

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 **MODERATE**.

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 an Alert Level 1 to a Bleaching Watch; although corals may still be impacted by previous thermal stress, this improvement in conditions way allow for initial recovery to begin.

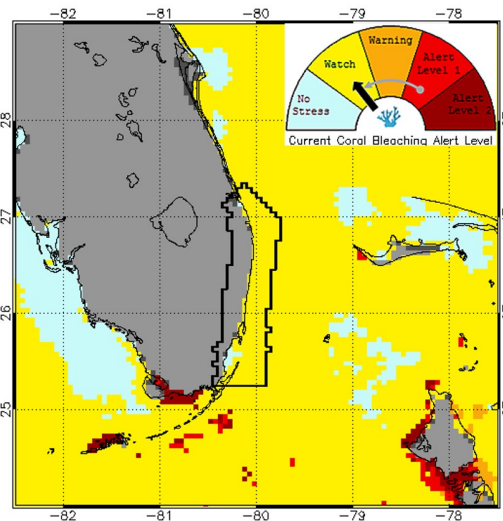


Figure 1. NOAA Coral Reef Watch Southeast Florida Satellite Coral Bleaching Alert Area. Sept. 28, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

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. Although still slightly elevated in parts of the region, current SST has dropped and is below the 1°C Hotspot bleaching threshold.

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, although it has not increased 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 has dropped below the bleaching threshold, and currently hovers around the maximum monthly average (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.

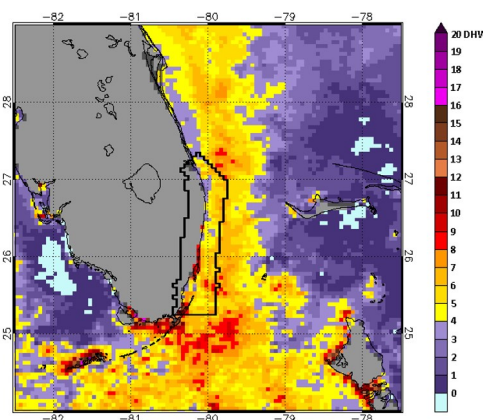
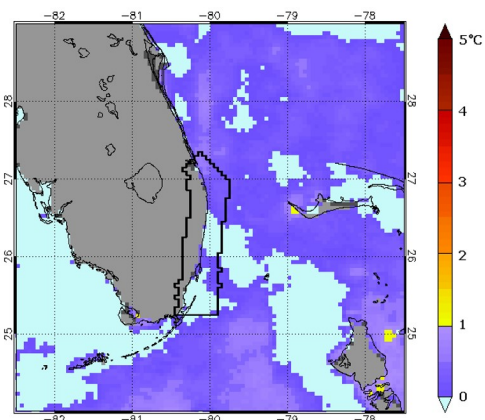


Figure 2. NOAA CRW Southeast Florida Coral Bleaching Hotspots. September 28, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Figure 3. NOAA CRW Southeast Florida Degree Heating Weeks. September 28, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

A total of 10 reports were received from the BleachWatch Observer Network during the last two weeks, from reefs located in Miami-Dade (1 report), Broward (7 reports), and Palm Beach (2 reports) counties. All reports indicated observations of corals exhibiting signs of thermal stress, with either partial bleaching or total bleaching noted as the predominant condition observed. The percentage of corals exhibiting signs of thermal stress varied among sites, with the majority of reports noting a range between 11 - 30% or 51 - 75%. One site each was reported with as little as 1 - 10% (Palm Beach County), and as much as 75 - 100% of corals affected (Broward County). During this time frame wind speed was generally reported as calm (0 - 5 kts), with bottom temperatures ranging from 84°F - 89°F. Some reports noted the presence of reverse thermoclines in which the surface water was cooler than the bottom temperature.

Bleaching observations were made for a variety of species, including Encrusting/Mound/Boulder corals (*Siderastrea siderea*, *Orbicella annularis*, *Montastraea cavernosa*), Brain corals (*Psuedodiploria strigosa*, *Psuedodiploria clivosa*, *Meandrina meandrites*), Branching/Pillar corals (*Acropora cervicornis*), Leaf/Plate/Sheet corals, Fleishy corals 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 ongoing observations of black band and/or white plague disease.

Despite these bleaching observations, 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 likely to experience a continued improvement in conditions 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."

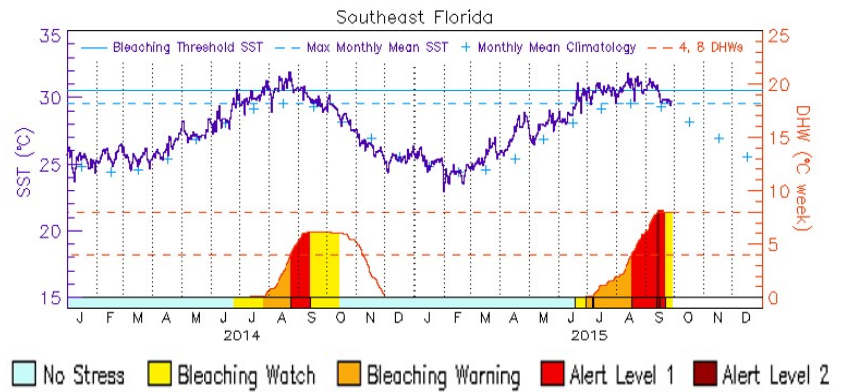


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 - September 29, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

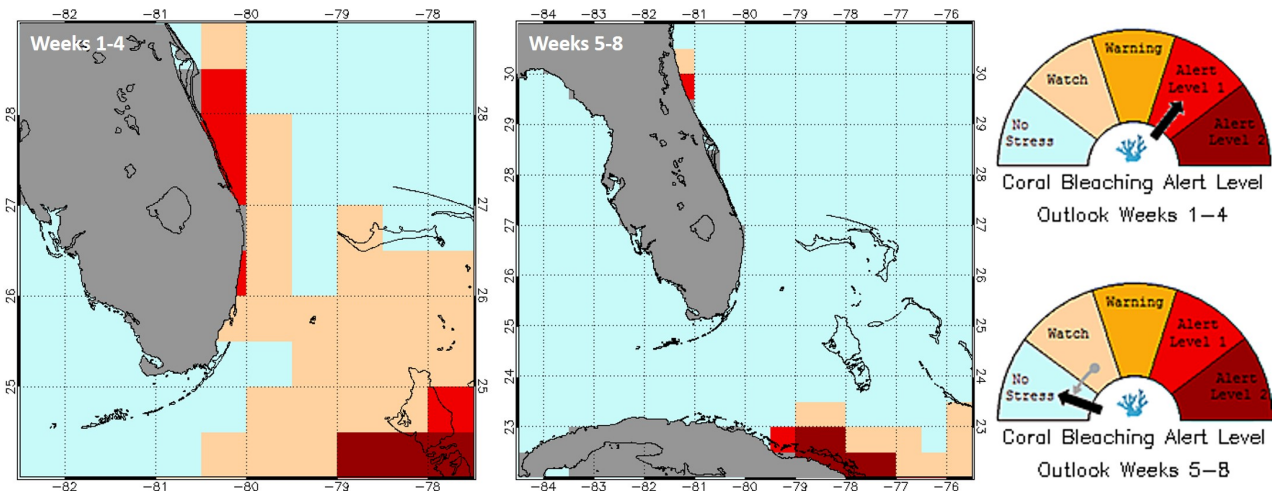


Figure 5. Southeast Florida Coral Bleaching Outlook for weeks 1-4 and 5-8; issued September 27, 2015. http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

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