

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 October 26, 2020.

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-kilometer (km) Coral Bleaching Alert Area indicates that the southeast Florida region is presently experiencing no thermal stress (Fig. 1).

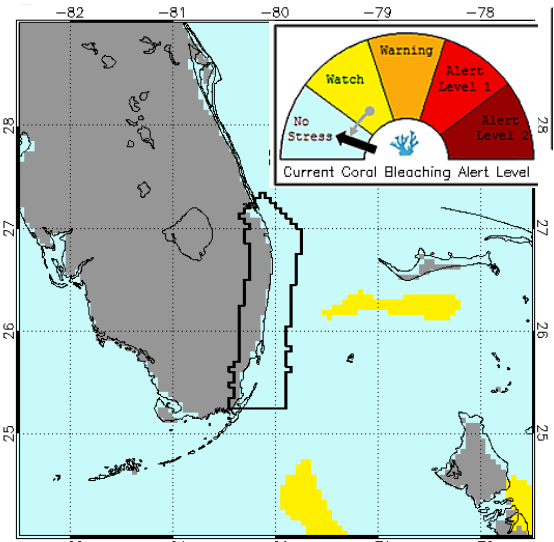


Figure 1. NOAA CRW Bleaching Alert Area for October 26, 2020.

- NOAA's experimental 5-km Bleaching Hotspot Map (Fig. 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 well 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 (Fig. 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 that there is no accumulated temperature stress in southeast Florida.
- Near real-time data from CRW's new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region was below the bleaching threshold for most of October (Fig. 4).
- SSTs have begun to drop in Southeast Florida, hovering below the bleaching threshold. The Coral Bleaching Alert Area Outlook for the upcoming 12 weeks indicates there will be no thermal stress in the region.

The Florida Department of Environmental Protection's Coral Reef Conservation Program will continue to monitor NOAA's Coral Reef Watch data for the remainder of the bleaching season and throughout the year.

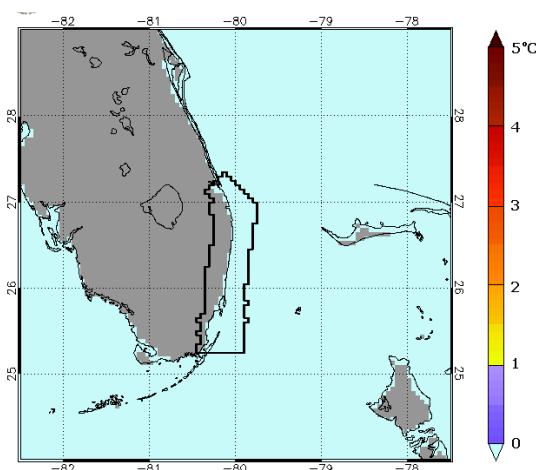


Figure 2. NOAA CRW Hotspots for October 26, 2020.

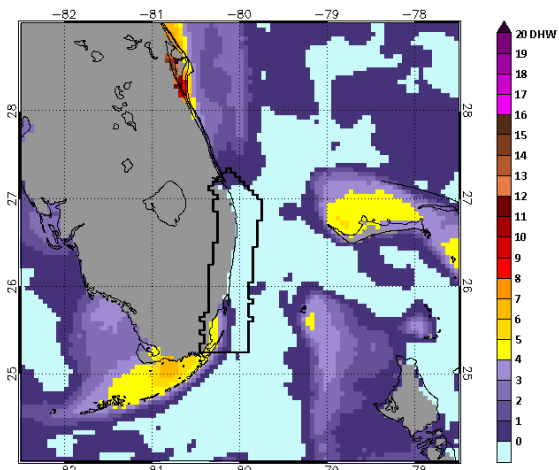


Figure 3. NOAA CRW Degree Heating Weeks for October 26, 2020.

Observer Network

Since October 1, 2020, a total of three reports were received. To break down reports by county: two reports came from Palm Beach County and one report came from Broward County. In Broward County, the first and second reefs off of Anglin's Pier in Lauderdale-By-The-Sea reported bleaching on lesser starlet coral (*Siderastrea radians*) and stony coral tissue loss disease on great star coral (*Montastraea cavernosa*) (Fig. 5).

No bleaching was observed at Area 51 in Palm Beach County, but stony coral tissue loss disease was observed on brain coral (Fig. 6) and great star coral. Neither bleaching nor disease were reported at Blue Heron Bridge in Palm Beach County. With the likelihood of little to no thermal stress in coming months, this Current Conditions Report marks the end of the 2020 SEAFAN BleachWatch season.

2020 SEAFAN BleachWatch Season Summary

Thank you to all our observers, who collectively contributed 54 BleachWatch reports (Table 1) since the beginning of June 2020! Of the 54 reports submitted, 20 reports of bleaching came from Broward County, while 14 came from Palm Beach and 1 came from Martin County. The most bleaching reports received were for mounding, encrusting and boulder corals, followed by brain corals and then leafy corals. Most disease reports were also from mounding, encrusting and boulder corals. Of the 54 reports submitted, 7 reports of disease came from Broward and 5 reports of disease came from Palm Beach County. Aspergillosis was observed again this season on Caribbean sea fans (*Gorgonia* spp.). 12 Aspergillosis reports came from Broward and 2 came from Palm Beach County. Sponge orange band disease was observed at 1 site in Broward and 4 sites in Palm Beach County. This disease affects giant barrel sponges (*Xestospongia muta*). Given the severity of the stony coral tissue loss disease outbreak and other conditions on the reef, including Aspergillosis and sponge orange band disease, we encourage the BleachWatch Observer Network to continue submitting observations on coral condition after every dive on the reef and to report any unusual marine sightings in southeast Florida to SEAFAN. For more information about SEAFAN BleachWatch or to organize a training session for your group to become a part of the Observer Network, visit www.SEAFAN.net.

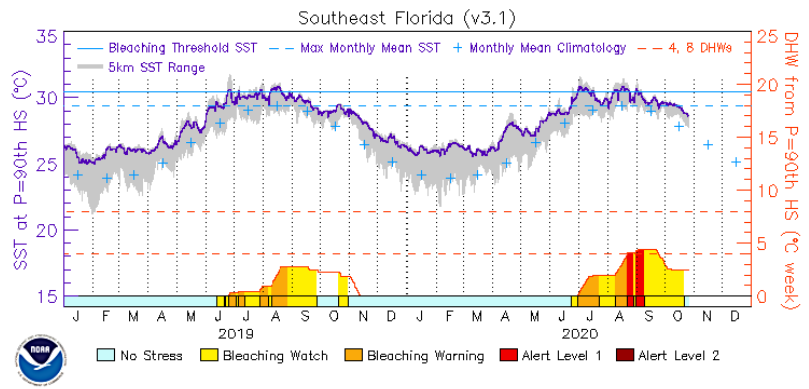


Figure 4. NOAA CRW Virtual Station Data for Southeast Florida; January 1, 2019 - October 26, 2020. <https://coralreefwatch.noaa.gov/product/5km/index.php>

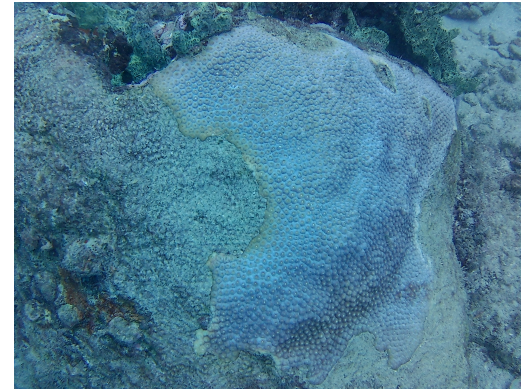


Figure 5. Partially bleached star coral with old tissue loss observed by Natalie Goulett in Broward County on October 11, 2020.



Figure 6. Diseased brain coral observed by William Caffrey in Palm Beach County on October 14, 2020.

SEAFAN BleachWatch Reports by County	
Martin	3
Palm Beach	19
Broward	25
Miami-Dade	0
Monroe	7
Total	54

Table 1. SEAFAN BleachWatch Reports by County for the 2020 season.

Program Partners

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www.SEAFAN.net/BleachWatch

