



Drought and Precipitation Statement for Antigua – March 2012

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Well below normal rainfall for March...Slight meteorological drought exists

The island had well below normal rainfall during March with an average total of 1.01 inches. This is the second lowest since 2005 for the month. Meanwhile, the period January to March (JFM), had below normal rainfall. Hence, as a result of the below normal rainfall totals for JFM, Antigua has entered into a slight meteorological drought. The total for JFM is 1.71 inches below the Climatological Normal. See table 1 for more.

Based on various models, trends, climatology and subjective input, below normal rainfall is most likely for April and near normal for AMJ. There is a moderate chance of the drought ending over the next three months – AMJ.

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(Mar)	1.01	2.04	- 1.03	Well below normal	8.90	1967	0.36	1930
3(Jan – Mar)	5.22	6.93	- 1.71	Below normal	12.95	1937	1.87	1931
6(Oct – Mar)	22.41	23.00	- 0.39	Near normal	38.52	2000	10.47	2001
9(Jul – Mar)	47.29	36.80	+ 10.49	Well above normal	55.26	1937	19.95	1931
12(Apr – Mar)	62.35	46.47	+ 15.88	Well above normal	71.72	1952	24.34	1931
24(Apr – Mar)	129.29	93.91	+ 35.38	Well above normal	131.61	1953	60.91	1969

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 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

Disclaimer

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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.