Florida Department of Environmental Protection
Coral Reef Conservation Program

SEAFAN BleachWatch Program

Current Conditions Report #20171115

November 15, 2017

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 November 15, 2017.

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 (Figure 1):

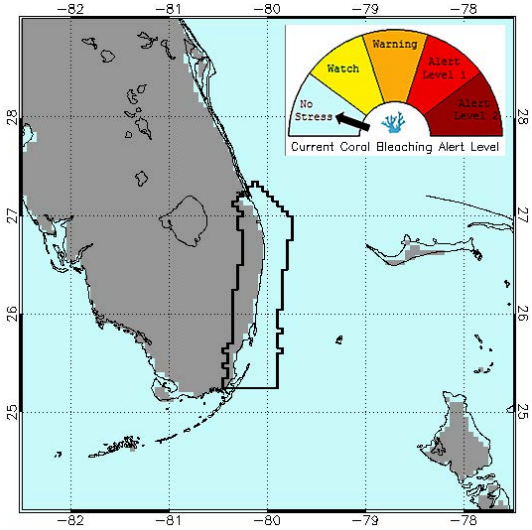


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for November 13 2017. https://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

- 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 is below the 1°C bleaching hotspot 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 that there is some accumulated temperature stress in Miami-Dade County, but still below the 4-week threshold.
- Near real-time data from CRW's new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region is slightly above the monthly average, but below the bleaching threshold (Figure 4).

This Current Conditions report marks the end of the bleaching season, however, 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 throughout the winter and spring.

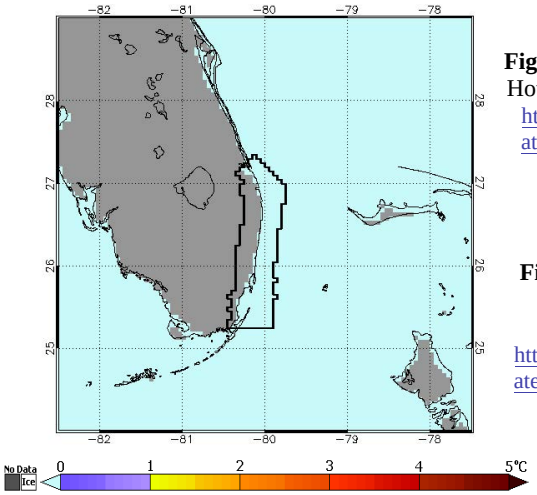


Figure 2 (left). NOAA CRW Hotspots for November 13, 2017. http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php

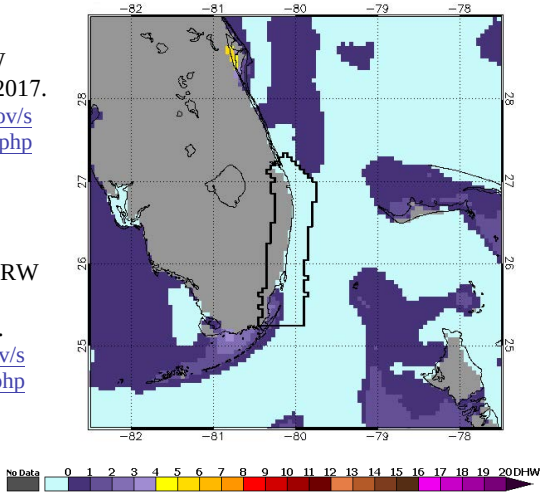


Figure 3 (right). NOAA CRW Degree Heating Weeks for November 13, 2017. http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php

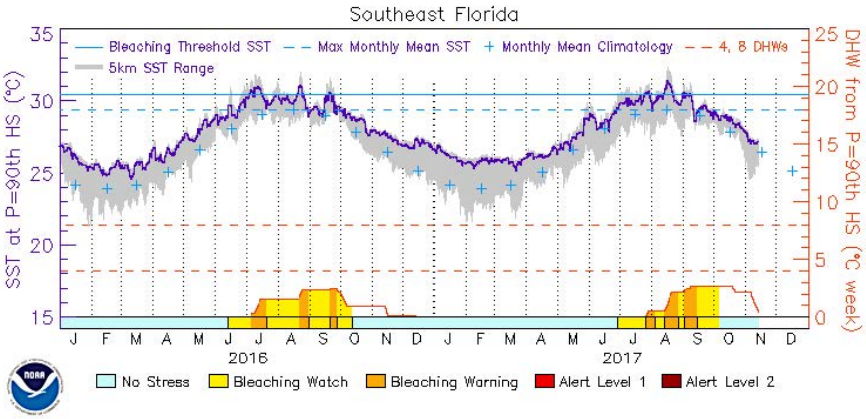


Figure 4. NOAA CRW Virtual Station Data; January 1, 2016 – November 13 2017.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

Since the last Current Conditions report in September, BleachWatch received a total of seven reports from Palm Beach County. Of those, 4 reports indicated only isolated colonies exhibiting signs of paling or partially bleaching. The few affected colonies were reported in Mound/Boulder (Figure 5), Brain, and Leaf/Plate/Sheet corals in depths ranging from 50-75 feet. The overall percentage of corals exhibiting signs of thermal stress were mostly 1-10%, however, one site noted up to 30% of

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Program Partners