



Florida Department of Environmental Protection
Coral Reef Conservation Program
SEAFAN BleachWatch Program
Current Conditions Report #20210602



June 2, 2021

Based on climate predictions and field observations, the threat of mass coral bleaching in Southeast Florida between Miami-Dade and Martin counties is **low as of May 31, 2021.**

Environmental Monitoring

Climate predictions for this current conditions report are based on NOAA's Coral Reef Watch (CRW) satellite imagery products, which summarize sea surface temperature (SST) data and provide an indication as to when conditions are favorable for coral bleaching. The current CRW 5-km Coral Bleaching Alert Area indicates that the southeast Florida region is presently experiencing no thermal stress (Figure 1).

- NOAA's experimental 5-km Bleaching Hotspot Map (Figure 2) compares current SST to the maximum monthly mean. Corals start to become stressed when SST is 1° C greater than the highest monthly average. Currently, SST remains below that 1° C threshold.
- Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA's experimental 5-km Degree Heating Weeks (DHW) Map (Figure 3) shows the accumulation of temperature stress over the previous 12 weeks, with 1 DHW equal to one week at 1° C greater than the maximum monthly mean.

Currently, this map indicates there is no accumulated temperature stress in the Southeast Florida region.

- Near real-time data from CRW's new 5-km Satellite Regional Virtual Station for Southeast Florida indicates that SST in the region is below the maximum monthly average and below the bleaching threshold of the region (Figure 4).

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

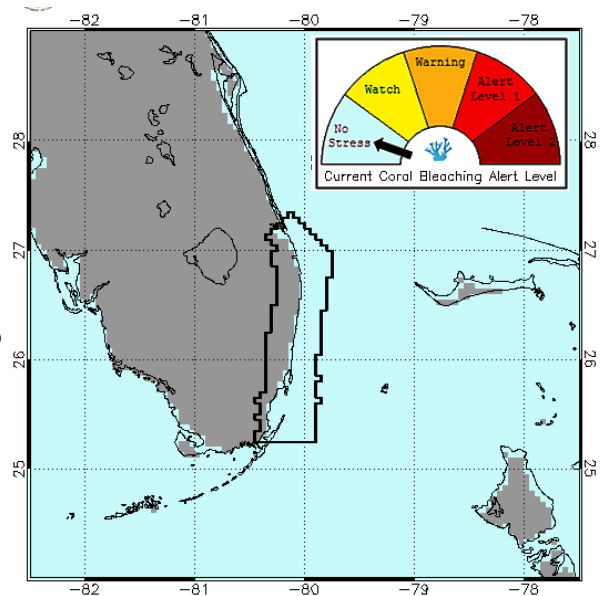


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for 5/31/2021. https://coralreefwatch.noaa.gov/product/vs/gauges/southeast_florida.php

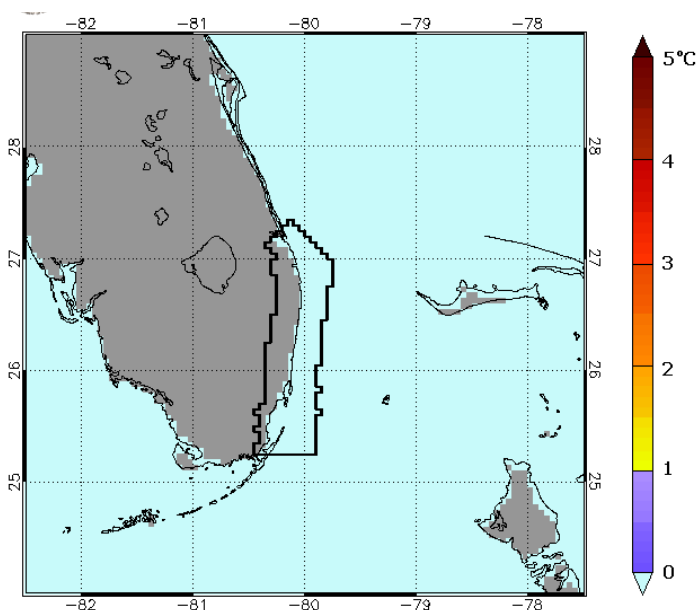


Figure 2. NOAA CRW Hotspots for 5/31/2021.

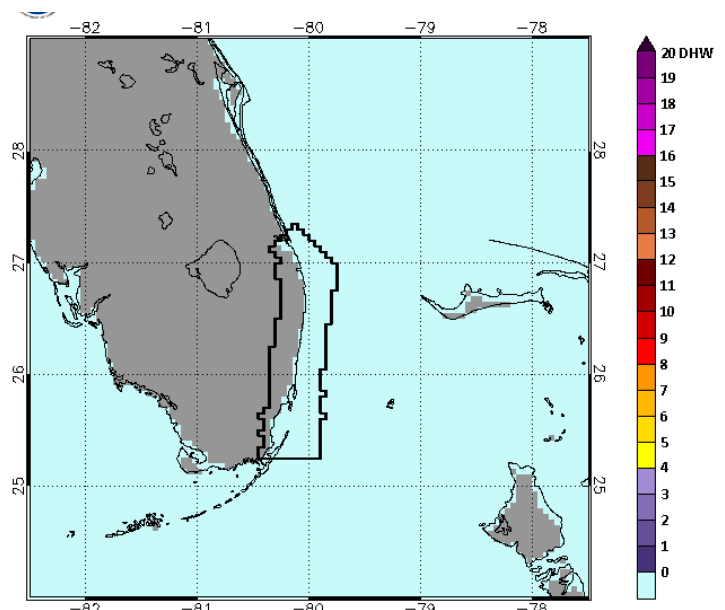


Figure 3. NOAA CRW Degree Heating Weeks for 5/31/2021.

SSTs have remained slightly higher than the monthly mean in Southeast Florida but remain below the maximum monthly mean and bleaching threshold. The Southeast Florida Satellite Coral Bleaching Alert Area Outlook for the upcoming four weeks predicts no stress in the Southeast Florida region (Figure 5A). The five-to-eight-week outlook indicates Miami-Dade County will elevate to a Bleaching Watch (Figure 5B). The nine- to 12-week outlook indicates the northern counties will elevate to Bleaching Watch, while southern Miami-Dade County will elevate to Bleaching Warning (Figure 5C).

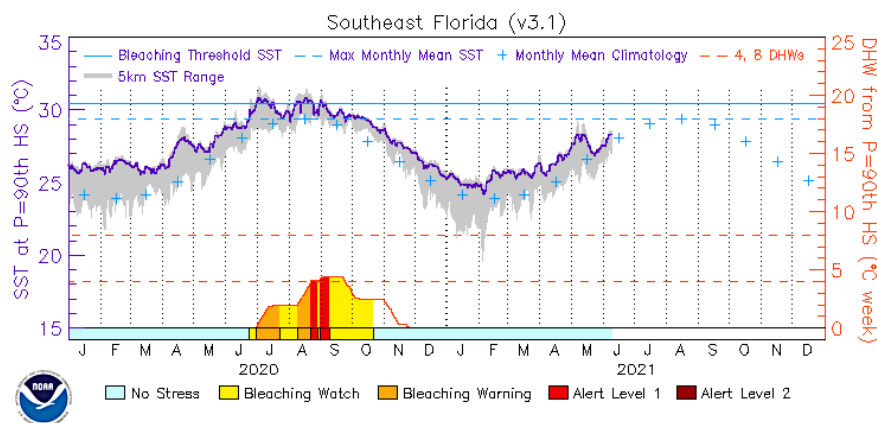


Figure 4. NOAA CRW Virtual Station Data, 1/1/2020 to 5/31/2021.

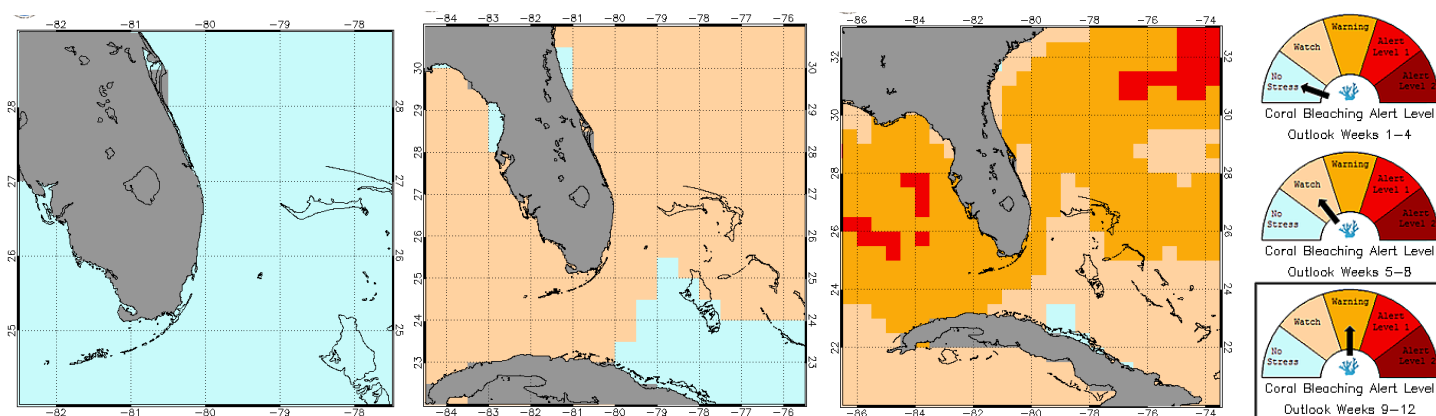


Figure 5. NOAA CRW Southeast Florida Satellite 60% Probability Coral Bleaching Outlook Areas for 5/31/2021 through part of 8/2021.

A) 1- to 4-week Outlook for 5/31 to 6/28/2021. B) 5- to 8-week outlook for 6/28 to 6/26/2021. C) 9- to 12-week outlook for 7/26 to 8/23/2021.

Observer Network

We have not yet received reports of coral bleaching in Southeast Florida. However, stony coral tissue loss disease continues to pose a threat to Florida's Coral Reef, and we have received four reports of disease since Jan. 1, 2021. Disease has also been observed in *Palythoa* spp.

The next *Current Conditions Report* will be sent in early July. Given the rising temperatures over the next eight weeks, especially in southern Miami-Dade County, we encourage the SEAFAN BleachWatch network to continue submitting observations after every reef dive and report any unusual marine sightings in Southeast Florida to SEAFAN at [SEAFAN.net](https://seafan.net).

Figure 6

Healthy boulder coral observed by Pamela Fletcher in Broward County in February.



Figure 7

Diseased *Palythoa* spp. Observed by Pamela Fletcher in Broward County in February.



For more information about SEAFAN BleachWatch or to organize a training session for your group to become a part of the Observer Network, please contact the program coordinator below.

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Program Partners

