



## Drought and Precipitation Statement for Antigua – November 2012

Dale C. S. Destin

[Antigua and Barbuda Meteorological Service Climate Section](#)

[mail](#) | [twitter](#) | [facebook](#) | [youtube](#) | [blog](#)

December 17, 2012

### Tenth Driest November on record

The island had significant deficit rainfall for November with the 2.55 inches that fell being the 10<sup>th</sup> lowest on record for the month. This total only 43% of the normal of 5.88 inches and the second lowest since 1997. Meanwhile, the period September to November (SON) had near normal rainfall. Based on various models, trends, climatology and subjective input, near normal (2.87 to 4.04 inches) and above normal rainfall (greater than 10.06 inches) are most likely for December and December to February respectively. There is only a slight chance of a meteorological drought over the next three months. See table 1 for more.

Period	Rainfall (inches)			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2012			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Nov)	2.55	5.88	- 3.33	Well below normal	20.91	1999	0.99	1947
3(Sep – Nov)	16.41	17.88	- 1.47	Near normal	33.57	1974	6.45	1983
6(Jun – Nov)	23.92	29.01	- 5.09	Below normal	43.87	1999	15.46	1983
9(Mar – Nov)	33.09	38.49	- 5.4	Near normal	59.33	1987	20.68	1930
12(Dec – Nov)	41.56	47.38	- 5.82	Near normal	69.01	1952	27.11	2001
24(Dec – Nov)	104.91	94.02	+ 10.89	Above normal	134.39	1952	62.88	2001

Table 1: Rainfall (inches) over the past 24 months.

### Drought

Drought in general means water shortage and rainfall deficiency. This is assessed by first examining the rainfall periods of three months or more for selected places to see whether they lie below the 30<sup>th</sup> 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 historical data, are defined as follow:

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

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

The following definitions are being used on the 1981 to 2010 rainfall dataset:

- **Well Below normal:** Rainfall totals in the lowest 10% of the dataset
- **Below Normal:** Rainfall totals in the lowest 33.3% of the dataset
- **Near Normal:** Rainfall totals in the middle 33.3% of the data
- **Above Normal:** 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.

Note: The issuing of formal drought and precipitation statements by the Antigua and Barbuda Met Service is not to be taken to mean that there are unprecedented rainfall totals. Rather, the Met Service in harmony with its mission has seen the need to provide these statements to inform the public regarding the state of rainfall in Antigua and Barbuda.