

# Salt River Bay National Historical Park and Ecological Preserve

National Park Service  
U.S. Department of the Interior

Inventory and Monitoring Program  
South Florida/Caribbean Network



## Marine Benthic Communities, 2016 Coral Reef Monitoring Summary

### Importance: A Critical Resource for Fisheries, Tourism and Marine Biodiversity

Coral reef communities within Salt River Bay National Historical Park and Ecological Preserve (SARI) consist of stony corals, octocorals, sponges, algae, and gorgonians (e.g. sea fans). Reefs support incredible marine biodiversity and provide habitat for a multitude of fish species, lobsters, sea turtles, and other creatures. Coral reefs also play a vital economic role by supporting fisheries, tourism, sand creation for beaches, pharmaceutical bio-prospecting, and shoreline protection to name a few. Monitoring coral reefs was identified as a national priority in President Clinton's Executive Order 13089, establishing the Coral Reef Initiative. Coral reefs are negatively impacted by events such as extreme water temperatures that cause "bleaching", vessel scarring, major storms, coral disease, damaging fishing practices, sediment runoff, nutrient enrichment, contaminants, ocean acidification, and abrasion of the reef by debris or careless snorkelers and divers.

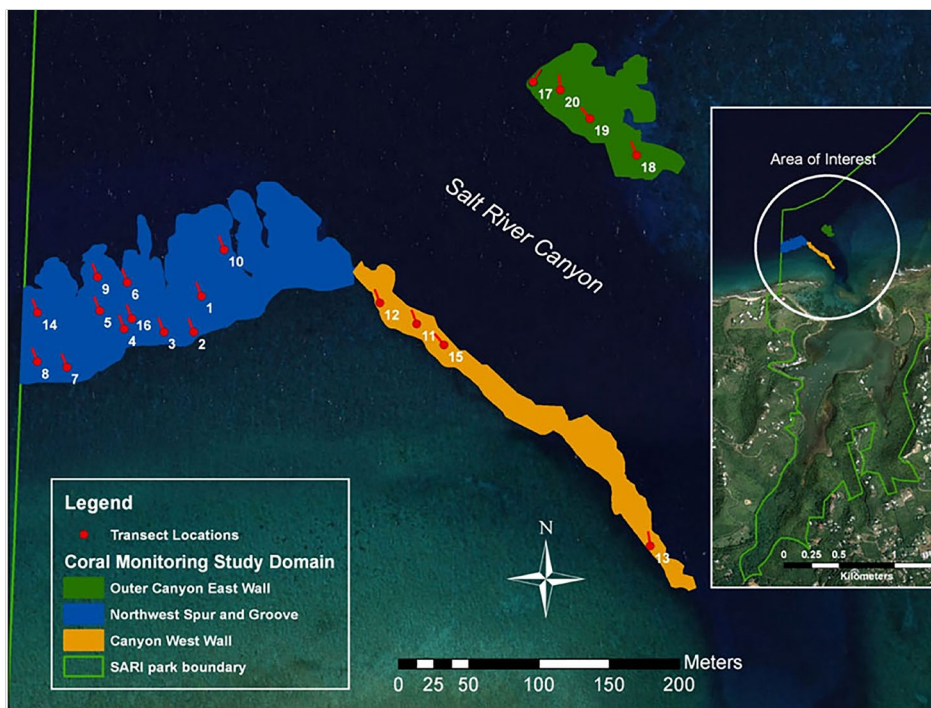


The Salt River submarine canyon is approximately 100 meters (328 feet) deep; characterized by a steep near vertical west wall and more gradually sloped (15–20 degree) east wall.

### Monitoring: *Canyon West Wall, Canyon East Wall, and Northwest Spur and Groove since 2012*

The SARI coral reef monitoring site was installed in April 2012. The site is 26,437 square meters (6.5 acres), and consists of 20 randomly placed permanent transects, located within three sections: Canyon West Wall, Canyon East Wall, and Northwest Spur and Groove. These areas

were constrained to less than 33 meters (108.3 ft) in depth and were chosen because of relatively high coral cover, reef complexity, and historical significance. The 10 meter (32.8 ft) transects are monitored annually using underwater video. Percent cover of living coral by species, macroalgae, turf and coralline algae, octocorals, and sponges are calculated. Data on coral disease, bleaching, water temperature, and long-spined sea urchins are also collected



Locations of the 20 transects which make up the Salt River Bay National Historical Park and Ecological Preserve (SARI) coral reef monitoring index site: outer Canyon East Wall (green area), Canyon West Wall (orange area), and Northwest Spur and Groove (blue area). The sites are located at the Northwest corner of the SARI boundary.

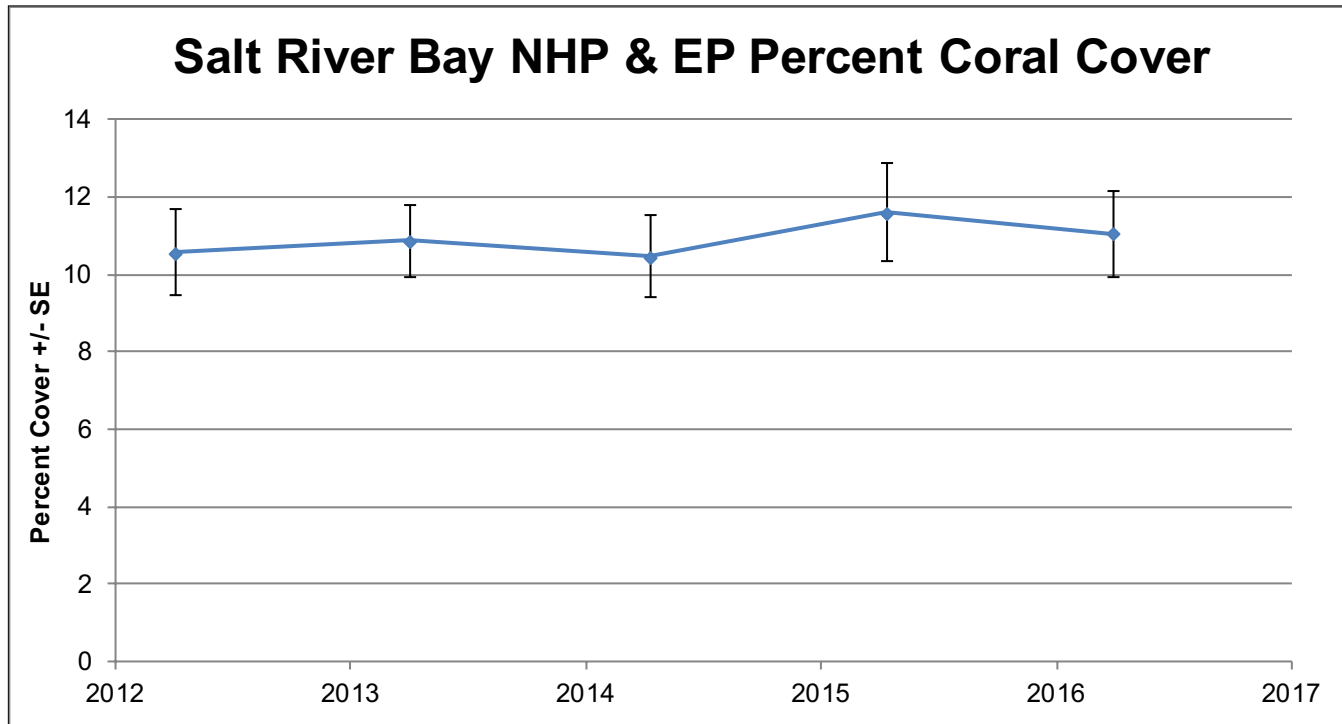


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18001 Old Cutler Rd. Suite 419  
Palmetto Bay, FL 33157

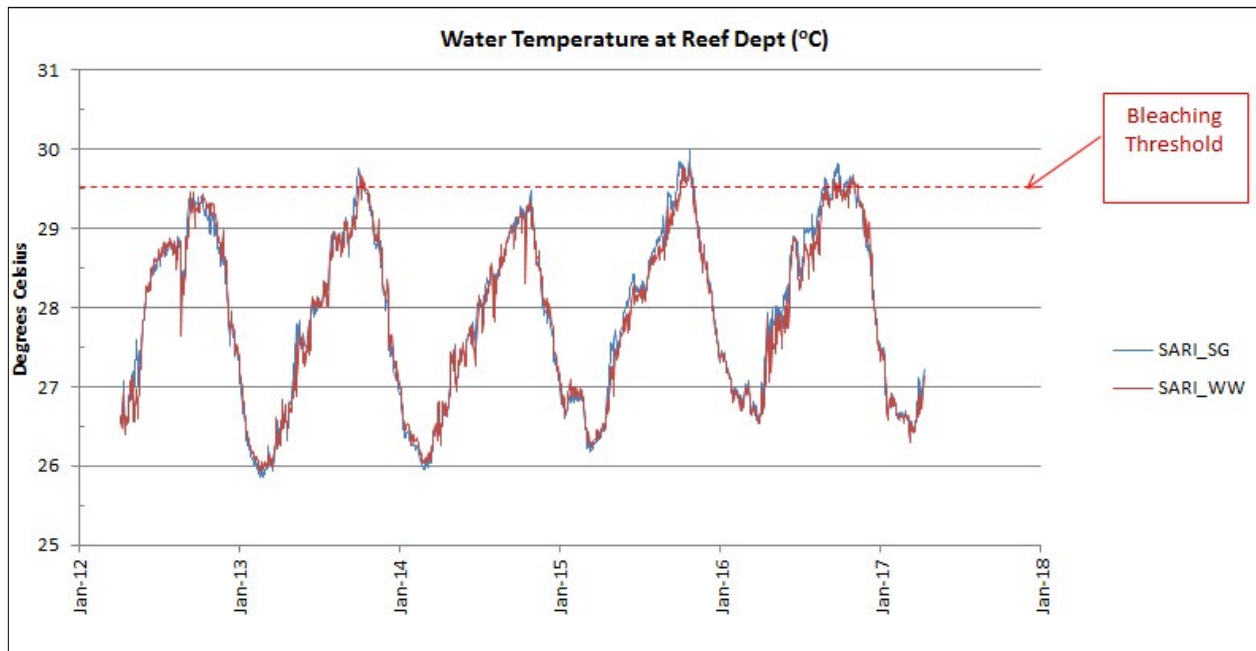
<http://science.nature.nps.gov/im/units/sfcn/monitor/marine/coral.cfm>

## Status and Trends

This is SFCN's fifth year collecting benthic data at the SARI site. Live stony coral cover was 11%. A comparison of historical data shows that coral cover on the Canyon East Wall of the Salt River canyon is within the historical range but coral cover on the West Wall is below values reported previously from 1979–1984. SFCN data also shows relatively high macroalgae cover (21%), which was not listed as a benthic component in any historical report for SARI.



Trends in live stony coral cover at monitoring site in Salt River National Historical Park and Ecological Preserve.



SARI water temperature is measured using loggers placed at reef depth at the West Wall (WW) and Northwest Spur and Groove (SG) areas.



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