

ANTIGUA AND BARBUDA WEATHER SUMMARY 2014



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Overview

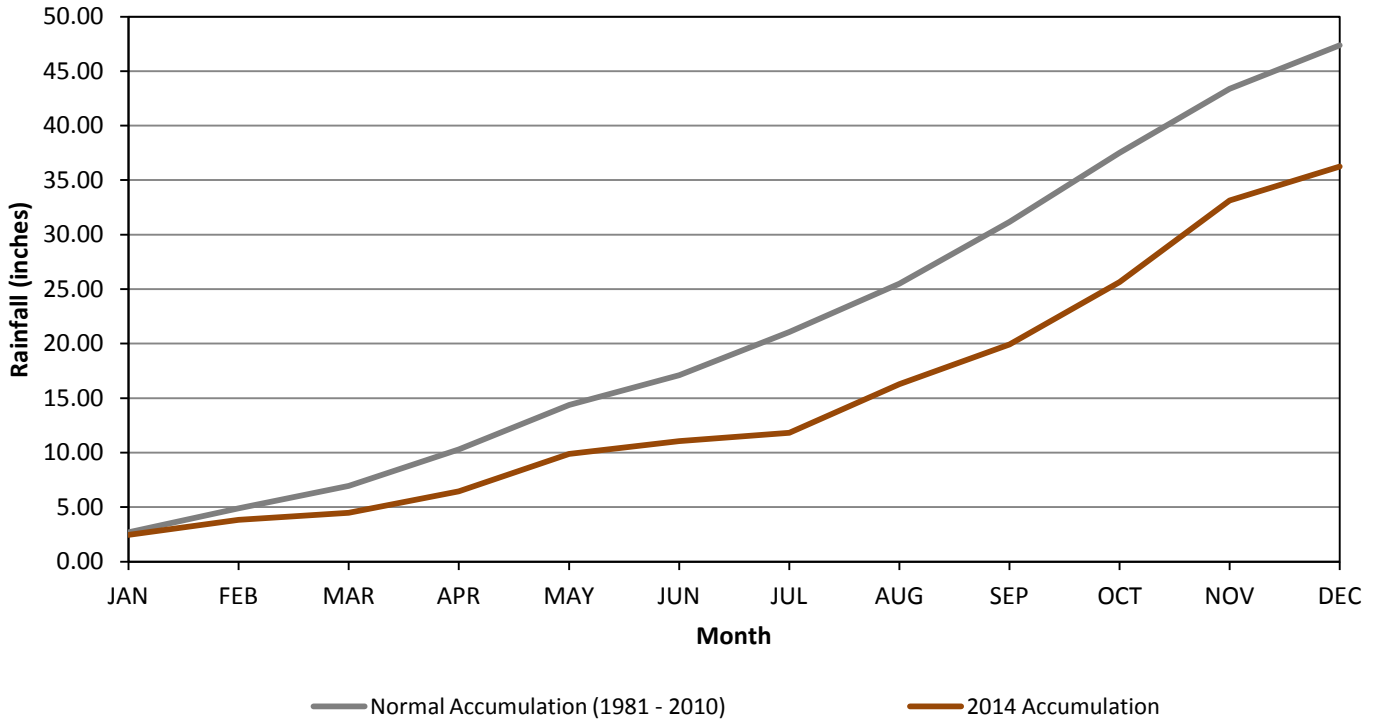
This was another drought year for Antigua with both dry and wet seasons producing lower than normal rainfall. This resulted in basically all surface catchments drying up, plunging the island into a water crisis. November was the wettest and only month with above normal rainfall, without which the water crisis would have deepened further with perhaps severe economic implications. July was the driest and severely so with the dryness experienced occurring once in every 115 years, on average. In October, Tropical Cyclone Gonzalo struck the island with hurricane force winds and caused millions of dollars in damage. Although the global temperature was at record high, the mean temperature for Coolidge Antigua was below normal.

Precipitation

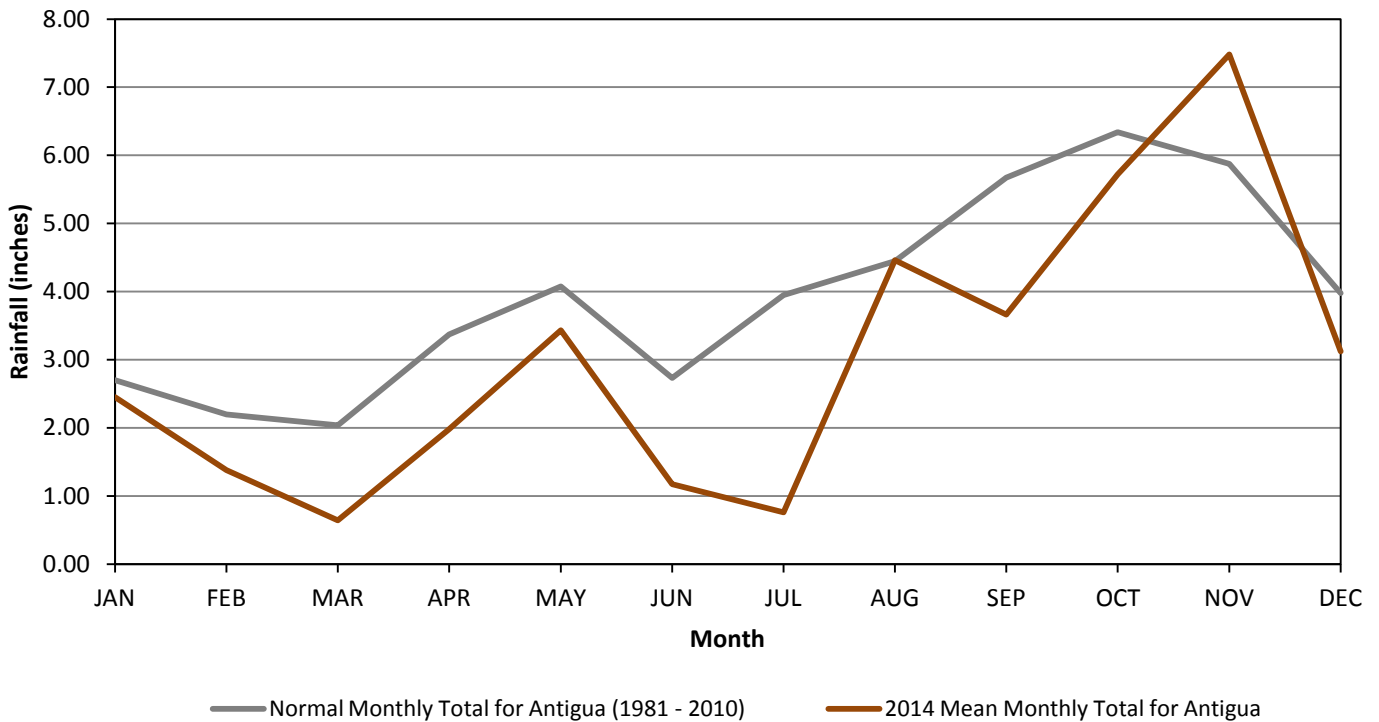
The year 2014 was a drought year for Antigua, following on from a drought which started in September 2013. It started out as a meteorological drought and undoubtedly degenerated into an economic drought by July with basically all surface catchments dried-up. By which time, there was extreme water rationing with some communities going weeks without pipe-borne water. The drought reached moderate levels over the period January to April and serious levels June to September. It eased to slight levels at the end of October and continued at this level for the remainder of the year (Graph 1 and 2). In terms of droughts lasting a year or more, it is the 10th worse and the worse since 2002/2003. Overall, it ranks as the 17th worse out of the 68 droughts on record.

Overall, the rainfall for 2014 was 920.8 mm (36.25 in); this was drier than normal, the driest since 2003 and 13th driest on record dating back to 1928. Both the **dry** and **wet** seasons were drier than normal with the dry season (January-June) ranked 12th driest on record. No rainfall records were broken in 2014; however, July was the second driest ever. This low rainfall total only happens once in every 115 Julys, on average. The last and only other time July was drier was 1976. The period June-August (summer) was the fourth driest on record and the driest since 1986. This severe dryness only occurs once in every 21 summers, on average. Meanwhile, the first nine months of the year was the sixth driest on record and the driest since 2003. This occurs once every 29 years, on average. Five months had below normal rainfall: February, March, April, June and July; only **November** had above normal rainfall, which exceeded the accumulated total for the months mentioned. The rainfall of November also resulted in moderate flooding. Although overall it was a relatively dry year, there were a few places that had near average rainfall: Dunbars, Bethesda and Park (Barbuda). Of the station reporting, Orange Valley was the wettest and Hodges Bay the driest (Graph 3 and Map 1).

Graph 1: Rainfall Accumulation for Antigua

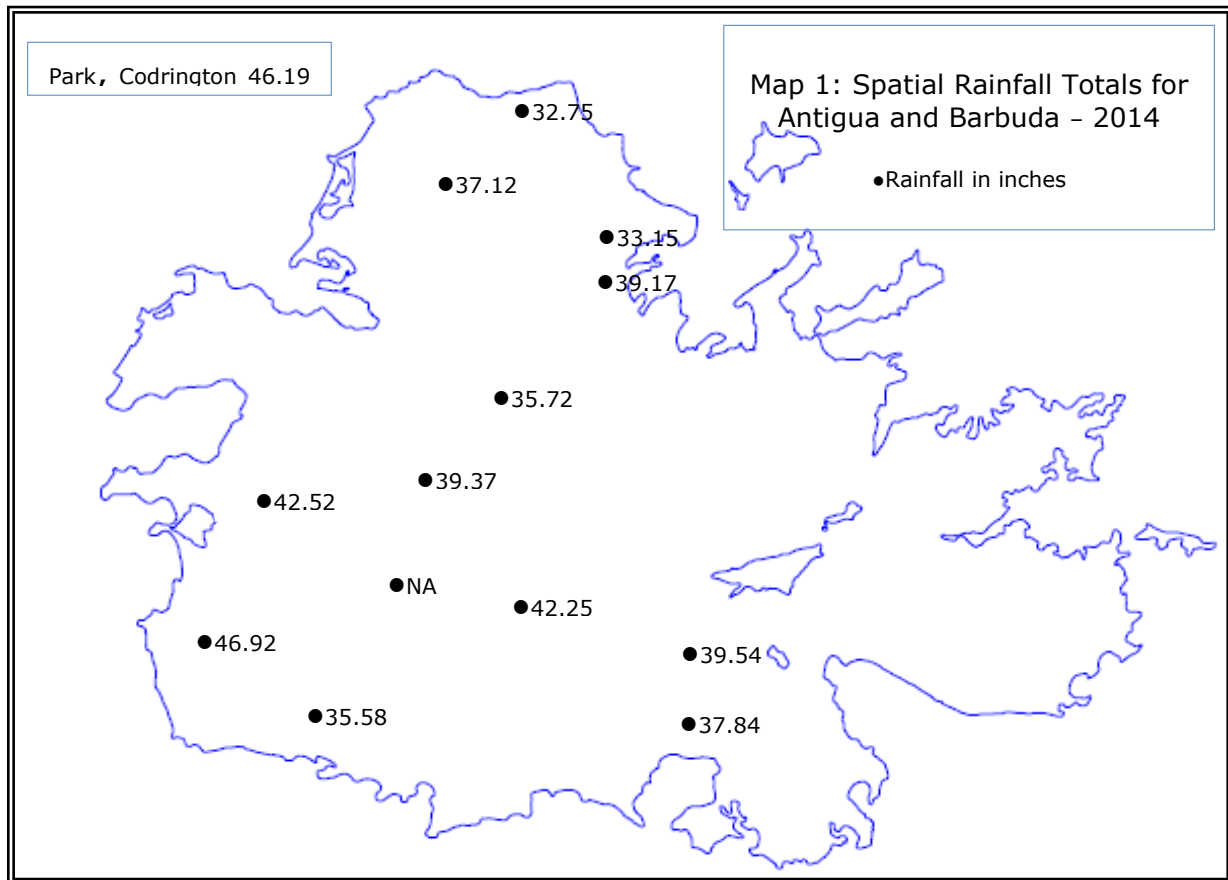
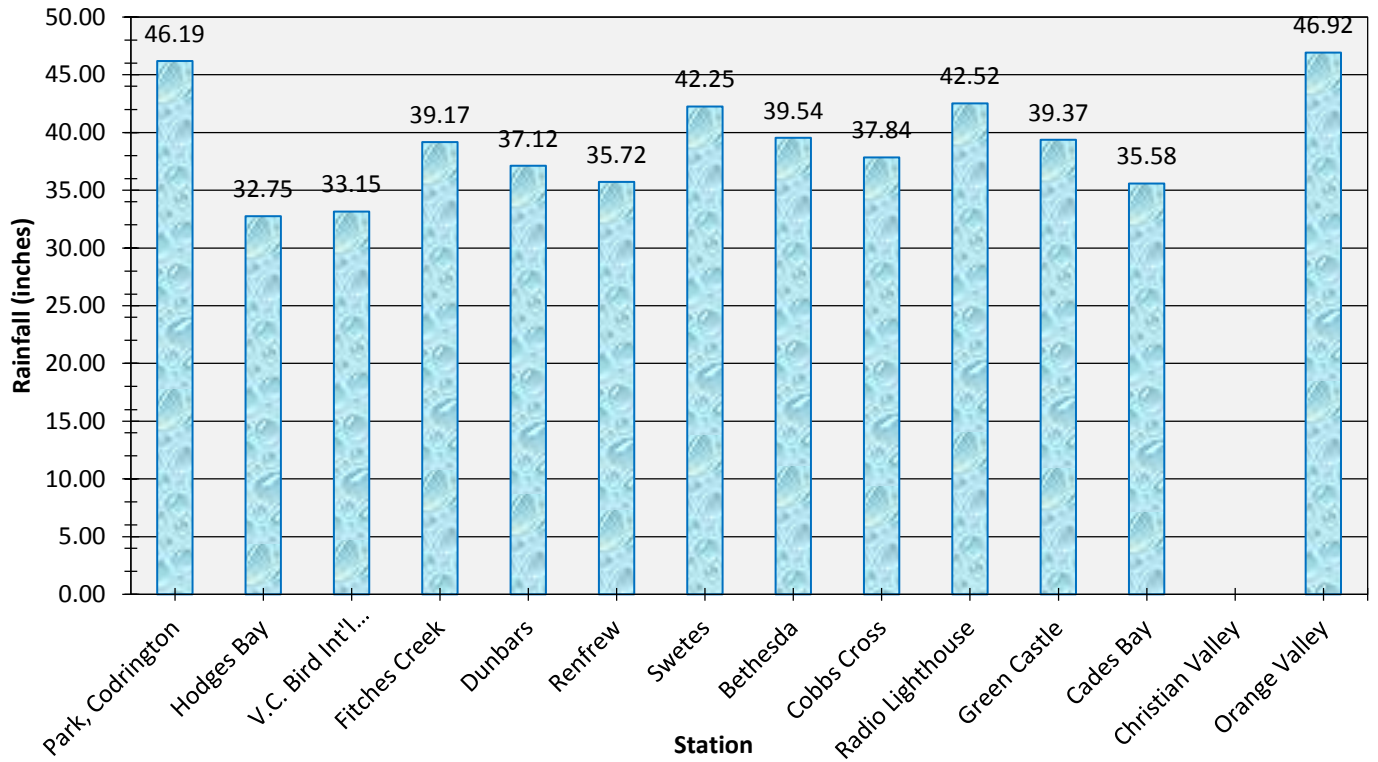


Graph 2: Rainfall for Antigua



The estimated island average is 1187.5 mm or 46.75 inches (1981 – 2010). In the past 87 years, the wettest year is 1951 with 1764.0 mm (69.45 in) and the driest is 1983 with 681.48 mm (26.83 in).

Graph 3: Annual Rainfall Totals for Antigua and Barbuda - 2014

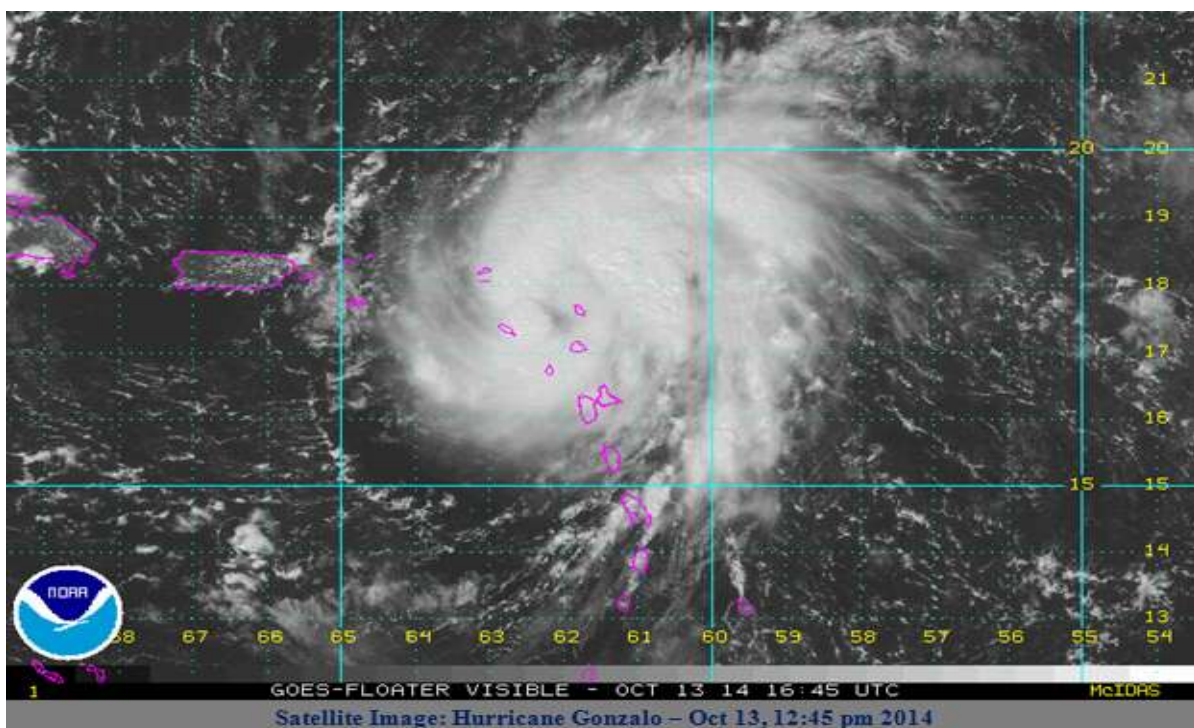


Tropical Cyclones

The 2014 Atlantic hurricane season was generally relatively quiet; however, it was average for Antigua. It produced eight (8) named storms. Of the eight (8) storms, six (6) became hurricanes and two reached major hurricane status - category three (3) or higher on the Saffir-Simpson Hurricane Wind Scale. Two of the eight named storms affected Antigua and Barbuda: Bertha and Gonzalo. Gonzalo ended the country's 14-year hurricane drought, becoming the first tropical cyclone to cause sustained hurricane force winds since Jose in 1999.

Bertha brushed Antigua as a storm on August 1-2. At its closest point, the centre of the storm passed about 120 miles southwest of Antigua between 8 pm August 1 and 2 am August 2. At the Antigua and Barbuda Meteorological Office (ABMO) located at the V. C. Bird International Airport (VCBIA), Coolidge, the maximum 1-minute sustained wind from Bertha was around 27 mph with maximum gusts around 38 mph. Total rainfall from the system, measured at the airport, was about 8.4 mm (0.33 in) over the period August 1-3.

Gonzalo made a direct hit on Antigua as a hurricane on October 13 (Picture 1). The centre passed over Antigua between 10 and 11 am. Up until January 2015, [Gonzalo](#) was officially classified as a tropical storm while over Antigua; however, the ABMO was able to convince the U.S. National Hurricane Center that the system was indeed a hurricane at the time it was over the island. At the ABMO, the maximum 1-minute sustained wind from Gonzalo was 77 mph with gusts of 90 mph. There are unofficial reports of stronger winds. Total rainfall from the system, measured at the airport, was about 32.4 mm (1.28 in) over the period October 11-16. However, radar estimates showed up to 50.8 mm (2 in) fell in Antigua and up to 152.4 mm (6 in) fell in Barbuda. The estimated cost of damage to the country from Gonzalo was around US\$40 million.



Picture 1: Hurricane Gonzalo

Temperature

Land

Notwithstanding the earth having a record high temperature for 2014, this warmth was not evident here in Antigua. The mean temperature for the year, measured at the VCBIA of 26.6°C was cooler than normal. This is the lowest in three years. No month had above normal temperature. The warmest months were July and September, both with 27.9°C and the coldest were February and March, both with 25.3°C. The absolute maximum and minimum temperatures for the year were 32.3°C and 19.8°C respectively. The absolute temperature range, the difference between the absolute maximum and minimum was 12.5°C, the record lowest. This was mainly due to the absolute minimum, which tied with 2002 for the sixth highest on record.

Sea

Unlike land temperatures, sea surface temperatures (SST) around Antigua and Barbuda were above normal (Graph 4). The mean SST was 27.9°C. This is the 10th highest on record. However, the past four years have seen similar or higher temperatures. The warmest months were September and October, and the coolest was February. Temperatures in January, March, November and December were well above normal.

The combined VCBIA and sea surface temperatures was 27.2°C, near normal.

