on 8/31/24. Photo: Nora Mouter, ICARE



Figure 8. Healthy *Meandrina meandrites* off Islamorada on 9/6/2024. Photo: Eric Wehmeyer, ICARE

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 August 30 – September 17, 2024



Figure 6. Overview of BleachWatch observer reports submitted from August 30 – September 17, 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....

