

September 12, 2019

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 September 12, 2019.

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 low thermal stress (Figure 1):

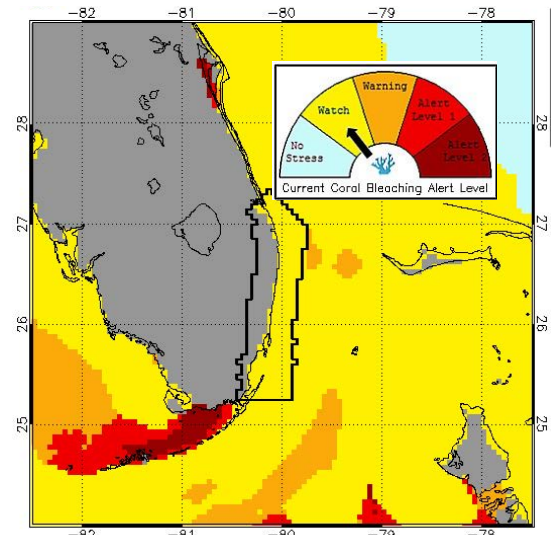


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for September 9, 2019. https://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

- NOAA’s experimental 5-km Bleaching Hotspot Map (Figure 2) compares current SST to the maximum monthly mean, which is the average temperature during the warmest month of the year. Corals start to become stressed when SST is 1°C greater than the highest monthly average. Currently, SST remains below that 1°C threshold in all areas within the southeast region.

- 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 that there is slight accumulated temperature stress in lower Miami-Dade County and no accumulated temperature stress in northern Martin County.

- Near real-time data from CRW’s 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region peaked in August above the bleaching threshold but has dropped since then. While SST is still above the monthly average, it remains below the bleaching threshold (Figure 4).

The Florida Department of Environmental Protection’s Coral Reef Conservation Program staff 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.

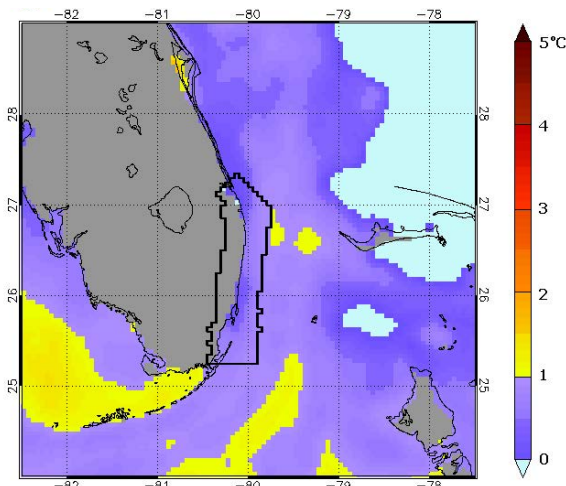


Figure 2. NOAA CRW Hotspots for September 9, 2019. <http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

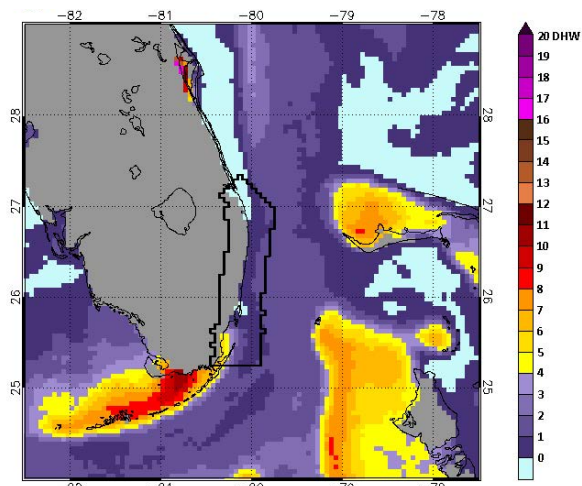


Figure 3. NOAA CRW Degree Heating Weeks for September 9, 2019. <http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

Observer Network

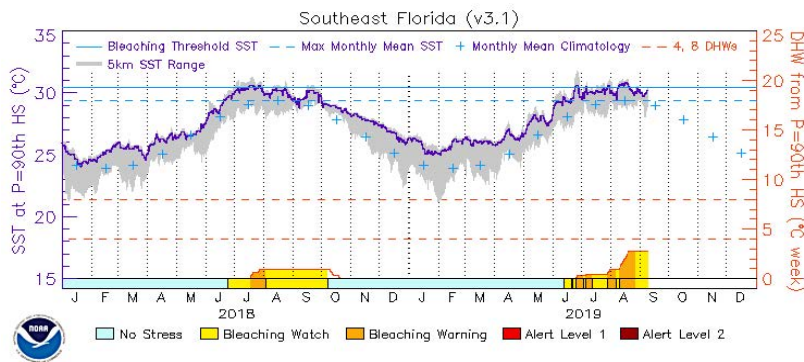


Figure 4. NOAA CRW Virtual Station Data; January 1, 2018 – September 9, 2019. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Thermal stress has remained low in the southeast Florida region (Miami-Dade, Broward, Palm Beach, and Martin Counties). Although it didn't make landfall, the presence of Category 3 Hurricane Dorian on September 2, 2019 brought cooler water temperatures to southeast Florida. Four BleachWatch reports have been received since the last Current Conditions Report. One report from Martin County indicated partial

bleaching on a single colony of Massive starlet coral (*Siderastrea siderea*), another report from Martin County indicated no bleaching or no disease observed, and two reports from Broward County indicated the presence of black band disease on two separate coral colonies- one brain coral and one mound/boulder coral.

The Southeast Florida Satellite Coral Bleaching Alert Area Outlook predicts cooler sea surface temperatures in the next 9-12 weeks, resulting in the coral bleaching alert level for the region dropping from a Watch to No Stress (Figure 5). Currently, the likelihood of bleaching remains low throughout the southeast Florida region, however, SST further south in the Florida Keys remains high (Figure 1).

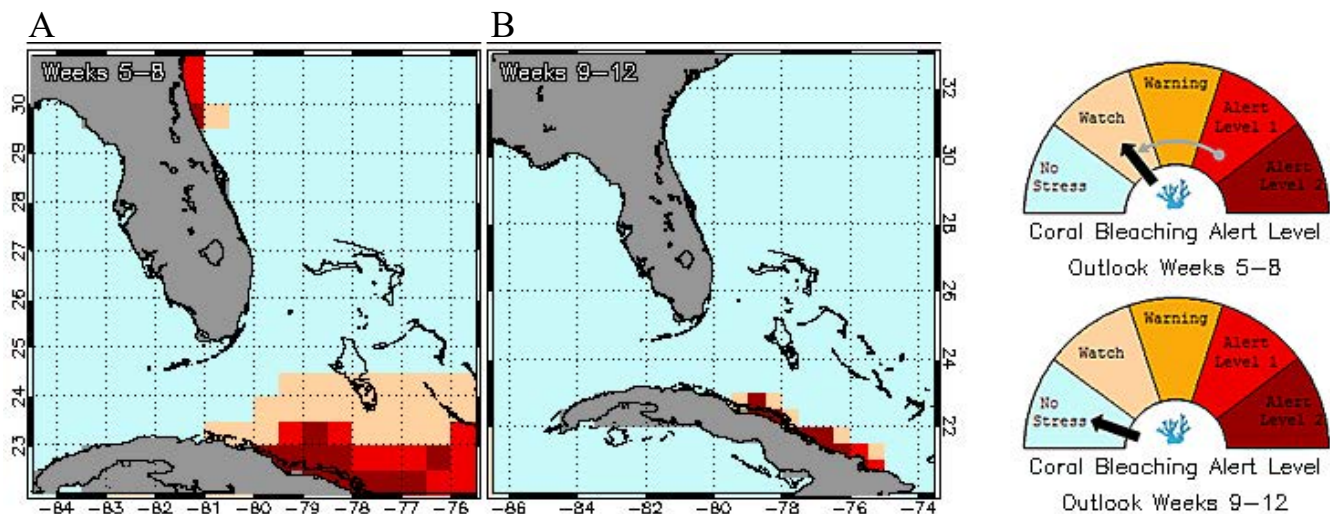


Figure 5. NOAA CRW Southeast Florida Satellite 60% Probability Coral Bleaching Alert Outlook Areas for September 9, 2019 through part of December 2019. A) 5-8-Week Outlook for September 9, 2019 through November 7, 2019, B) 9-12 week outlook for September 9, 2019 through December 5, 2019. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

The BleachWatch Observer Network is encouraged to submit observations on coral condition after every visit to the reef throughout the year. Remember, reports of 'No Bleaching' are just as important as bleaching reports! Given the severity of the southeast Florida coral disease outbreak, it is also encouraged to report any signs of coral disease. To learn more about coral bleaching, coral disease, or the SEAFAN BleachWatch Program and to submit a report on coral condition in southeast Florida, please visit www.SEAFAN.net/BleachWatch.

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

