



# SEAFAN BleachWatch Program

CURRENT CONDITIONS REPORT #20230604

JUNE 4, 2023



**Summary: Based on climate predictions and field observations, the threat for mass coral bleaching in Southeast Florida between Miami-Dade and Martin counties is LOW as of June 4, 2023.**

## Bleaching Alert Area

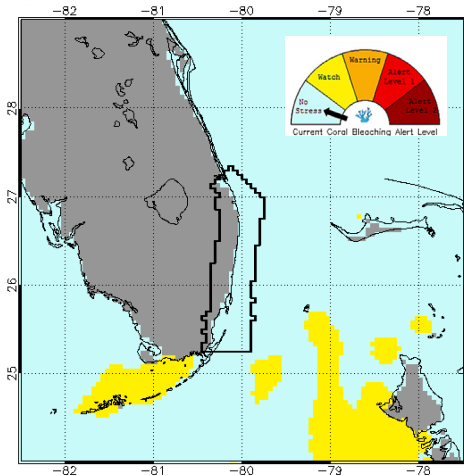


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for 6/4/2023

## HotSpot

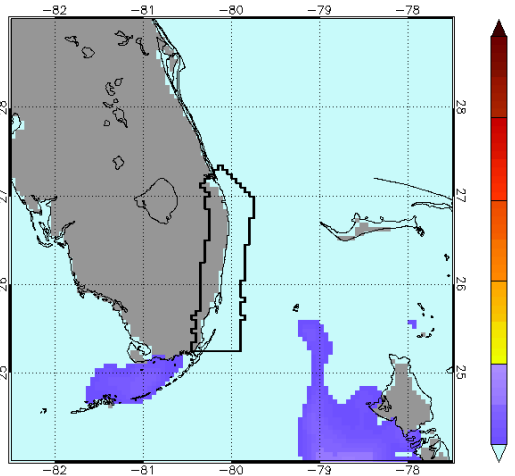


Figure 2. NOAA Coral Reef Watch Coral Bleaching HotSpots for 6/4/2023

## Degree Heating Week

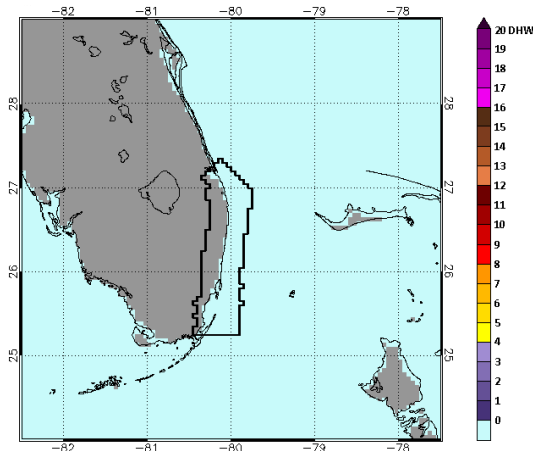


Figure 3. NOAA Coral Reef Watch Degree Heating Weeks for 06/4/2023

## Regional Virtual Station Data

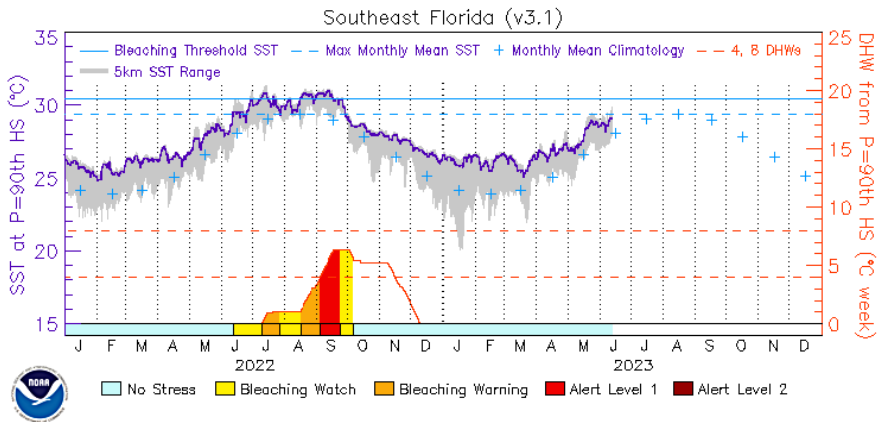


Figure 4. NOAA Coral Reef Watch Regional Virtual Station Data  
1/1/2022 - 6/4/2023

## ENVIRONMENTAL MONITORING

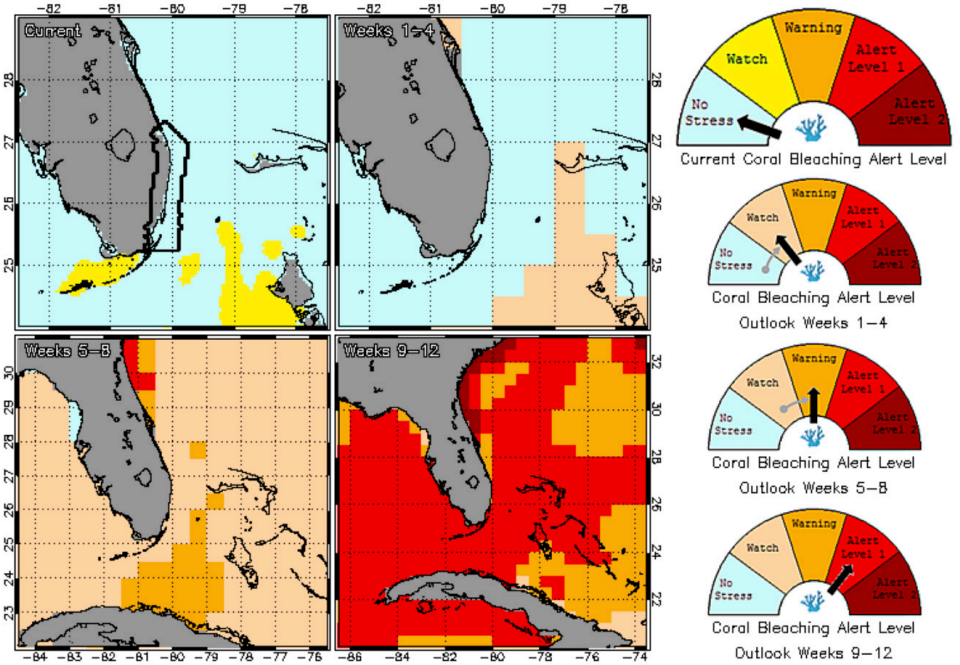
Climate predictions for this current conditions report are based on the National Oceanic and Atmospheric Administration's (NOAA) Coral Reef Watch (CRW) satellite imagery, which summarizes coral bleaching heat stress conditions derived from satellite sea surface temperature (SST) data and provides an indication as to when conditions are favorable for coral bleaching. **The current (as of June 4, 2023) CRW daily 5km Coral Bleaching Alert Area indicates that the Southeast Florida region is experiencing low thermal stress (Figure 1).**

- NOAA CRW's daily 5km Coral Bleaching HotSpots map (**Figure 2**) compares the current SST to the maximum monthly mean (MMM) SST climatology. Corals can start to become stressed and show signs of bleaching when the SST is at least  $1^{\circ}\text{C}$  greater than the MMM (i.e., HotSpot is  $\geq 1^{\circ}\text{C}$ ). **Currently, the SST remains below the  $1^{\circ}\text{C}$  HotSpot bleaching threshold.**
- Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA CRW's daily 5km Degree Heating Week (DHW) map (Figure 3) shows the accumulated heat stress over the previous 12 weeks, with 1 DHW ( $1^{\circ}\text{C}\text{-week}$ ) equivalent to one week at  $1^{\circ}\text{C}$  greater than the MMM. **Currently, this map indicates that no bleaching heat stress has accumulated across Southeast Florida.**
- Near real-time data from CRW's daily 5km satellite Regional Virtual Station for Southeast Florida indicates that **SST in the region is below the MMM climatology and below the bleaching threshold (MMM+ $1^{\circ}\text{C}$ ) of the region (Figure 4).**

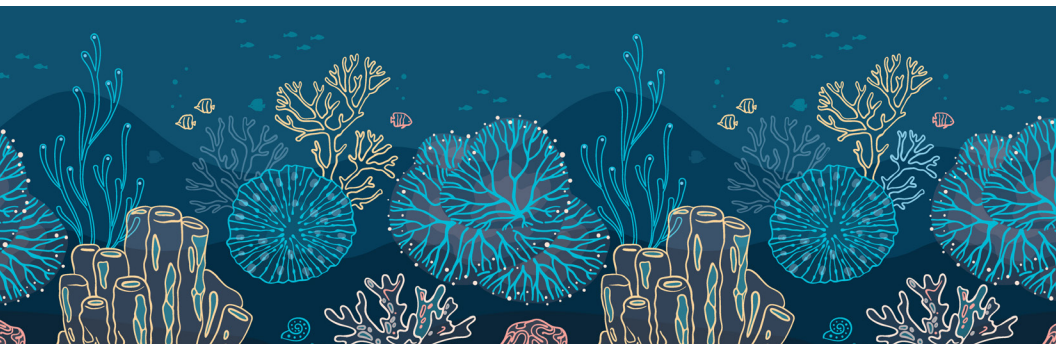
SSTs have remained slightly higher than the monthly mean climatology of June in Southeast Florida but remain below the MMM and bleaching threshold (MMM+ $1^{\circ}\text{C}$ ). The Southeast Florida Coral Bleaching Alert Area Outlook for the **upcoming four weeks** predicts that the region will be under a **Bleaching Watch (Figure 5A)**. The **five- to eight-week** Outlook indicates the region will be under a **Bleaching Warning (Figure 5B)**. The **nine- to 12-week** Outlook indicates the region will be under a **Bleaching Alert Level 1**, associated with significant coral bleaching (**Figure 5C**).

The Florida Department of Environmental Protection's Coral Reef Conservation Program will continue to monitor NOAA's HotSpot, DHW, Bleaching Alert Area, and Outlook maps, as well as the Regional Virtual Station data, for the remainder of the summer bleaching season.

## Bleaching Alert Area Outlooks



**Figure 5. NOAA CRW Southeast Florida Coral Bleaching Alert Area Outlook (60% Probability) for the future 1-12 weeks of June 4, 2023, through Aug. 27, 2023**





# OBSERVER NETWORK

The Southeast Florida Action Network (SEAFAN) BleachWatch Program has trained nine new instructors who are now teaching divers in South Florida. If you are a trained BleachWatch Observer interested in a refresher, please contact the Reef Resilience Coordinator at 561-681-6631 or email [Coral@FloridaDEP.gov](mailto:Coral@FloridaDEP.gov)

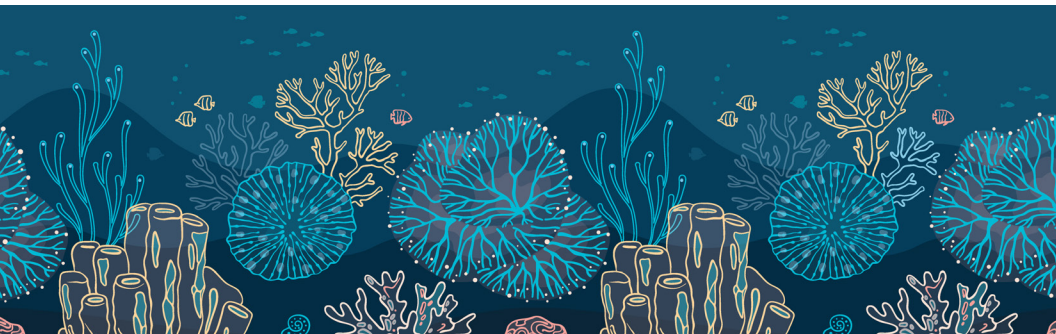
BleachWatch has received 30 reports since May 1, 2023. Of these, 16 reports indicated coral colonies were exhibiting signs of paling, partial bleaching or full bleaching. Geographically, there were 11 reports from Broward County, seven reports from Palm Beach County and one report from Miami-Dade County. Eleven reports were submitted from Monroe County and referred to Mote Marine Laboratory's [Florida Keys BleachWatch Program](#).

At those sites where paling/partial bleaching was observed, the overall percentage of coral exhibiting signs of thermal stress was 1% to 30%. Coral bleaching was observed on branching, brain and mound/boulder/encrusting corals. There were also observations of paling *Palythoa* spp.

Coral disease continues to pose a threat to Florida's Coral Reef. Of the 30 reports received since early May, five reports noted observations of coral disease. Geographically, there were three reports from Broward County, one from Miami-Dade County and one from Monroe County. At those sites where disease was observed, the overall percentage of coral exhibiting signs of disease was 1% to 10%. Tissue loss was observed on branching, brain and mound/boulder/encrusting corals. There were no reports of black band, growth anomalies or other unknown diseases within Martin, Palm Beach, Broward and Miami-Dade counties.

The next Current Conditions Report will be issued in July. Given the increasing temperatures, SEAFAN encourages the BleachWatch network to [submit reports](#) on coral bleaching and disease after every dive on the reef. This includes reports of "No Bleaching" and "No Disease." **Frequent observer reports will be critical for determining where coral bleaching is most severe this warm season.**

For more information about [SEAFAN BleachWatch](#) or to take [BleachWatch Training](#) and become a part of the observer network, please contact the Reef Resilience Coordinator at 561-681-6631 or email [Coral@FloridaDEP.gov](mailto:Coral@FloridaDEP.gov).





**Figure 6. Staghorn coral (*Acropora cervicornis*) experiencing tissue loss disease in Miami-Dade County. Photo by BleachWatch Instructor Juliana Grilo.**



**Figure 7. Healthy mountainous star coral (*Orbicella faveolata*) in Miami-Dade County. Photo by BleachWatch Instructor Juliana Grilo.**

## Program Partners

