

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 **HIGH**.

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 is presently experiencing thermal stress; the majority of the region is under a bleaching Alert Level 1 with some areas experiencing an Alert Level 2 (Figure 1):

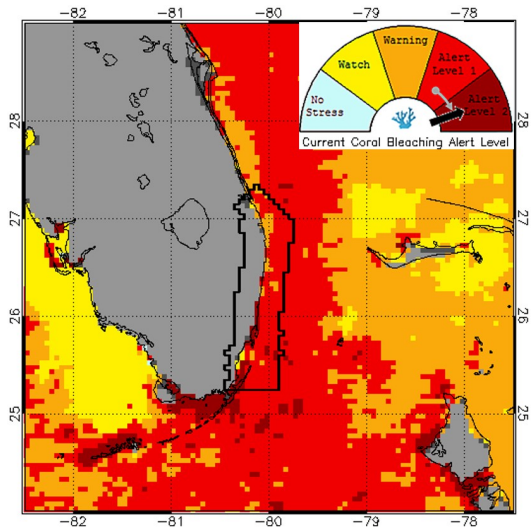


Figure 1. NOAA Coral Reef Watch Southeast Florida Satellite Coral Bleaching Alert Area. Sept. 13, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

- 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. Currently, SST is elevated throughout southeast Florida and has surpassed the 1°C Hotspot bleaching threshold in the majority of 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 temperature stress has continued to accumulate across of southeast Florida with some areas surpassing 8 DHW where widespread bleaching is likely and mortality can be expected.

- Near real-time data from CRW's new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region remains above the maximum monthly average and has surpassed 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.

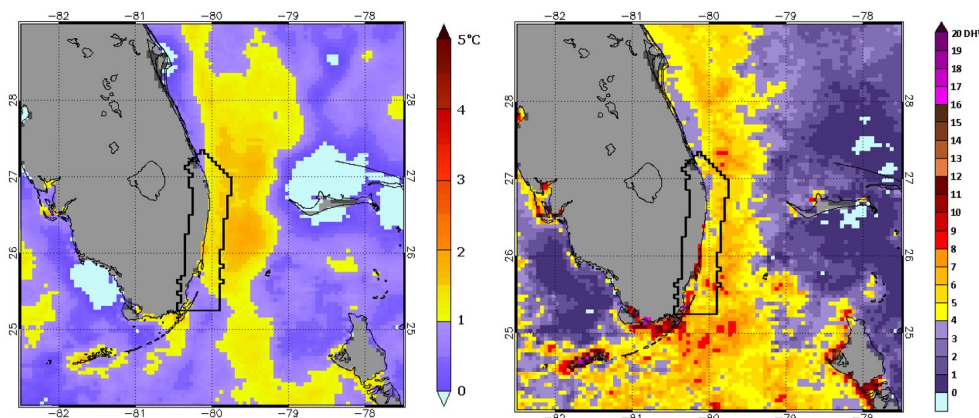


Figure 2. NOAA CRW Southeast Florida Coral Bleaching Hotspots. September 13, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Figure 3. NOAA CRW Southeast Florida Degree Heating Weeks. September 13, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

A total of 18 reports were received from the BleachWatch Observer Network during the last two weeks, from reefs located in northern Miami-Dade (3 reports), Broward (10 reports), Palm Beach (4 reports) and Martin (1 report) counties. All reports indicated observations of corals exhibiting signs of thermal stress, with the exception of Martin County which reported no bleaching. The majority of reports indicated partial bleaching as the predominant condition, although paling and total bleaching was also observed. The percentage of corals exhibiting signs of thermal stress generally ranged from 31% to 75%, although as little as 1 - 10% was observed at some sites.

Bleaching observations were made for a variety of species, including Encrusting/Mound/Boulder corals (*Siderastrea siderea*, *Solenastrea bournoni*, *Montastraea cavernosa*), Brain corals (*Psuedodiploria strigosa*, *Meandrina meandrites*), Branching/Pillar corals (*Acropora cervicornis*, *Porites porites*), Leaf/Plate/Sheet corals (*Undaria agaricites*, *Agaricia fragilis*), and Flowering/Cup corals. Many reports noted the presence of bleached Fire Coral, Gorgonians and *Palythoa spp.* at the survey sites, and several reports also included observations of black band and/or white plague disease, including possible recent disease-related mortality.

These observations along with a continued accumulation of thermal stress indicate that the onset of a mass bleaching event is likely at this time, although more field observations are needed. The Southeast Florida Coral Bleaching Outlook (Figure 5) indicates that the region is likely to continue to experience elevated temperatures in the coming weeks. 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."

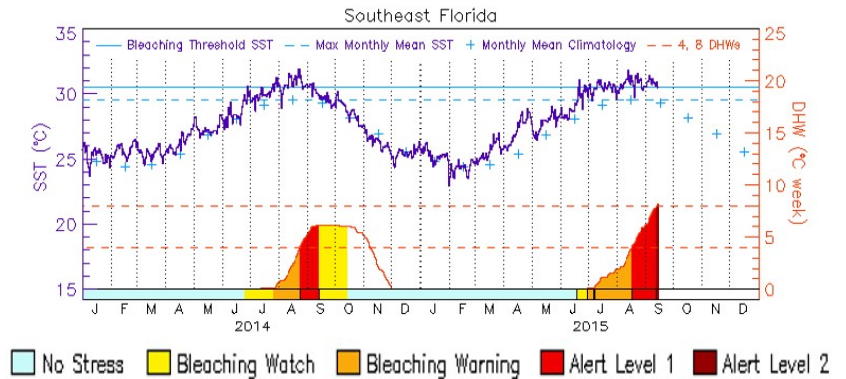


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 - September 14, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

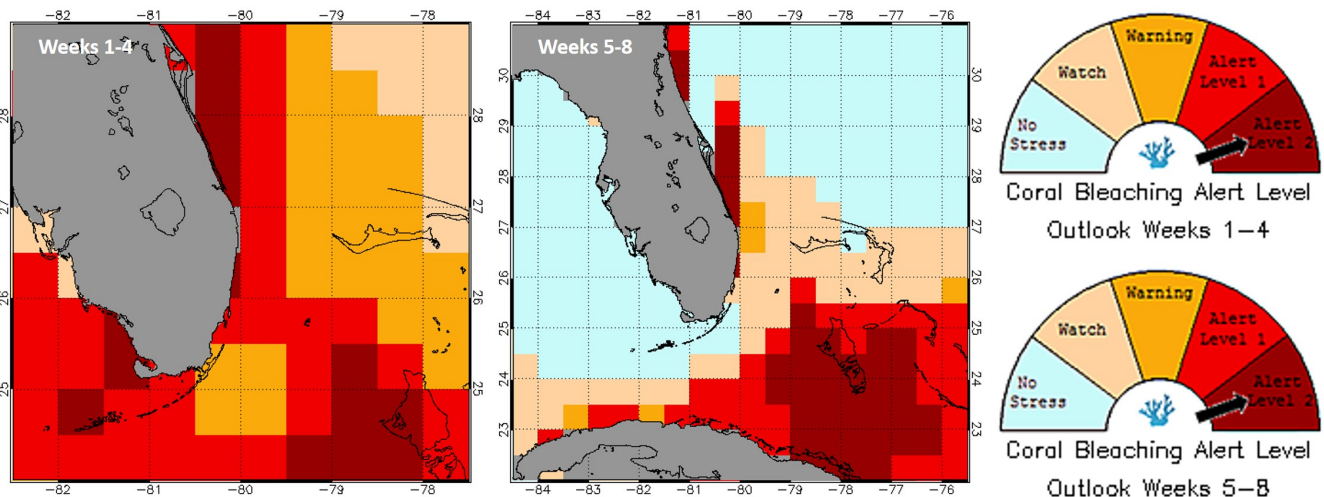


Figure 5. Southeast Florida Coral Bleaching Outlook for weeks 1-4 and 5-8; issued September 13, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

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