



Florida Department of Environmental Protection
 Coral Reef Conservation Program
SEAFAN BleachWatch Program



Current Conditions Report #20151016

October 16, 2015

Summary: Based on climate predictions and field observations, the threat for mass coral bleaching in southeast Florida between Miami-Dade and Martin counties is currently **LOW**.

Environmental Monitoring

Climate predictions for this current conditions report are based on 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 kilometer (km) Satellite Coral Bleaching Alert Area indicates that southeast Florida has been reduced from a Bleaching Watch to No Stress. Although corals may still be impacted by previous thermal stress, these improved conditions may allow for initial recovery to begin.

NOAA's experimental 5-km Coral Bleaching Hotspots 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. Current SST remains below the 1°C Hotspot bleaching threshold and is not significantly elevated in the region.

Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA's 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 southeast Florida is still experiencing accumulated temperature stress from previously elevated temperatures, although further accumulation has not occurred over the past two weeks.

Near real-time data from CRW's new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region continues to drop and 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 coral bleaching season.

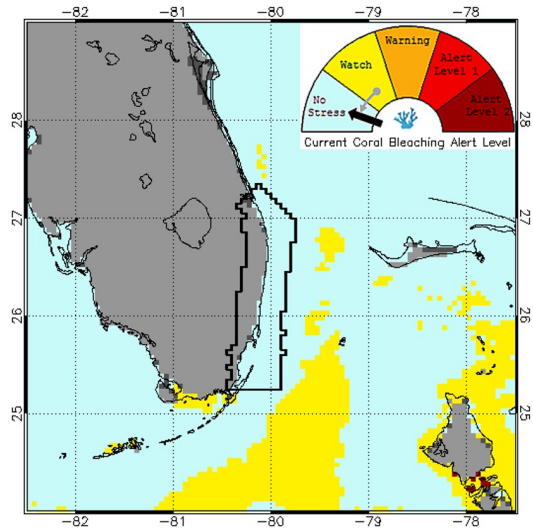


Figure 1. NOAA Coral Reef Watch Southeast Florida Satellite Coral Bleaching Alert Area. Oct 14, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

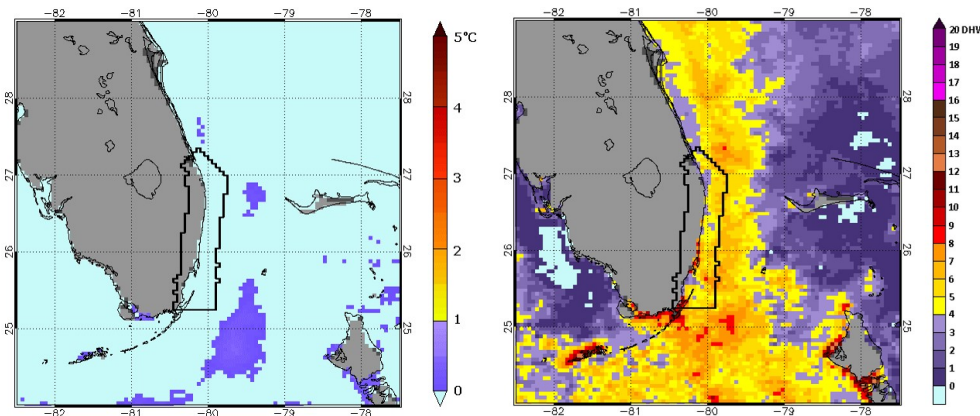


Figure 2. NOAA CRW Southeast Florida Coral Bleaching Hotspots. October 14, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Figure 3. NOAA CRW Southeast Florida Degree Heating Weeks. October 14, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

Only 5 reports were received from the BleachWatch Observer Network during the last two weeks. While all reports indicated observations of corals exhibiting signs of thermal stress, the predominant condition observed was paling or partially bleached, indicated that initial recovery from the summer bleaching event may be underway. Similarly, although the percentage of corals affected at each site varied, the majority of reports noted a range between 1 - 10% and 11 - 30%. Only one site was reported with as many as 31 - 50% of corals affected. During this time frame bottom temperatures ranged from 80°F - 88°F (as opposed to a range of 84°F - 89°F during the last reporting period), which indicates that water temperatures are starting to cool off.

Bleaching observations were made for a variety of species, including Encrusting/Mound/Boulder corals (*Siderastrea siderea*, *Orbicella faveolata*, *Montastraea cavernosa*, *Solenastrea bournoni*), Brain corals (*Pseudodiploria strigosa*, *Colpophyllia natans*), and Branching/Pillar corals (*Acropora cervicornis*). Reports also noted the presence of bleached Gorgonians and *Palythoa spp.* at the survey sites, and several reports also included ongoing observations of black band and/or white plague disease.

While observations of coral bleaching continue, a recent improvement in conditions across southeast Florida indicates that a mass bleaching event is less likely at this time, although more field observations are needed. The Southeast Florida Coral Bleaching Outlook (Figure 5) indicates that the region is unlikely to experience additional thermal stress in the coming weeks, and conditions may continue to improve. The BleachWatch Observer Network is encouraged to continue submitting observations on coral condition after every visit to the reef. Remember, **reports of 'No Bleaching' are just as important as bleaching reports!** To submit a report on coral condition in southeast Florida, or for more information on the SEAFAN BleachWatch Program, please visit www.SEAFAN.net and click "BleachWatch."

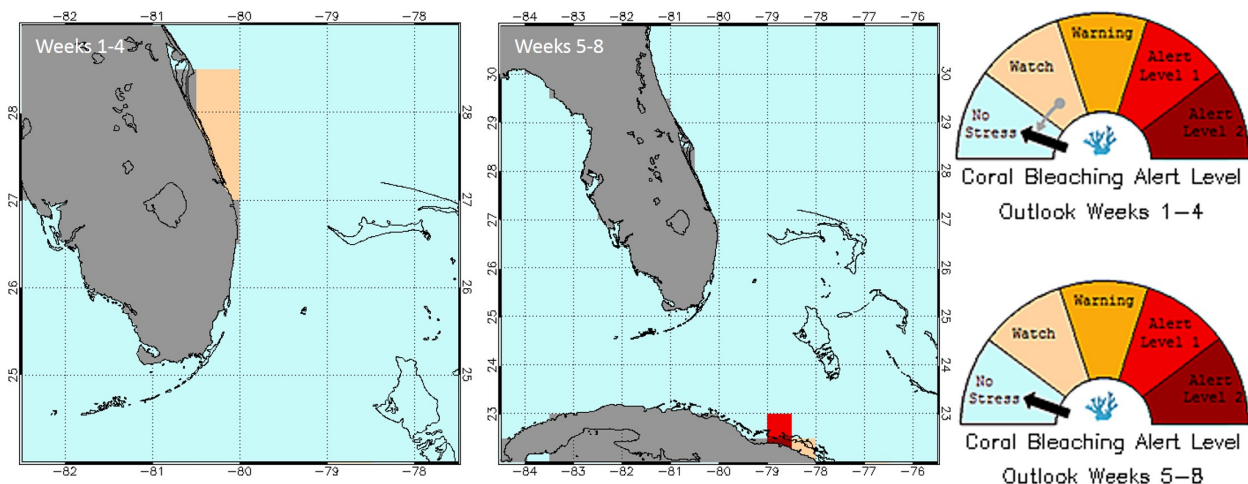


Figure 5. Southeast Florida 60% Probability Coral Bleaching Outlook for weeks 1-4 and 5-8; issued October 11, 2015.

http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

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