



Florida Department of Environmental Protection  
 Coral Reef Conservation Program  
**SEAFAN BleachWatch Program**  
 Current Conditions Report #20210927



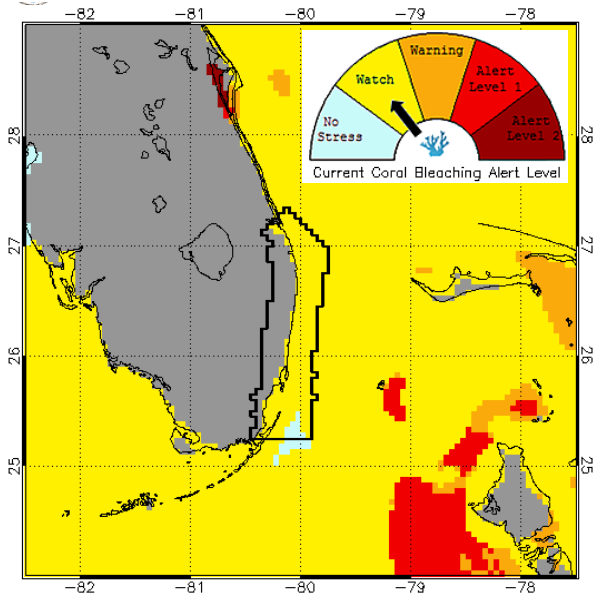
**Sept. 27, 2021**

**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 Sept. 27, 2021.**

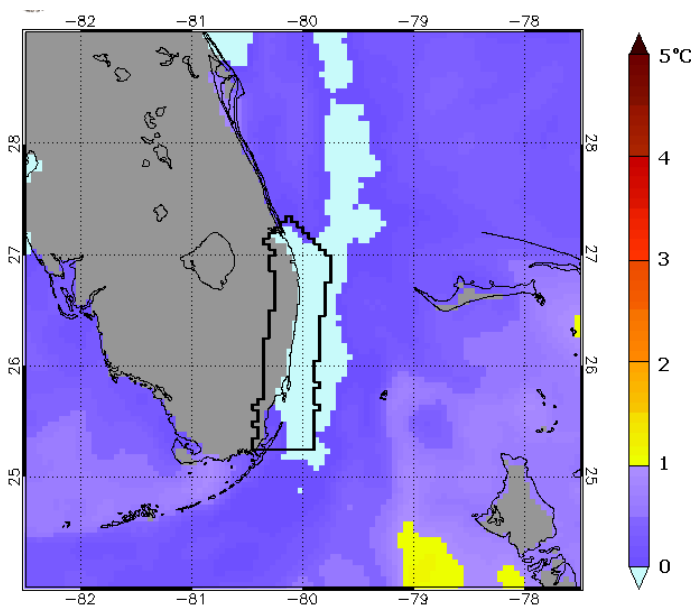
**Environmental Monitoring**

Climate predictions for this current conditions report are based on the National Ocean & Atmospheric Association's (NOAA) 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 under a bleach watch due to the low thermal stress (Figure 1).**

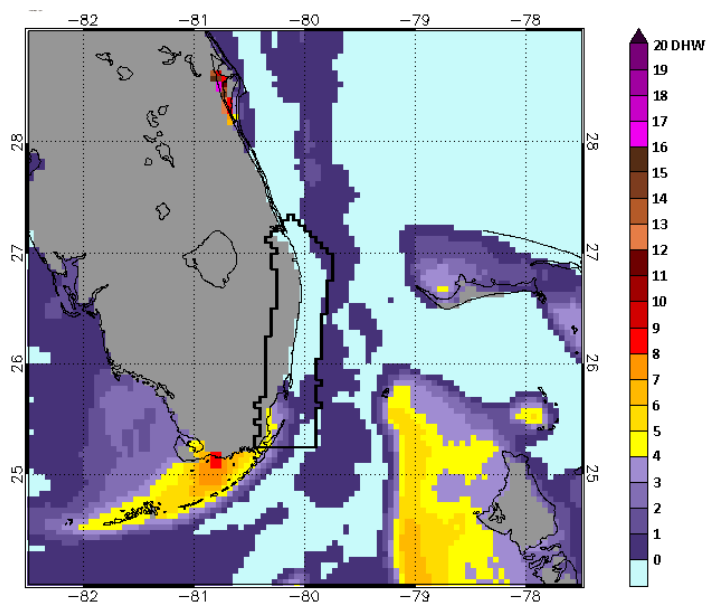
- NOAA's experimental 5-km Bleaching Hotspot Map (Figure 2) compares current SST to the maximum monthly mean. Corals start to become stressed when SST is 1° C greater than the highest monthly average. **Currently, SST is below that 1° C threshold.**
- Coral bleaching risk increases if the temperature 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 some accumulated temperature stress in the Southeast Florida region concentrated mainly in Miami-Dade County.**
- Near real-time data from CRW's new 5-kilometer Satellite Regional Virtual Station for southeast Florida indicates that SST in the region is hovering around maximum monthly average and below the bleaching threshold of the region. (Figure 4)



**Figure 1.** NOAA Coral Reef Watch Bleaching Alert Area for 9/25/2021. [https://coralreefwatch.noaa.gov/vs/gauges\\_southeast\\_florida.php](https://coralreefwatch.noaa.gov/vs/gauges_southeast_florida.php)



**Figure 2.** NOAA CRW Hotspots for 9/25/2021.



**Figure 3.** NOAA CRW Degree Heating Weeks for 9/25/2021

The satellite Coral Bleaching Alert Area outlook for the upcoming four weeks predicts a bleaching warning for the southeast Florida region (Figure 5A). The 5-8 week outlook indicates all counties will decrease to a watch (Figure 5B). The 9-12-week outlook indicates all counties will decrease to no stress (Figure 5C).

DEP'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 bleaching season.

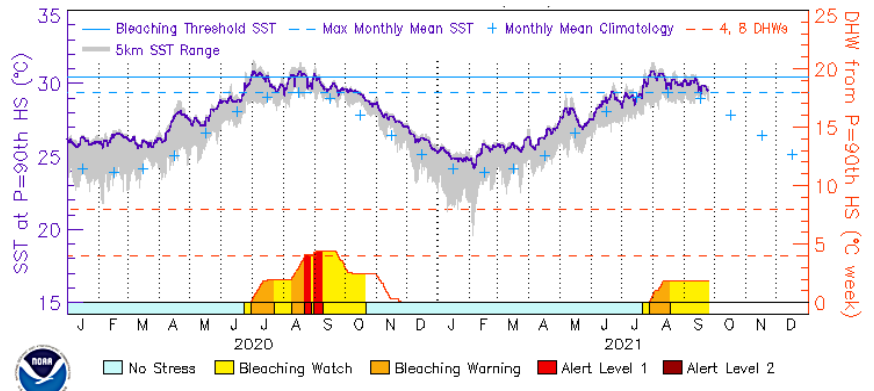


Figure 4. NOAA CRW Virtual Station Data; 1/1/2020 - 9/25/2021

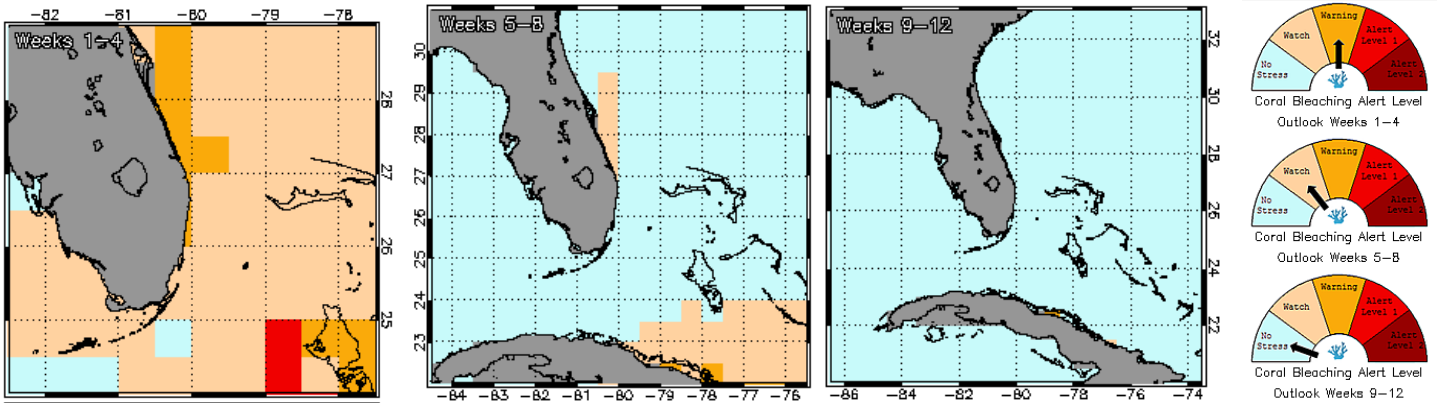


Figure 5. NOAA CRW Southeast Florida Satellite 60% Probability Coral Bleaching Outlook Areas for 9/25/2021 through 12/11/2021. A) 1-4 week Outlook for 9/25-10/23/2021. B) 5-8 week outlook for 10/23-11/13/2021. C) 9-12 week outlook for 11/13 - 12/11/2021.

### Observer Network

We have received 11 total BleachWatch Reports in Southeast Florida since Aug. 1, 2021 with 10 reports from Broward County and 1 from Palm Beach County. Of these 11 reports, nine reports noted signs of bleaching and two noted no bleaching. Paling corals comprised 71% of all reports in the last two months. It has been observed on branching, fleshy, leaf, plate, sheet, mound, boulder, encrusting, and soft corals. Given the declining temperatures, we expect to see less coral bleaching over the next 8-12 weeks.

Disease continues to be observed in Southeast Florida. Of the 11 reports received since August, three noted signs of coral disease and all were in Broward County. Both black band disease and tissue loss (white) were observed on brain and mound/boulder corals (most notably the Great Star Coral). Two reports also noted a white/grey mat on *Porites asteroides* (PAST) and *Palythoa* spp. (not a stony coral) (Figure 6). At this time we cannot confirm if this is the same disease across both species, but it does seem to be spreading fast across the colony, with a defined margin and a mat behind the margin (see figure 7). It has been sighted in both Broward and Miami-Dade (from other anecdotal sources). It is also important to note that there have been several reports of an unknown disease in the Florida Keys affecting *Acropora* spp.

The next *Current Conditions Report* will be sent in early November. Given the multiple diseases being observed in South Florida, we encourage the SEAFAN BleachWatch Observer Network to continue submitting observations after every reef dive. Please continue to report any unusual marine sightings in southeast Florida to SEAFAN at [www.SEAFAN.net](http://www.SEAFAN.net). We appreciate all reports being sent in and thank you for your incredible effort in saving Florida's Coral Reef.

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.



Figure 7 (left) Unusual grey/white mat on *Palythoa* spp. observed by Pamela Fletcher in Broward County.



Figure 6 (right) Mustard Hill Coral (*Porites asteroides*) with unknown disease observed by Sarah Thanner in Miami-Dade County.

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### Program Partners

