

Current Conditions Report #20150901

September 1, 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 **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 entire region is under a bleaching warning or Alert Level 1 (Figure 1):

- 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 portions 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.
- 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.

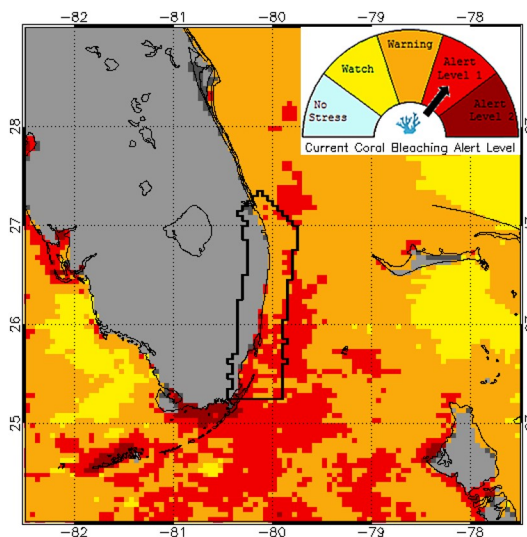


Figure 1. NOAA Coral Reef Watch Southeast Florida Satellite Coral Bleaching Alert Area. Aug. 30, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

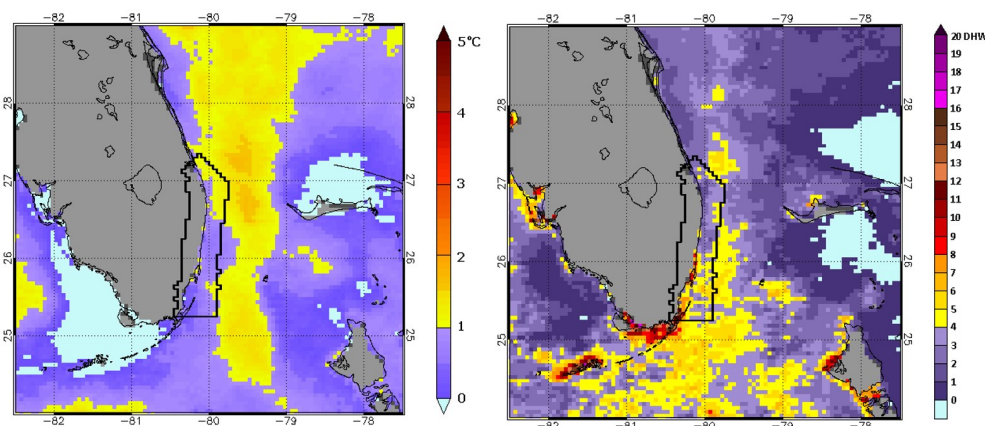


Figure 2. NOAA CRW Southeast Florida Coral Bleaching Hotspots. August 30, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Figure 3. NOAA CRW Southeast Florida Degree Heating Weeks. August 30, 2015.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

A total of 35 reports were received from the BleachWatch Observer Network during the last two weeks, from reefs located in northern Miami-Dade (4 reports) and Broward (9 reports) counties, as well as Biscayne National Park (22 reports). All reports indicated observations of corals exhibiting signs of thermal stress. In Biscayne National Park, the severity of bleaching ranged from paling to partial bleaching across 1-10% or 11-30% of coral cover, while in northern Miami-Dade all reports indicated total bleaching ranging from 11% up to 100% of stony coral cover. Observations from Broward County ranged from partial to total bleaching generally affecting 1 - 30% of the reef, although two reports indicated 50 - 75% affected.

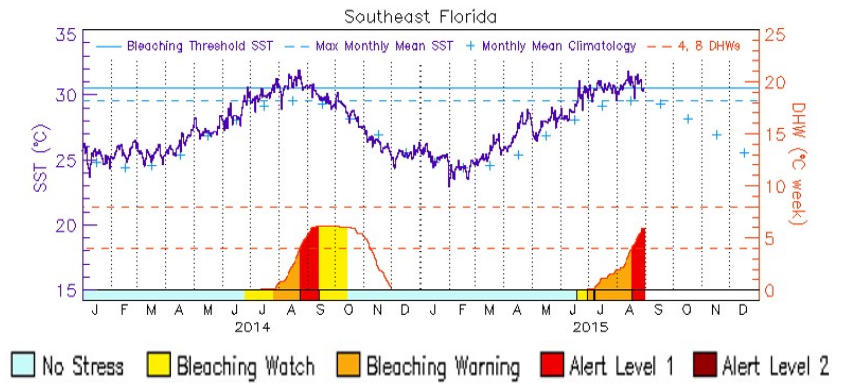


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 – August 30, 2015

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

Bleaching observations were made for a variety of species, including Encrusting/Mound/Boulder corals (*Siderastrea siderea*, *Stephanocoenia intersepta*, *Solenastrea bournoni*, *Montastraea cavernosa*, *Porites astreoides*), Brain corals (*Psuedodiploria strigosa*, *Meandrina meandrites*, *Colpophyllia natans*), Branching/Pillar corals (*Acropora cervicornis*, *Porites porites*), Leaf/Plate/Sheet corals (*Agaricia agaricites*), Fleshy corals, and Flowering/Cup corals. The majority of reports noted bleached Fire Coral, Gorgonians and *Palythoa spp.*, 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."

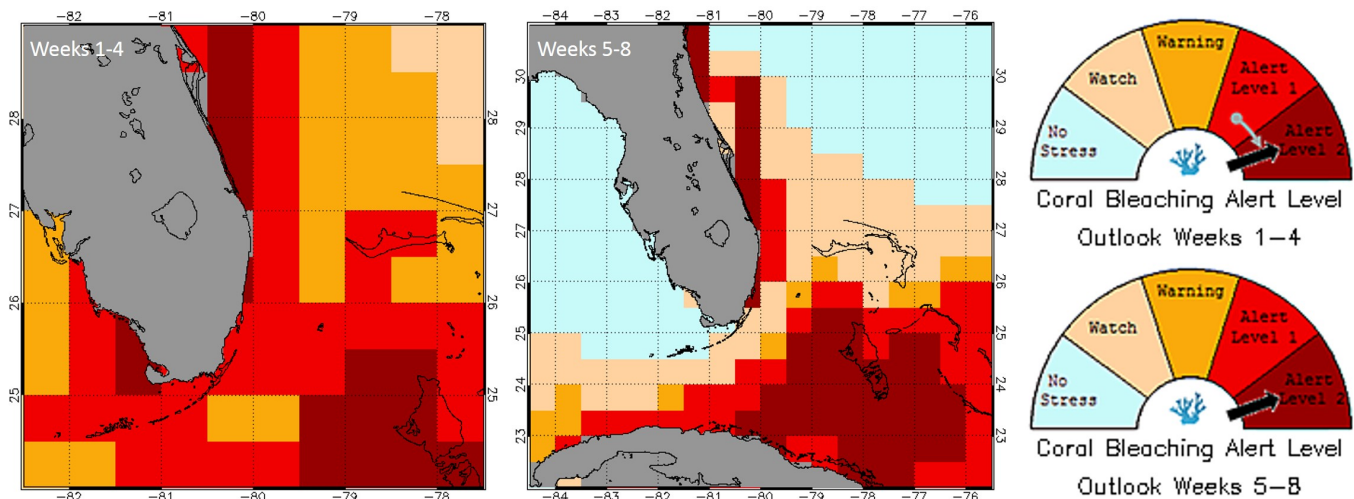


Figure 5. Southeast Florida Coral Bleaching Outlook for weeks 1-4 and 5-8; issued August 30, 2015.

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

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