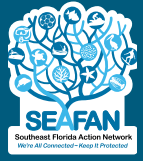




SEAFAN BleachWatch Program

CURRENT CONDITIONS REPORT #20220801

AUG. 1, 2022



Based on climate predictions and field observations, the threat for mass coral bleaching in Southeast Florida between Miami-Dade and Martin counties is MODERATE as of July 25, 2022.

Bleaching Alert

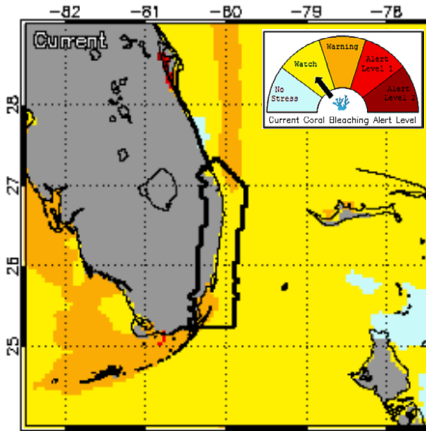


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for July 25, 2022

Bleaching Alert

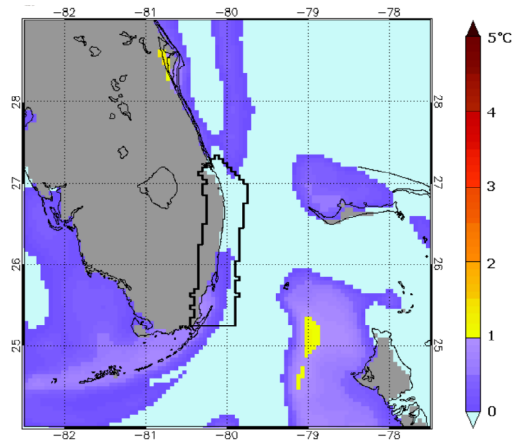


Figure 2. NOAA Coral Reef Watch Bleaching Hot Spots for July 25, 2022

Bleaching Alert

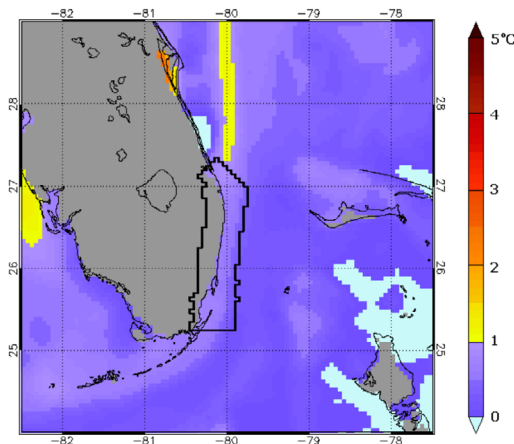


Figure 3. NOAA Coral Reef Watch Degree Heating Weeks for July 25, 2022

Virtual Station Data

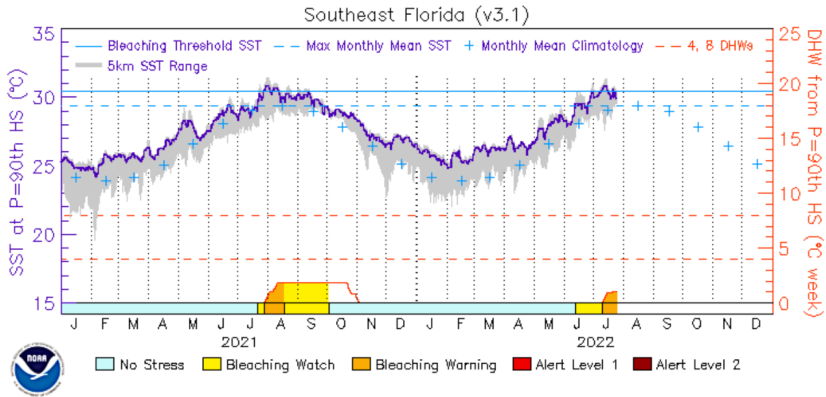


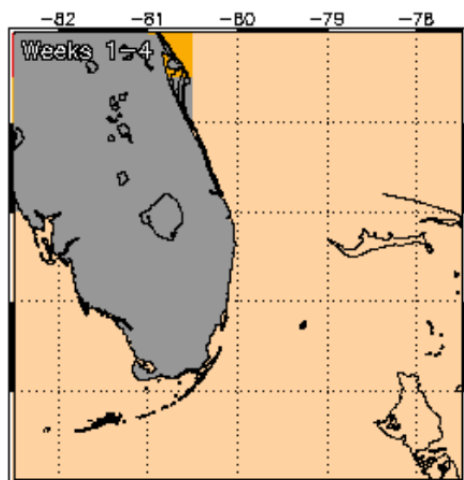
Figure 4. NOAA Coral Reef Watch Virtual Station Data
1/1/2021 – 7/25/2022

ENVIRONMENTAL MONITORING

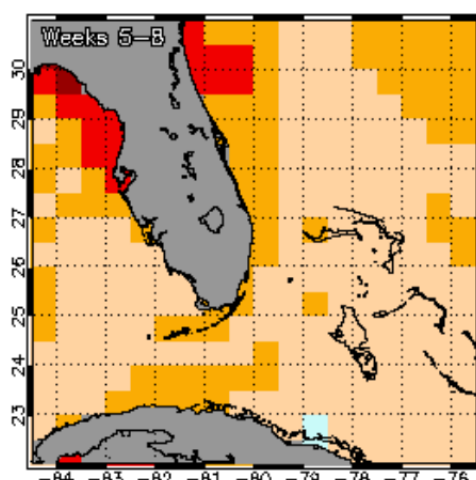
Climate predictions for this current conditions report are based on the National Oceanic and Atmospheric Administration's Coral Reef Watch (CRW) satellite imagery, which summarizes sea surface temperature (SST) data and provides an indication as to when conditions are favorable for coral bleaching. The current CRW 5K Coral Bleaching Alert Area indicates that the Southeast Florida region is presently experiencing some thermal stress with possible bleaching (**Figure 1**).

- NOAA's experimental 5K Bleaching Hot Spot Map (**Figure 2**) compares current SST to the maximum monthly mean. Corals begin to be stressed when SST is 1°C greater than the highest monthly average. Currently, SST is hovering around that 1°C threshold.
- Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA's experimental 5K 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 there is some accumulated temperature stress in the Southeast Florida region.
- Near real-time data from CRW's new 5K Satellite Regional Virtual Station for Southeast Florida indicates that SST in the region is above the maximum monthly average and above the bleaching threshold of the region (**Figure 4**).

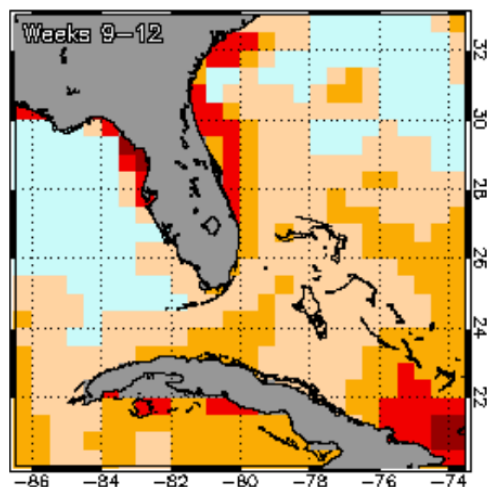
5A. One- to Four-Week Outlook



5B. Five- to Eight-Week Outlook



5C. Nine- to 12-Week Outlook



Coral Bleaching Alert Level
Outlook Weeks 1-4



Coral Bleaching Alert Level
Outlook Weeks 5-8

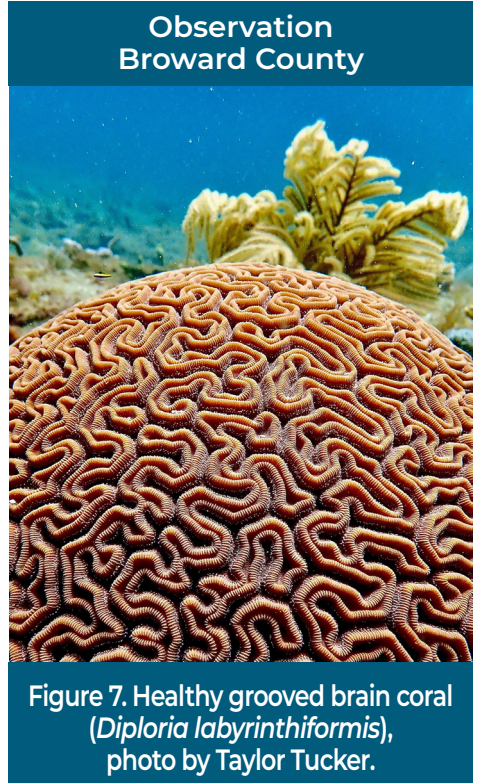
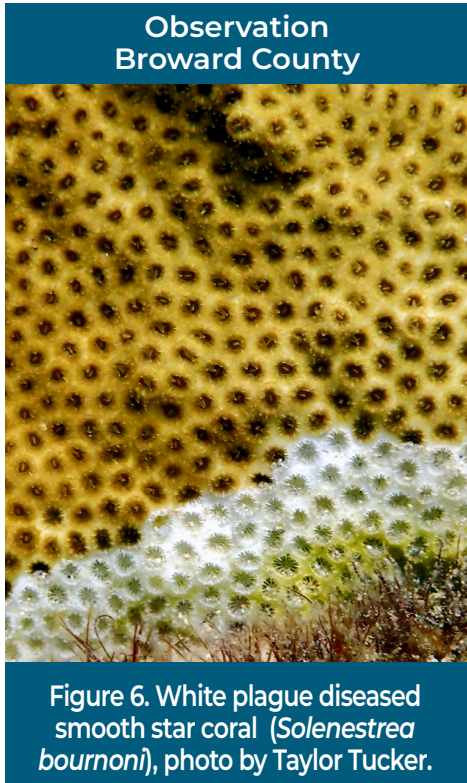


Coral Bleaching Alert Level
Outlook Weeks 9-12

Figure 5. NOAA CRW Southeast Florida Satellite 60% Probability Coral Bleaching Outlook Areas for July 25, 2022, through part of October 2022

SSTs have remained slightly higher than the monthly mean in Southeast Florida and are hovering near the bleaching threshold. The Southeast Florida Satellite Coral Bleaching Alert Area Outlook for the upcoming four weeks predicts that the region will be under a Bleaching Watch (**Figure 5A**). The five- to eight-week outlook indicates that the region will be under a Bleaching Warning (**Figure 5B**). The nine- to 12-week outlook indicates a Bleaching Alert Level 1 for Martin and Palm Beach counties, while Broward and Miami-Dade counties will continue to stay in a Bleaching Warning (**Figure 5C**).

The Florida Department of Environmental Protection's Coral Reef Conservation Program will continue to monitor NOAA's Hot Spot, DHW and Alert Area maps as well as virtual station data for the remainder of the summer bleaching season.



OBSERVER NETWORK

The Southeast Florida Action Network (SEAFAN) BleachWatch Program has received six reports since June 1, 2022. Of these, two reports indicated observations of bleaching and one indicated an observation of disease. The additional three reports observed only healthy corals with no signs of bleaching or disease. Geographically, there was one report from Palm Beach County, one report from Miami-Dade County and four reports from Broward County. Paling accounted for the majority of BleachWatch reports with some partial bleaching observed. Bleaching was observed on the maze coral (*Meandrina meandrites*) and the blushing star coral (*Stephanocoenia intersepta*), and recent mortality was observed on the grooved brain coral (*Diploria labyrinthiformis*).

Tissue loss disease continues to pose a threat to Florida's Coral Reef. There was one observation of tissue loss disease on the smooth star coral (*Solenastrea bournoni*) in Broward County.

The next Current Conditions Report will be issued in early September. Given the rising temperatures over the next eight weeks and current Bleaching Warning, SEAFAN encourages the BleachWatch network to submit reports on coral bleaching and disease after every dive on the reef. This includes reports of "No Bleaching" and "No Disease."

For more information about SEAFAN BleachWatch or to take a BleachWatch Training and become a part of the observer network, please call 561-681-6631 or email Coral@FloridaDEP.gov.

Program Partners



Florida Department of Environmental Protection
Southeast Florida Action Network (SEAFAN) BleachWatch