

Summary: Based on climate predictions and field observations, the threat for mass coral bleaching in southeast Florida between Miami-Dade and Martin counties is **MODERATE as of August 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 **some thermal stress in lower Miami-Dade County with bleaching and mortality likely** (Fig. 1).

- 🌐 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^oC greater than the highest monthly average. **Currently, SST remains below that 1^oC 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^oC greater than the maximum monthly mean. **Currently, this map indicates that there is slight accumulated temperature stress in lower Miami-Dade County.**
- 🌐 Near real-time data from CRW's new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region is **above the monthly average in lower Miami-Dade County and is fluctuating around the bleaching threshold of the region** (Fig. 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.

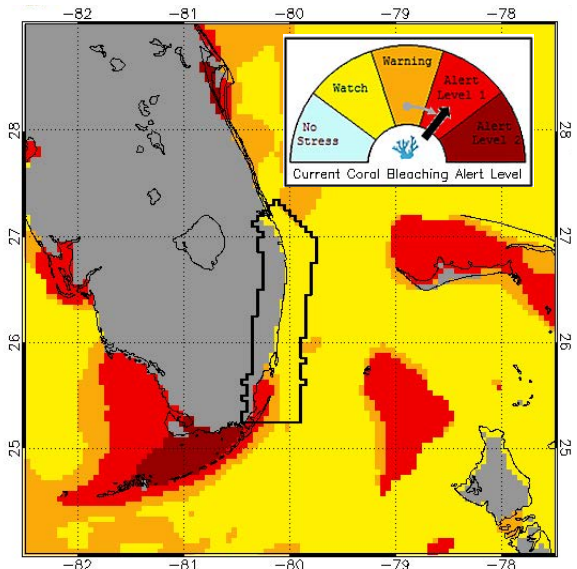


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for August 26, 2020. https://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

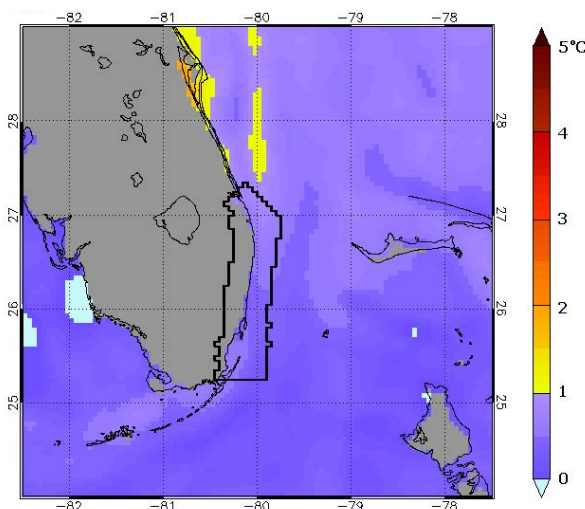


Figure 2. NOAA CRW Hotspots for August 26, 2020. <http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

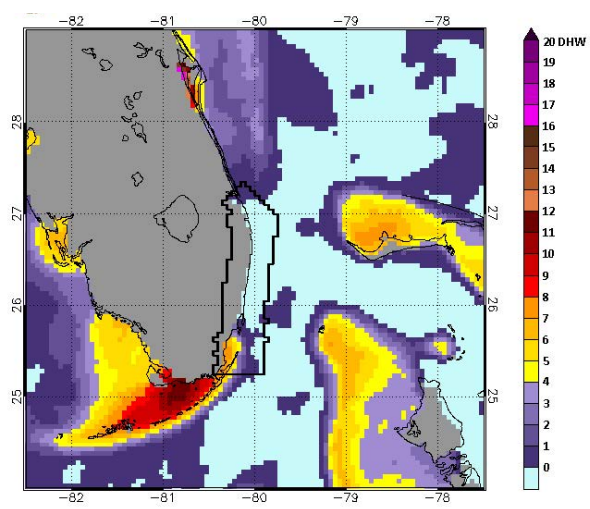


Figure 3. NOAA CRW Degree Heating Weeks for August 26, 2020. <http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

SSTs have continued to remain high in Southeast Florida, hovering around the bleaching threshold. The satellite Coral Bleaching Alert Area Outlook for the upcoming 4 weeks predicts a Bleaching Warning for lower Miami-Dade and a Bleaching Watch for the remainder of the region (Fig. 5). The 5-8 week outlook indicates the northern counties will elevate to a Bleaching Warning.

Observer Network

Since June 1, 2020, a total of 40 reports were received. Of those, 29 reported coral bleaching and 7 reported coral disease observations.

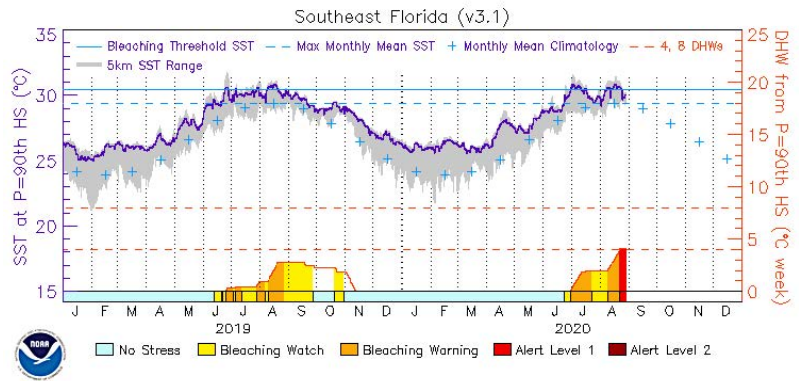


Figure 4. NOAA CRW Virtual Station Data; January 1, 2019 – August 26, 2020. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

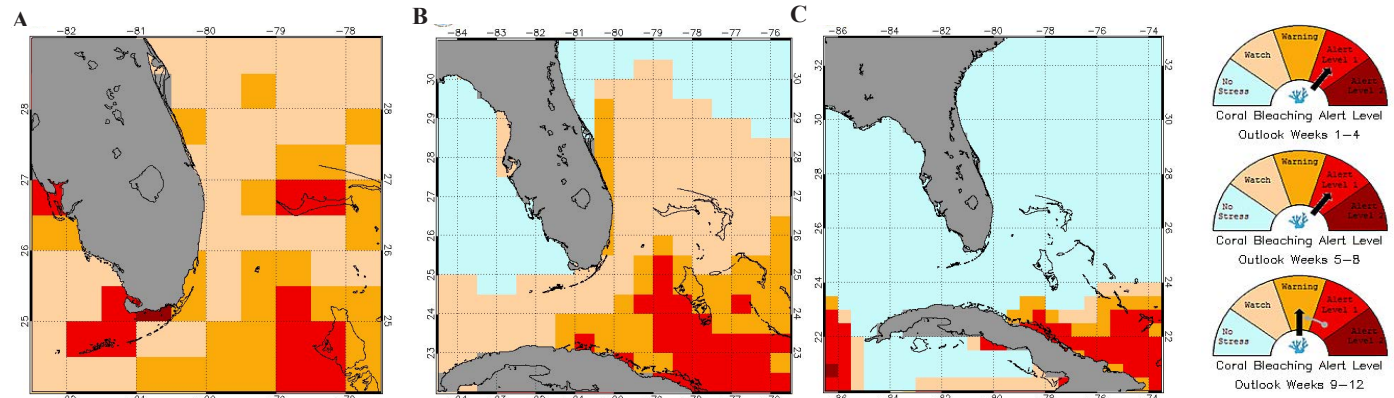


Figure 5. NOAA CRW Southeast Florida Satellite 60% Probability Coral Bleaching Outlook Areas for August 26, 2020 through part of November 2020. A) 1-4 week Outlook for August 27 - September 24, 2020 B) 5-8 week outlook for September 24 - October 22, 2020 C) 9-12 week outlook for October 22 - November 12, 2020

To break down reports by county: 19 reports came from Broward County, 14 reports came from Palm Beach County, 3 reports came from Martin County, and the remainder came from Monroe County. We encourage divers in lower Miami-Dade County to submit reports based on the Bleaching Warning. Aspergillosis has also been observed on several sea fans in Palm Beach and Broward counties. Aspergillosis is a disease caused by the terrestrial fungus *Aspergillus sydowii*.

The next Current Conditions Report will be sent at the end of September. Given the rising temperatures over the next 8 weeks, we encourage the SEAFAN BleachWatch network to continue submitting their observations on coral condition after every dive on the reef and to report any unusual marine sightings in southeast Florida to SEAFAN at www.SEAFAN.net.

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.

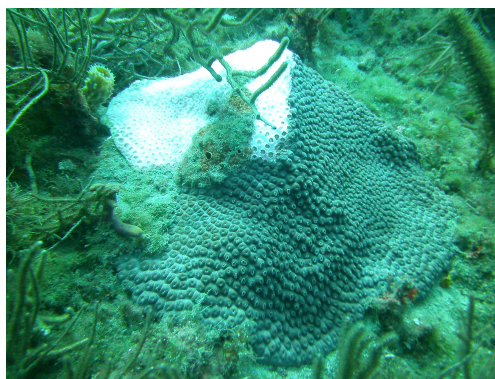


Figure 6 (left) Partial bleaching on star coral observed by William Caffrey in Palm Beach County at the end of July.

Figure 7 (right) Stony coral tissue loss disease on brain coral observed by Nikole Heath in Broward County in mid-July.

Kristi Kerrigan
Assistant Manager
DEP Coral Reef Conservation Program
Phone: 561-681-6632
Email: Kristi.Kerrigan@FloridaDEP.gov
www.SEAFAN.net/BleachWatch

Program Partners

