Drought and Precipitation Statement for Antigua – April 2012

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Above normal rainfall for April

The island had above normal rainfall during April with an average total of 3.18 inches. This is the third highest since 2002 for the month. Meanwhile, the period February to April (FMA), had below normal rainfall; above normal rainfall for FMA was required to lift the country out of the slight meteorological drought which started in February. Thus, a slight meteorological drought continued through April. The total for JFMA is 2.20 inches below the Climatological Normal. However, with recent rain consistent with our forecast of above normal rainfall for May, the drought is expected to come to an end shortly. See table 1 for more. Based on various models, trends, climatology and subjective input, above normal rainfall is most likely for May and MJJ. There is just a slight chance of a meteorological drought during the next three months.

Period	Rainfall (inches)				Rainfall Record – 1928 to 2012			
Previous Month(s)	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)	Description of Actual (1981 – 2010)	Max	Year	Min	Year
1(Apr)	3.18	3.37	- 0.19	Above normal	9.66	1981	0.23	1944
3(Feb – Apr)	5.40	7.60	- 2.20	Below normal	16.19	1992	2.44	1947
6(Nov – Apr)	22.77	20.16	+ 2.61	Above normal	34.31	2000	8.83	1948
9(Aug – Apr)	41.95	36.23	+ 5.72	Above normal	53.44	1952	20.05	1931
12(May – Apr)	62.30	46.76	+ 15.54	Well above normal	72.04	1952	25.11	1931
24(May – Apr)	123.07	94.18	+ 28.89	Well above normal	130.93	1953	63.07	1931

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

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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.