



Drought and Precipitation Statement for Antigua – November 2011

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Well above normal rainfall for November...the eighth highest on record

The island had well above normal rainfall during November with an average total of 10.11 inches. This is the highest since 1999 for the month and the eighth highest on record. Meanwhile, for autumn - the period September to November (SON), the rainfall total was near normal. This near normal total was largely due to the below normal rainfall for October; thus, the abundant rainfall episode, which started in April, came to an end; however, November could be the start of another episode of abundant rainfall. As of the end of November, the total for the year stood at 59.11 inches; this it has significantly surpassed the normal yearly total of 46.75 inches.

Based on various models, trends, climatology and subjective input, above normal rainfall is most likely for December and for the winter - DJF. There is only a slight chance of drought for DJF. See table 1 for the rainfall totals for the past 24 months.

Period	Rainfall (inches)			Description (1981 – 2010)	Rainfall Record – 1928 to 2011			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Nov)	10.11	5.88	+ 4.23	Well above normal	20.91	1999	0.99	1947
3(Sep – Nov)	19.79	17.88	+ 1.91	Near normal	33.57	1974	6.45	1983
6(Jun – Nov)	40.69	29.01	+ 11.68	Well above normal	43.87	1999	15.46	1983
9(Mar – Nov)	55.83	38.49	+ 17.34	Well above normal	59.33	1987	20.68	1930
12(Dec – Nov)	63.35	47.38	+ 15.97	Well above normal	69.01	1952	27.11	2001
24(Dec – Nov)	127.34	94.02	+ 33.32	Well above normal	134.39	1952	62.88	2001

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

Top 8 Wettest Novembers:

- 1 20.91 in 1999
- 2 16.29 in 1974
- 3 13.72 in 1942
- 4 13.35 in 1986
- 5 13.34 in 1977
- 6 12.23 in 1934
- 7 10.61 in 1987
- 8 10.11 in 2011

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 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 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

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

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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.