

Drought and Precipitation Statement for Antigua - August 2015



Dale C. S. Destin ([follow @anumetservice](#))
 Antigua and Barbuda Meteorological Service Climate Section
 September 18, 2015

[Please take our Weather Survey](#)

...Record low rainfall for a number of periods...drought remains at severe levels...

Statement

A number of rainfall records were again broken over the past 26 months. Stricken by drought, which has been at severe levels since May, there has been **record low rainfall** over the past 2, 3, 4, 5, 6, 7, 8, 9, 15, 18, 19, 20, 21, 22, 23, 24, 25 and 26 months (see table 1).

August, which is the second month of the wet season, proved to be another extremely dry month for Antigua, with 1.61 inches of rainfall. This is the second lowest on record dating back to 1928; only August 1984 was drier.

The intensity of the drought is based on the rainfall total of the last three months. Over the periods March-May, April-June, May-July and June-August (summer 2015), the rainfall totals were in the bottom 5% of all totals for the respective periods; hence, the classification of the drought to be at severe levels.

Summer 2015) is now the **driest summer** on record dating back to 1928. The drought continues to intensify and is now the worst since 2000/2001. Of the 69 droughts on record dating back to 1928, it's the sixth worst of any length, and of the fifth worst of the eleven lasting at least 18 months, based on average rainfall deficit.

The year-to-date is the driest ever on record dating back to 1928. The rainfall deficit since the drought started (**readjusted to July 2013**) has increased to **32.1 inches**, up 2.84 inches from last month. It is the record driest for any similar 26-month period ending August and the ninth driest of any 26-months.

Based on our latest analyses, below normal rainfall is **forecast** for the next six months. Given these and **other forecasts**, it is likely that the drought will continue for the foreseeable future.

Period	Rainfall			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2015			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Aug)	1.61	4.45	- 2.84	Well below normal	13.23	2010	1.52	1984
3(Jun-Aug)	3.74	11.12	- 7.38	Record low	24.48	2010	3.74	2015
6(Mar-Aug)	6.53	20.61	- 14.08	Record low	40.53	2010	6.53	2015
9(Dec-Aug)	12.39	29.50	- 17.11	Record low	49.05	1951	12.39	2014
12(Sep-Aug)	29.25	47.29	- 18.04	Well Below normal	71.84	1951	27.56	1983
24(Sep-Aug)	62.11	94.41	- 32.3	Record low	130.76	1951	62.11	2013

Table 1: Rainfall (inches) over the past 24 months. (For records, the year given marks the start of the period).

Definition

Drought in general means water shortage and rainfall deficiency. **Meteorological (climatological) drought** is defined in terms of the magnitude of a precipitation shortfall/deficit and the duration of this shortfall event. This is assessed by first examining the rainfall periods of three months or more for selected places to see whether they lie below the 30th percentile (lowest 30% of the historical records). The approach used to determine the rainfall deficit is an adjusted version of the decile method

developed by Gibbs and Maher (1967). An adjusted version of this method is used as the measurement of droughts within the Australian Drought Watch System.

The drought levels, based on consecutive three-month historical data, are defined as follow:

- **Slight:** rainfall ranges from less than 30th percentile to the 20th percentile
- **Moderate:** rainfall ranges from less than the 20th percentile to the 10th percentile
- **Serious:** rainfall ranges from less than the 10th percentile to the 5th percentile
- **Severe:** rainfall less than the 5th percentile

The level of a drought period/episode (drought lasting three or more months) is described based on the maximum consecutive three-month rainfall deficit.

Probability of drought:

- **Slight chance:** 5 to 25% chance of occurring
- **Chance:** 30 to 55% chance of occurring
- **Likely:** 60 to 75% chance of occurring
- **Highly likely/expected:** Greater than or equal to 80% chance of occurring

Rainfall Description used on the 1981 to 2010 rainfall dataset:

- **Well below normal:** Rainfall totals in the lowest 10% of the dataset
- **Below normal** (lower or less than usual): Rainfall totals in the lowest 33.3% of the dataset
- **Near normal** (normal or usual): Rainfall totals in the middle 33.3% of the data
- **Above normal** (more or higher than usual): Rainfall totals in the highest 33.3% of the dataset
- **Well above normal:** Rainfall totals in the highest 10% of the dataset
- **Rainfall:** Island average, based on rainfall at the Airport and Green Castle

Disclaimer

The information contained herein is provided with the understanding that the Antigua and Barbuda Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this statement. The information may be used freely by the public with appropriate acknowledgement of its source, but shall not be modified in content and then presented as original material.