



Drought and Precipitation Statement for Antigua – July 2011

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Near record rainfall for July

The island had well above normal rainfall during July with an average total of 8.52 inches. This is the second highest total since 1963 and the second highest on record. For the period May to July (MJJ), the rainfall was also well above normal; the island continues to be in a period of abundant rainfall which started in April.

Based on various models, trends, climatology and subjective input, above normal rainfall is most likely for August, and for ASO. There is only a slight chance of drought for ASO. 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(Jul)	8.52	3.95	+ 4.57	Well above normal	8.85	1963	0.62	1976
3(May – Jul)	20.35	10.75	+ 9.60	Well above normal	28.09	1970	2.86	1974
6(Feb – Jul)	28.43	18.36	+ 10.07	Well above normal	32.19	1970	7.04	1974
9(Nov – Jul)	36.88	30.92	+ 5.96	Above normal	50.03	1987	14.81	1974
12(Aug – Jul)	64.74	46.99	+ 17.75	Well above normal	71.06	1952	28.78	1974
24(Aug – Jul)	112.34	94.12	+ 18.22	Well above normal	132.22	1952	66.71	1974

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 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.